Introduction to Financial Accounting

Based on International Financial Reporting Standards

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CHAPTER ONE

Overview of Financial Accounting

Accountants communicate financial information to interested users for decision–making purposes. The answers to the following questions are discussed in Chapter 1.

1. What is accounting?
2. What is the entity concept, and how is it one of the boundaries of accounting?
3. How do accountants communicate financial information to interested parties?
4. What are the four required financial statements and their components?
5. Which accounting report measures profitability? Financial position?
6. What information is provided in the statement of cash flows?
7. What are the advantages and disadvantages of different forms of business organisation?
8. What is the general structure of corporate organisation on how do shareholders participate in day-to-day management?
9. What was Luca Pacioli's role in establishing the accounting model?
10. What is the accounting equation?
11. What is the financial structure of a corporation?
12. How are financial transactions completed?
13. How does the accounting process summarise transactions into financial statement information?
14. What is the distinction between calendar, interim, and fiscal year ends?
15. What impact does the periodicity concept have on the reporting of financial information?
16. What are the authoritative accounting bodies in Canada?
17. What is the function of the auditor's report in relation to generally accepted accounting principles?
18. What is corporate social responsibility?

A. The Accounting Model

Accounting is the systematic process of collecting, recording, reporting, and analysing a business' economic activities. **Financial accounting** is the field of accountancy concerned with the preparation of a set of standardised reports for decision makers. It is often called the language of business. Like any language, it is used to communicate information, in this case, financial information. Like any language, too, accounting has its own special vocabulary. For instance, **assets** are resources that are expected to bring future economic benefits to an enterprise. **Liabilities** are obligations arising from past events, requiring someone to pay an economic resource at some time in the future. **Equity** is the amount of assets available to owners of an enterprise after all liabilities have been deducted.

Certain assets like **cash** are often exchanged. Cash is anything that will be accepted by a bank as a deposit. Each exchange of assets is referred to as a **financial transaction** – for example, when an organisation exchanges cash for land and buildings. Incurring a liability in return for an asset is also a financial transaction. Instead of paying cash for land and buildings, an organisation may borrow money from financial institution. The company must repay this with cash payments in the future. Financial accounting is essentially a system for processing and summarising these transactions.

The Entity Concept

There are always two or more parties to each financial transaction. Each is considered an accounting **entity**. An entity is an individual or organisation that exists separately from other individuals and organisations, including owners. For example, the owner of a pizza shop and the store itself are two separate entities for accounting purposes. Purchases of ingredients and sales of pizzas would be recorded in the accounting records of the pizza shop. The owner's cost of taking her son to the movies would not be recorded as a store expense. It is a personal expenditure, separate from the pizza shop activities.

A **corporation** is an entity that issues ownership units called **shares.** Equivalent designations that denote a business entity that issues shares are "Corp.", "Incorporated", "Inc.", "Limited", or "Ltd." An important feature of a corporation is that its assets and liabilities are legally separate from shareholders.

Creditors are people or organizations that lend money to another entity that must be repaid at a later date. Equity in a corporation always consists of at least shares (or share capital) and **retained earnings**. Retained earnings are the sum of all profits earned by a corporation over its life, less any distributions of these profits to shareholders. These distributions are called **dividends**. Shareholders generally have the right to share in dividends according to the percentage of their ownership interest.

Financial Statements

Financial accounting information is accumulated in a set of formal, standardised reports called **financial statements** or *financial reports* that help readers make economic decisions, such as whether to invest money in an entity. Four primary types of financial statements are discussed below.

The Income Statement

An **income statement** is a financial report that summarises an entity's **revenue** less **expenses** over a period of time. Revenue represents the generation of assets by an entity in return for services performed or goods sold during that period. Expenses are the assets that have been used up or the obligations incurred in the course of earning revenue. When revenue is greater than expenses, the difference is called **net income** or *profit*. When expenses are greater than revenue, a *net loss* results.

Consider the following income statement of Big Dog Carworks Ltd. (BDCL). This entity was started on January 1, 2011 by Bob "Big Dog" Baldwin to repair automobiles. All the shares of the corporation are owned by Bob.

The financial transaction recording process starts on January 1, 2011. When it is stopped one month later at January 31, the income statement shows total revenue of $10,000 and various expenses totalling $8,000. Net income therefore equals $2,000.

Big Dog Carworks Ltd.
Income Statement
For the Month Ended January 31, 2011

Revenue		
Repairs		$10,000
Expenses		
Rent	$1,600	
Salaries	3,500	
Supplies	2,200	
Truck Operation	700	
Total Expenses		8,000
Net Income		$2,000

The heading of the income statement shows the name of the entity, the type of financial statement, and the *period-in-time date*.

When the recording process begins again in February, the accounting records continue to accumulate revenue and expense transactions. The February transactions are added to those of January.

This recording process usually lasts for a 12–month time period. At the end of the year, December 31, 2011 in this case, the cumulative results are removed from the income statement and a new one is started for the next 12 months. In this way only the transactions of the new year are accumulated.

The Balance Sheet

The **balance sheet** (sometimes called the *Statement of Financial Position*) shows the assets, liabilities, and equity of an entity at the end of the income statement period. Assume the balance sheet of Big Dog Carworks Ltd. at January 31, 2011 is as follows:

Big Dog Carworks Ltd.
Balance Sheet
At January 31, 2011

This heading shows the name of the entity, the type of financial statement, and the *point-in-time date*.

Assets		*Liabilities*		
Cash	$ 3,200	Bank Loan	$ 6,000	
Accounts Receivable	2,000	Accounts Payable	200	
Prepaid Insurance	2,400	Unearned Revenue	400	
Equipment	3,000	Total Liabilities		$ 6,600
Truck	8,000			
		Shareholders' Equity		
		Share Capital	$10,000	
		Retained Earnings	2,000	12,000
		Total Liabilities and		
Total Assets	$18,600	Shareholders' Equity		$18,600

Total assets ($18,600 here) always equal total liabilities ($6,600) plus shareholders' equity ($12,000).

Later, we will examine how these balances occurred.

What Is an Asset?

Several types of assets are shown on the balance sheet of BDCL. *Cash*, usually held in a bank account, is an obvious financial resource with future benefit. **Accounts receivable** represent amounts to be collected in cash in the future for goods sold or services rendered during the month. **Prepaid expenses** are assets that are paid in cash beforehand, but have benefits that apply over future periods – for example, an insurance policy that will be in force for an entire year that is paid at the beginning of the year in cash. *Equipment* and *Truck* are examples of **long-lived assets,** often called *capital assets*: assets with useful lives that extend more than one year.

These long-lived assets are recorded and shown on the balance sheet at their original cost. The values of long-lived assets are reduced as they are used up through use or age, as will be explained in more detail later.

What Is a Liability?

A liability was defined as an obligation to pay some asset in the future. For example, BDCL's bank loan represents an obligation to repay cash in the future to the bank. **Accounts payable** are obligations to pay a creditor for goods purchased or services rendered. **Unearned revenue** represents an advance payment of cash from a customer for a repair service that BDCL will provide in the future.

What Is Equity?

As noted earlier, equity represents the amount of net assets remaining to owners after liabilities have been deducted. In BDCL's January 31 balance sheet, equity consists of share capital (ownership units) of $10,000 and retained earnings (undistributed profit) of $2,000 for total equity of $12,000. Liabilities represent amounts that are owed to creditors. Equity represents amounts that are owed to owners. The total of liabilities and equity always equals the total amount of assets shown on the balance sheet.

The Statement of Changes in Equity

This third financial statement is called the **statement of changes in equity.** This provides information about changes to retained earnings and share capital during the period. It acts as a link between successive balance sheets. Retained earnings from the previous period's balance sheet become the opening balance for the next period's retained earnings.

The statement also serves as a link between the income statement and the balance sheet. For example, at the end of each period Net income shown on the income statement is added to opening retained earnings on the statement of changes in equity. Any earnings distributed as dividends to shareholders during the period are deducted to arrive at ending retained earnings. This ending balance appears on the balance sheet at the end of the current period.

In the following statement of changes in equity for the one-month period ended January 31, 2011, share capital and retained earnings balances at January 1 are zero because the corporation has not started business. During the one-month period ending January 31, 2011, share capital of $10,000 was issued and net income of $2,000 was earned and added to opening retained earnings. As no earnings were distributed to shareholders, ending retained earnings also equals $2,000.

Big Dog Carworks Ltd.
Statement of Changes in Equity
For the Month Ended January 31, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$ -0-	$ -0-	$ -0-
Shares Issued	10,000		10,000
Net Income		2,000	2,000
Ending Balance	$10,000	$2,000	$12,000

These agree to the share capital and retained earnings figures shown on the balance sheet at January 31, 2011.

The Statement of Cash Flows

The fourth financial statement is the **statement of cash flows** (SCF). The SCF explains the sources (inflows) and uses (outflows) of cash over a period of time. The following statement of cash flows is a simplified version, intended for illustrative purposes only. The preparation and interpretation of the SCF will be covered in a later chapter.

Big Dog Carworks Ltd.
Statement of Cash Flows
For the Month Ended January 31, 2011

Sources of cash		
Revenue collected in cash		
(8,000 + 400)	$ 8,400	
Share capital issued	10,000	
Bank loan proceeds	8,000	
Total sources		$ 26,400
Uses of cash		
Expenses paid in cash		
(2,400 + 7,800)	10,200	
Bank loan repayment	2,000	
Purchase of equipment	3,000	
Purchase of truck	8,000	
Total uses		23,200
Increase in cash		3,200
Opening cash balance		-0-
Ending cash balance		$ 3,200

This agrees to the cash figure shown on the balance sheet at January 31, 2011.

At this point, just note that the BDCL income statement shows a net income of $2,000 but net cash inflow shown on the SCF equals $3,200. The reasons for this difference will be discussed in a later chapter. Also, observe that the income statement does not disclose all important activities of the entity involving cash that is shown on the SCF – for instance, the issuance of share capital for $10,000.

The statement of cash flows is useful because cash is one of the most important assets of a corporation. Maintaining sufficient cash to pay expenses and liabilities as they come due is a critical business activity. Information about expected future cash flows is therefore important for decision makers. For instance, BDCL's bank manager needs to determine whether the remaining $6,000 loan can be repaid, and also about whether to grant a new loan to the corporation if requested. The statement of cash flows helps to make these decisions.

B. The Corporate Organisation Structure

In a large corporation, there can be many shareholders. In these cases, shareholders do not manage a corporation but participate indirectly through the election of representatives collectively called a **board of directors.** The board of directors does not participate in the day–to–day management of the corporation but delegates this responsibility to the officers of the corporation. An example of this delegation of responsibility is illustrated in Figure 1–1.

Shareholders usually meet annually to elect a board of directors. The board meets regularly to review the operations of the corporation and to set policies for future operations. Based on the performance of the corporation, the board may decide to distribute dividends to shareholders. Unlike shareholders, directors can be held personally liable if a company fails.

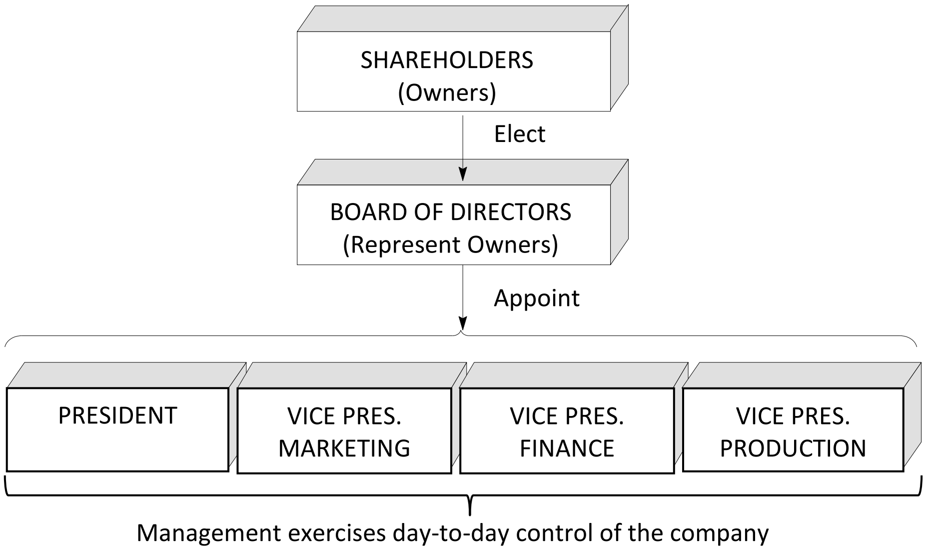


Figure 1–1 Generalised form of a corporate organisation

C. Transaction Analysis and Double-entry Accounting

The **accounting equation** is foundational to financial accounting. It states that the total assets of an entity must always equal the total claims against those assets by creditors and owners. The equation is expressed as follows:

ASSETS	=	LIABILITIES	+	EQUITY
(economic resources owned by an entity)		(creditors' claims on assets)		(owners' claims on assets)

When financial transactions are recorded, combined effects on assets, liabilities, and equity are always exactly offsetting. It is the reason that the balance sheet always balances.

Accountants view financial transactions as economic events that change components within the accounting equation. These changes are usually triggered by information contained in **source documents,** which contain the raw data of financial transactions and that can be verified for accuracy. Examples of source documents are bank statements, sales invoices, and bills from creditors.

The accounting equation can be expanded to include all the items listed on the balance sheet of BDCL at January 31, 2011, as follows:

ASSETS					=	LIABILITIES			+	EQUITY	
Cash	+ Accounts Receivable	+ Prepaid Insurance	+ Equipment	+ Truck	=	Bank Loan	+ Accounts Payable	+ Unearned Revenue	+	Share Capital	+ Retained Earnings

If one item within the accounting equation is changed, then another item must also be changed to balance it. In this way, the equality of the equation is maintained. For example, if there is an increase in an asset account, then there must be a decrease in another asset or a corresponding increase in a liability or equity account. This equality is the essence of *double–entry record keeping*. The equation itself always remains in balance after each transaction. The operation of the accounting equation is illustrated in the following section, which shows ten transactions of Big Dog Carworks Ltd. for January 2011.

Transaction Number	Date	Description of Transaction	Effect on the Accounting Equation				
			ASSETS	=	LIABILITIES	+	EQUITY
1	Jan. 1	Big Dog Carworks Ltd. issued 1,000 shares for $10,000 cash to Bob Baldwin, the owner.	(+)				(+)
		The asset Cash is increased while the equity item Share Capital is also increased. After the transaction is recorded, the equation will appear as follows:					
		CASH	+10,000				
		SHARE CAPITAL					+10,000
		Note that both sides of the equation are in balance.					
2	Jan. 2	The company borrowed $3,000 from the bank. The funds were deposited into the company's bank account.	(+)		(+)		
		The asset Cash is increased and the liability Bank Loan is also increased. This transaction will affect the equation as follows:					
		CASH	+3,000				
		BANK LOAN			+3,000		
3	Jan. 2	The corporation purchased $3,000 of equipment for cash.	(-)(+)				
		There is an increase in the asset called Equipment and a decrease to another asset, Cash. This transaction will affect the equation as follows:					
		EQUIPMENT	+3,000				
		CASH	-3,000				
4	Jan. 3	The corporation purchased a tow truck for $8,000, paying $3,000 cash and incurring an additional bank loan for the balance.	(-)(+)		(+)		
		The asset Cash is decreased, while the asset Truck is increased; the liability Bank Loan is also increased. The impact on the equation is:					
		CASH	-3,000				
		TRUCK	+8,000				
		BANK LOAN			+5,000		

			Effect on the Accounting Equation				
Transaction Number	Date	Description of Transaction	ASSETS	=	LIABILITIES	+	EQUITY
5	Jan. 5	Big Dog Carworks Ltd. paid $2,400 for a one-year insurance policy, effective January 1.	(-)(+)				
		Here the asset called Prepaid Insurance is increased; Cash is decreased.					
		The equation appears as follows:					
		PREPAID INSURANCE	+2,400				
		CASH	-2,400				
		Since the one–year period will not be fully used at January 31 when financial statements are prepared, the insurance cost is considered to be an asset called Prepaid Insurance at the payment date. The transaction does not affect liabilities or equity.					
6	Jan. 10	The corporation paid $2,000 cash to the bank to reduce the loan outstanding.	(-)		(-)		
		The asset Cash is decreased as well as the liability Bank Loan.					
		This transaction has the following impact on the equation:					
		ACCOUNTS PAYABLE			-2,000		
		CASH	-2,000				
7	Jan. 15	The corporation received $400 as an advance payment from a customer for services to be performed over the next two months as follows: $300 for February, $100 for March.	(+)		(+)		
		The asset Cash is increased by $400; a liability, called Unearned Revenue, is also increased since the revenue will not be earned by the end of January. It will be earned when the work is performed in later months. At January 31, these amounts are repayable to customers if the work is not done (and thus a liability). The impact on the equation is:					
		CASH	+400				
		UNEARNED REVENUE			+400		

			Effect on the Accounting Equation				
Transaction Number	Date	Description of Transaction	ASSETS	=	LIABILITIES	+	EQUITY
8	Jan. 31	Automobile repairs of $10,000 were made for a customer. $8,000 of this amount was paid in cash and $2,000 will be paid in next month.	(+)(+)				(+)
		The Cash and Accounts Receivable assets of the corporation increase. The repairs are revenue for the corporation. As a result, net income and equity is increased.					
		CASH	+8,000				
		ACCOUNTS RECEIVABLE	+2,000				
		REPAIR REVENUE					+10,000
		This activity increases assets and net income.					
9	Jan. 31	The corporation paid operating expenses in cash for the month as follows: $1,600 for rent; $3,500 for salaries; $2,000 for supplies expenses; and $700 for truck operating expenses (oil, gas, etc.).	(-)				(-)
		The asset Cash decreases. The expenses also decrease net income and equity.					
		RENT EXPENSE					-1,600
		SALARIES EXPENSE					- 3,500
		SUPPLIES EXPENSE					- 2,000
		TRUCK OPERATION EXPENSE					- 700
		CASH	-7,800				
		These expenses reduce the assets and (net income/retained earnings) in the equation.					
10	Jan. 31	A bill for $200 was received from a supplier for parts purchased and used in January.			(-)		(-)
		The liability accounts payable is increased on one side of the equation. On the other side, net income (and thus retained earnings) is decreased to record this expense.					
		SUPPLIES EXPENSE					-200
		ACCOUNTS PAYABLE			-200		

These various transactions can be recorded in the expanded accounting equation on a *transactions worksheet* shown in Figure 1-2a below:

	ASSETS					=	LIABILITIES			+	EQUITY	
Trans.	Cash	+ Acc. Rec.	+ Prepaid Insur.	+ Equip.	+ Truck	=	Bank Loan	+ Acc. Pay.	+ Unearned Revenue	+	Share Capital	+ Retained Earnings
1.	+10,000										$10,000	
2.	+3,000						+3,000					
3.	-3,000			+3,000								
4.	-3,000				+8,000		+5,000					
5.	-2,400		+2,400									
6.	-2,000						-2,000					
7.	+400								+400			
8.	+8,000	+2,000										+10,000
9.	-7,800											- 1,600
												- 3,500
												- 2,000
												- 700
10.								+200				- 200
	3,200 +	2,000 +	2,400 +	3,000 +	8,000 =		6,000 +	200 +	400	+	10,000 +	2,000

These numbers are used to prepare the statement of cash flows

These numbers are used to prepare the income statement

Transactions in these columns are used to prepare the statement of changes in equity

Column totals are used to prepare the balance sheet

ASSETS = $18,600

LIABILITIES + EQUITY = $18,600

Figure 1–2a Transactions worksheet for January 31, 2011

Transactions summary:

1. Issued share capital for $10,000 cash.
2. Received a bank loan for $3,000.
3. Purchased equipment for $3,000 cash.
4. Purchased a truck for $8,000; paid $3,000 cash and obtained a bank loan for the balance.
5. Paid $2,400 for a one–year insurance policy effective January 1.
6. Paid $2,000 cash to reduce the bank loan.
7. Received $400 as an advance payment for repair services to be rendered over the next two months as follows:
   $300 for February,
   $100 for March.
8. Performed repairs for $8,000 cash and $2,000 on credit.
9. Paid a total of $7,800 for operating expenses incurred during the month.
10. Received a $200 bill from a supplier for parts purchased and used in January.

The transactions summarised in Figure 1-2a were used to prepare the financial statements in Figure 1-2B below (the statement of changes in cash flow will be covered in a later chapter):

Big Dog Carworks Ltd.
Balance Sheet
At January 31, 2011

Assets		
Cash	$ 3,200	
Accounts Receivable	2,000	
Prepaid Insurance	2,400	
Equipment	3,000	
Truck	8,000	
		$18,600
Liabilities		
Bank Loan	$ 6,000	
Accounts Payable	200	
Unearned Revenue	400	6,600
Shareholders' Equity		
Share Capital	$10,000	
Retained Earnings	2,000	
		12,000
		$18,600

Big Dog Carworks Ltd.
Income Statement
For the Month Ended January 31, 2011

Revenue		
Repairs		$10,000
Expenses		
Rent	$ 1,600	
Salaries	3,500	
Supplies	2,200	
Truck Operation	700	
Total Expenses		8,000
Net Income		$2,000

The ending balances of shareholder's equity are shown on the balance sheet.

Net income becomes part of retained earnings

Big Dog Carworks Ltd.
Statement of Changes in Equity
For the Month Ended January 31, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$ -0-	$ -0-	$ -0-
Shares Issued	10,000		10,000
Net Income		2,000	2,000
Ending Balance	$10,000	$2,000	$12,000

Figure 1–2b Financial statements of Big Dog Carworks Ltd.

Accounting Time Periods

Financial statements are prepared at regular intervals—usually monthly or quarterly—and at the end of each 12–month period. This 12–month period is called the **fiscal year**. The timing of these financial statements is determined by the needs of management and other users of the financial statements. For instance, financial statements may also be required by outside parties, such as bankers and shareholders on a regular basis. Generally, financial statements are prepared at the end of each 12–month period at a minimum. This is known as the *fiscal year–end* of the entity.

Some companies' year–ends do not follow the calendar year (year ending December 31). This may be done so that the fiscal year coincides with their **natural year**. A natural year ends when a corporation's operations are at a low point. A ski resort may have a fiscal year ending in late spring or early summer for instance, when its business operations have ceased for the season.

Some corporations are large and have many owners. These types of corporations may make their shares available for public trading on **stock exchanges**. Stock exchanges provide services to facilitate the exchange of many corporations' shares among investors. Corporations listed on stock exchanges are often required to provide shareholders and creditors with more up-to-date financial information than otherwise. For instance, publicly-traded corporations are usually required to prepare **interim financial statements** every three months.

The relationship of the interim and year–end financial statements is illustrated in Figure 1–3.

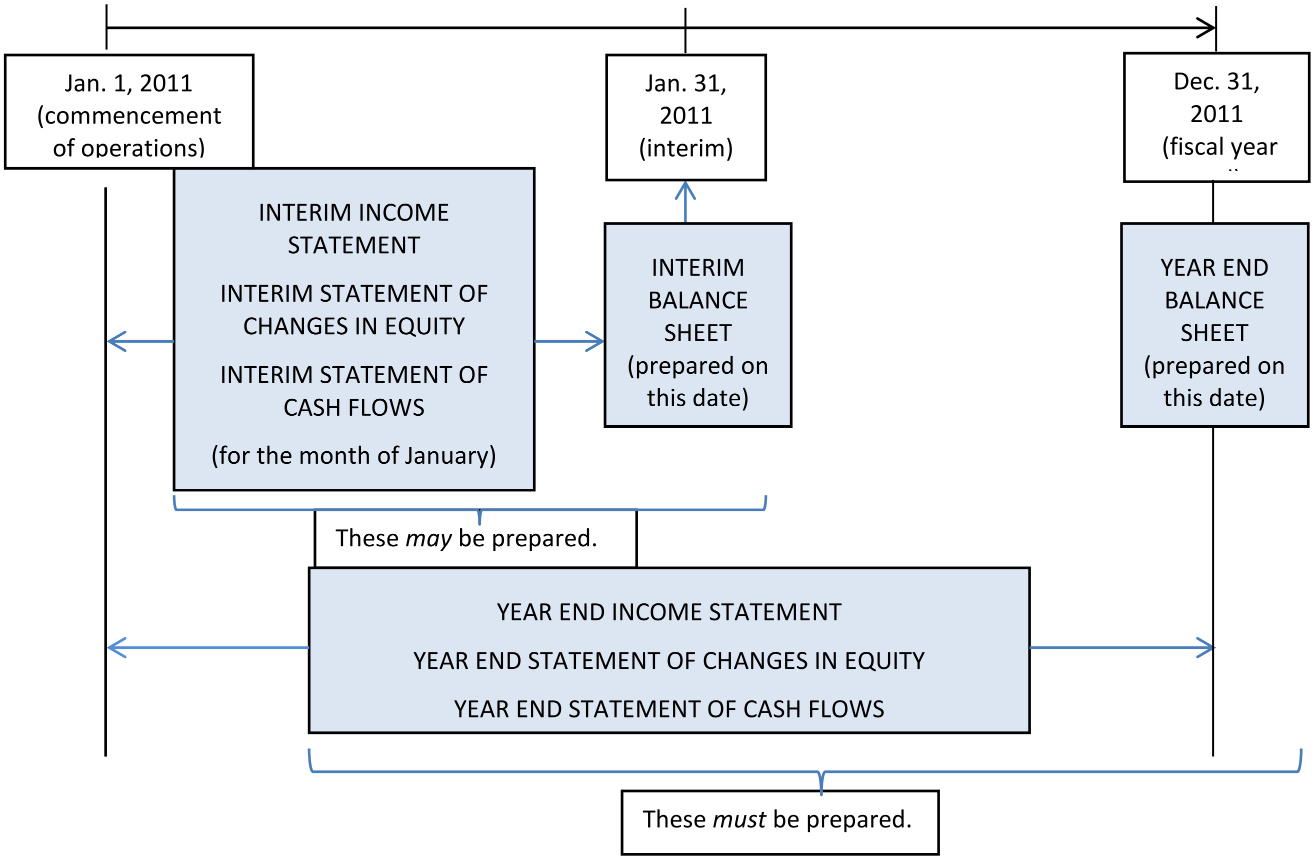


Figure 1–**3** **The relationship of interim and year–end financial statements**

D. The Accounting Profession and Corporate Social Responsibility

You have been introduced to some of the concepts and procedures that underlie the practice of financial accounting. An important goal of accountants is to ensure information provided to decision makers is reliable. To operationalise this, **ethics** must fundamentally inform accounting practice. Ethics are beliefs that help differentiate right practices from wrong. Appropriate accounting practices are embodied in standards and procedures called **generally accepted accounting principles** or **GAAP**. These principles are the result of many years of thought, debate, and research.

Considerable time and effort continues to be invested in the evolution of these standards so that financial accounting information is reported in a fair, objective, and relevant fashion to outside parties who rely upon this information for making business decisions. In Canada, for instance, a number of authoritative accounting organisations deal with the formulation of GAAP. The **Accounting Standards Board (AcSB)** is responsible for the issuance of pronouncements relating to accounting. Membership includes representatives from businesses, government, and accounting and financial professionals organisations. Pronouncements of the AcSB are published by the Canadian Institute of Chartered Accountants in the **CICA Handbook**. Though not legislated by governments, these pronouncements are recognised as authoritative.

Most nations of the world including Canada have adopted International Financial Reporting Standards (IFRS) as authoritative accounting pronouncements for large corporation, among others. IFRS are issued by the **International Accounting Standards Board (IASB)**. The board has fourteen members drawn from many countries. Its primary mandate is to promote the adoption of a single set of global accounting standards through a process of open and transparent discussions among large corporations, financial institutions, and accounting firms around the world.

The United States has not at this point adopted IFRS. In the United States, the Financial Accounting Standards Board (FASB) is the leading independent non–government body responsible for the development and issuance of financial accounting standards. The **Securities and Exchange Commission (SEC)** is a government body in the United States that issues pronouncements and regulations forming part of US GAAP. Large Canadian public corporations listed on American stock exchanges are affected by these pronouncements and regulations. The SEC identifies information that must be disclosed by listed corporations. It generally relies on FASB to establish accounting procedures.

Corporate Social Responsibility

However, there is more to a business operation than financial statements show. Accounting deals with transactions that represents economic events. The accounting model is limited to what can be measured in financial terms – for instance, dollars. Profit does not measure the effect of everything a corporation does. Other considerations are encompassed by the concept of **corporate social responsibility (CSR)**.

Corporate social responsibility encourages corporations to consider the effects of its decisions and actions on the entire social system. A most basic and important concept of accounting, the entity concept, is altered, because CSR considers the total costs and benefits to society.

The interest in and concern about corporate social responsibility has grown from two major related forces. The first is an increasing awareness by the public of the power and control that corporations have, which leads to a need for greater accountability to the public. The second is a decline in the reputation of corporations. Because the public is generally better educated, questioning, discerning, and informed, it holds increased social, moral, and economic expectations of corporations. Because of the power and control that large corporations can exercise and (well-publicised) corporate misdeeds like bribery, fraud, and environmental harm that can result, widespread doubts have developed about how responsible corporations are in general. CSR requires corporations to examine whether profits are being generated by socially-acceptable means.

Proponents of CSR argue:

- It will serve corporate interests in the long run by promoting better public image, providing better operational environments, and ensuring long–run viability of businesses. Corporations exist at the will of society and must produce social benefits if they are to survive. In the past, if a product was saleable, it was considered socially acceptable; this may be so no longer.
- Corporations are more likely to have the resources—both human and financial—to solve social problems.
- Corporations should seek to balance power with responsibility. The public and government may be more tolerant of concentrated corporate economic power if increased social responsibility goes with it.
- Increased social responsibility will help business to avoid further government intervention and regulation. Corporate social responsibility, either through corporate self-monitoring or government intervention, is inevitable. If corporations initiate the action, they will have more influence over its nature.
- The public and shareholders now expect more of business. They have diverse ownership and individual interests and thus benefit or suffer from corporate activities in the environment external to the corporation.
- Increased social responsibility may provide hidden profit opportunities for corporations. Sometimes problems turn into profits. For example, pollution–control requirements have already brought profit-making opportunities to some corporations.

There are, however, strong arguments against corporations accepting increased social responsibility. Opponents argue:

- Corporations should be concerned only with profit maximisation. This is their fundamental purpose. The costs of social involvement could drive marginal firms out of business, in turn increasing social costs not only through lost jobs but by giving the surviving firms more concentrated powers.
- Because of this fundamental profit motive, corporate managers cannot be relied upon to be socially responsible in difficult economic times. Often social costs outweigh social benefits, especially when considered in terms of a single firm; social responsibility programs are likely to be dropped quickly when business drops off.
- Corporations already have enough power; social power should not be added, especially with the current lack of accountability. Also, since co–ordinated efforts among numerous corporations are often needed to accomplish social objectives, this co–operation could further concentrate power.
- Corporate managers do not have the required skills. They are equipped to do only certain jobs well and should concentrate on those jobs. This is the basis of the global capitalist economic system.

- Managers are not very good at recognising public consensus and priorities around social concerns. If managers are to serve the interests of society as a whole, then ultimately they must be controlled by governments that can determine politically what social priorities exist.

It is difficult to quantify the information that encompasses corporate social responsibility – for instance, the environmental costs and benefits of a corporation's activities. In Canada and the United States, corporate social reporting has remained largely voluntary. As a result, questions have been raised about its objectivity and whether CSR-related information can be verified independently. However some European countries have adopted legislation specifying the content of such reports. Their governments have often placed great importance on labour-related information about employment, salaries, and environmental costs and benefits of an entity's activities.

As a student of business, you should remember that corporate financial health is not solely measured by published financial statements. Increasingly, resources will be employed by corporations, willingly or otherwise, to measure and report their impacts on areas outside their sphere of immediate economic concern, and incorporate these considerations into strategic and operational management decisions.

ASSIGNMENT MATERIALS

Discussion Questions

1. What are assets?
2. To what do the terms *liability* and *equity* refer?
3. Explain what is meant by the term *financial transaction*. Give an example of a financial transaction.
4. What is the entity concept of accounting? Why is it important?
5. What is the general purpose of financial statements? What are the four types of financial statements?
6. What is the purpose of an income statement? a balance sheet? How do they interrelate?
7. Define the terms *revenue* and *expense*.
8. What is net income? What information does it convey?
9. What is the purpose of a statement of changes in equity? a statement of cash flows?
10. What is the basic accounting equation? How does it work?
11. How is the accounting equation expanded when financial transactions are recorded?
12. Illustrate how the double-entry accounting system works.
13. Why are financial statements prepared at regular intervals? Who are the users of these statements?
14. What is a year–end? How does the timing of year–end financial statements differ from that of interim financial statements?
15. How does a fiscal year differ from a calendar year?
16. Name accounting organisations that are concerned with the formulation of accounting principles and standards.
17. What is the *CICA Handbook*?
18. What is corporate social responsibility?

Comprehension Problems

CP 1–1

The following list covers many of the types of financial transactions. Notice that each transaction has an equal and offsetting effect on the accounting equation.

Types of Accounting Transactions

	ASSETS	=	LIABILITIES	+	EQUITY
1.	(+)				(+)
2.	(+)		(+)		
3.	(+)(-)				
4.	(-)				(-)
5.	(-)		(-)		
6.			(+)		(-)
7.			(-)		(+)
8.			(+)(-)		
9.					(+)(-)

View Solution

Required: Using the appropriate accounting equation, study the following transactions and identify the effect of each on assets, liabilities and equity, as applicable. Use a (+) to denote an increase and a (–) to denote a decrease, if any.

A = L + E

Example:
(+) ___ (+) Issued share capital for cash
___ ___ ___ Purchased a truck for cash
___ ___ ___ Received a bank loan to pay for equipment
___ ___ ___ Made a deposit for electricity service to be provided in the future
___ ___ ___ Paid rent expense
___ ___ ___ Signed a new union contract that provides for increased wages in the future
___ ___ ___ Hired a messenger service to deliver letters during a mail strike
___ ___ ___ Received a parcel; paid the delivery service
___ ___ ___ Billed customers for services performed
___ ___ ___ Made a cash payment to satisfy an outstanding obligation
___ ___ ___ Received a payment of cash in satisfaction of an amount owed by a customer
___ ___ ___ Collected cash from a customer for services rendered
___ ___ ___ Paid cash for truck operation expenses (gas, oil, etc.)
___ ___ ___ Made a monthly payment on the bank loan; this payment included a payment on part of the loan and also an amount of interest expense. (*Hint:* This transaction affects more than two parts of the accounting equation.)
___ ___ ___ Issued shares in the company to pay off a loan

CP 1–2

View Solution

Refer to the list of accounting transactions in Comprehension Problem 1–1.

Required: Study the following transactions and identify, by number (1 to 9), the type of transaction. Some transactions may not require an accounting entry.

Example:
__1__ Issued share capital for cash
_____ Paid an account payable
_____ Borrowed money from a bank
_____ Collected an account receivable
_____ Collected a commission on a sale made today
_____ Paid for an advertisement in a newspaper
_____ Borrowed cash from the bank
_____ Signed a contract to purchase a computer
_____ Received a bill for supplies used during the month
_____ Received a payment of cash in satisfaction of an amount owed by a customer
_____ Sent a bill to a customer for repairs made today
_____ Sold equipment for cash
_____ Purchased a truck on credit, to be paid in six months
_____ Requested payment from a customer of an account receivable that is overdue
_____ Increased employee vacations from four to six weeks
_____ Recorded the amount due to the landlord as rent
_____ Received the monthly telephone answering service bill

CP 1–3

View Solution

Required: Calculate the missing amounts for companies A to E.

	A	*B*	*C*	*D*	*E*
Cash	$3,000	$1,000	$?	$6,000	$2,500
Equipment	8,000	6,000	4,000	7,000	?
Accounts payable	4,000	?	1,500	3,000	4,500
Share capital	2,000	3,000	3,000	4,000	500
Retained earnings	?	1,000	500	?	1,000

CP 1–4

View Solution

Required: Calculate the net income earned during the year. Assume that the change to equity results from net income during the year.

	Assets	*Liabilities*
Balance Jan. 1, 2011	$50,000	$40,000
Balance Dec. 31, 2011	40,000	20,000

CP 1–5

View Solution

Required: Indicate whether each of the following is an asset (A), liability (L), or an equity (E) item.

1. Accounts payable
2. Accounts receivable
3. Bank loan
4. Cash
5. Equipment
6. Insurance expense
7. Loan payable
8. Prepaid insurance
9. Rent expense
10. Repair revenue
11. Share capital
12. Truck operation expense
13. Unused office supplies

CP 1–6

The following accounts are taken from the records of Jasper Inc. at January 31, 2011, its first month of operations.

Cash	$33,000
Accounts receivable	82,000
Unused supplies	2,000
Land	25,000
Building	70,000
Equipment	30,000
Bank loan	15,000
Accounts payable	27,000
Share capital	?
Net income	40,000

View Solution

Required:
1. Calculate the amount of total assets.
2. Calculate the amount of total liabilities.
3. Calculate the amount of share capital.

View Solution

CP 1–7

Required: From the balances below, complete the following income statement, statement of changes in equity, and balance sheet.

Accounts receivable	$ 4,000
Accounts payable	5,000
Cash	1,000
Share capital	?
Equipment	8,000
Insurance expense	1,500
Miscellaneous expense	2,500
Office supplies expense	1,000
Service revenue	20,000
Wages expense	9,000

Income Statement

Service revenue		$
Expenses		
Insurance	$	
Miscellaneous		
Office Supplies		
Wages		
Net income		$

Statement of Changes in Equity

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$ -0-	$ -0-	$ -0-
Shares Issued			
Net Income			
Ending Balance			

Balance Sheet

Assets		*Liabilities and Shareholder's Equity*	
Cash	$	Accounts Payable	$
Accounts Receivable		Share Capital	
Equipment		Retained Earnings	
	$		$

CP 1–8

A junior bookkeeper of Adams Ltd. prepared the following financial statements at the end of its first month of operations.

Adams Ltd.
Income Statement
For the Month Ended January 31, 2011

Revenue		$3,335
Expenses		
Accounts Payable	$ 300	
Land	1,000	
Miscellaneous Expenses	335	1,635
Net Income		$1,700

Balance Sheet

Assets		*Liabilities and Shareholder's Equity*	
Cash	$1,000	Rent Expense	$ 300
Repairs Expense	500	Share Capital	3,000
Salaries Expense	1,000	Retained Earnings	1,700
Building	2,500		
	$5,000		$5,000

View Solution

Required: Prepare a revised interim income statement and balance sheet.

Problems

P 1–1

The following balances appeared on the transactions worksheet of Hill Chairs Inc. on April 1, 2011.

ASSETS							=	LIABILITY	+	EQUITY		
Cash	+	Accounts Receivable	+	Prepaid Expense	+	Unused Supplies	=	Accounts Payable	+	Share Capital	+	Retained Earnings
1,400		3,600		1,000		350		2,000		4,350		

The following transactions occurred during April:

a. Collected $2,000 cash in satisfaction of an amount owed by a customer
b. Billed $3,000 to customers for chairs rented to date
c. Paid the following expenses: advertising, $300; salaries, $2,000; telephone, $100
d. Paid half of the accounts payable
e. Received a $500 bill for April truck operation expenses
f. Collected $2,500 in satisfaction of an amount owed by a customer
g. Billed $1,500 to customers for chairs rented to date

h. Transferred $500 of prepaid expenses to rent expense
i. Counted $200 of supplies still on hand (recorded the amount used as an expense)
j. Issued additional share capital and received $1,000 cash.

Required: Record the opening balances and the above transactions on a transactions worksheet and calculate the total of each column at the end of April. (Use the headings above on your worksheet.)

P 1–2

The following transactions occurred in Larson Services Inc. during August 2011, its first month of operations.

Aug. 1 Issued share capital for $3,000 cash
1 Borrowed $10,000 cash from the bank
1 Paid $8,000 cash for a used truck
4 Paid $600 for a one–year truck insurance policy effective August 1 (recorded as prepaid expense since it will benefit more than one month)
5 Collected $2,000 fees from a client for work to be performed at a later date
7 Billed $5,000 fees to clients for services performed to date
9 Paid $250 for supplies used to date
12 Purchased $500 supplies on credit (record supplies as an asset)
15 Collected $1,000 of the amount billed August 7
16 Paid $200 for advertising in The News during the first two weeks of August
20 Paid half of the amount owing for the supplies purchased August 12
25 Paid the following expenses: rent for August, $350; salaries, $2,150; telephone, $50; truck operation, $250
28 Called clients for payment of the balances owing from August 7
29 Billed $6,000 fees to clients for services performed to date, including $1,500 related to cash received August 5
31 Transferred $50 of August's prepaid expenses to insurance expense
31 Counted $100 of supplies still on hand (recorded the amount used as an expense).

Required:

1. Record the above transactions on a transactions worksheet and calculate the total of each column at the end of August. Use the following headings on your worksheet.

ASSETS									=	LIABILITIES			+	EQUITY		
Cash	+	Accounts Receivable	+	Prepaid Expenses	+	Unused Supplies	+	Truck	=	Bank Loan	+	Accounts Payable	+	Share Capital	+	Retained Earnings

2. Prepare an interim income statement and statement of changes in equity for the month ended August 31, 2011, and an interim balance sheet at August 31, 2011. Identify the revenue earned as Fees. Record the expenses in alphabetical order.

P 1–3

Following are the asset, liability, and equity balances of Dumont Inc. at January 31, 2011, after its first month of operations.

ASSETS		=	LIABILITIES		+	EQUITY	
Cash	$1,300		Bank Loan	$8,000		Share Capital	$2,000
Accounts	2,400		Accounts	1,000		Service Revenue	7,500
Receivable	550		Payable			Advertising Expense	500
Prepaid Expenses	750					Commissions Expense	720
Unused Supplies	9,000					Insurance Expense	50
Truck						Interest Expense	80
						Rent Expense	400
						Supplies Expense	100
						Telephone Expense	150
						Wages Expense	2,500

Required:

1. Prepare an interim income statement and statement of changes in equity for the month ending January 31, 2011. Record the expenses in alphabetical order. Assume no share capital was issued during the month.
2. Prepare an interim balance sheet at January 31.

P 1–4

The following is an alphabetical list of data from the records of Kenyon Services Corporation at March 31, 2011.

Accounts Payable	$9,000	Equipment Rental Expense	$ 500
Accounts Receivable	3,900	Fees Earned	4,500
Advertising Expense	300	Insurance Expense	400
Cash	3,100	Interest Expense	100
Share Capital	2,000	Truck Operation Expense	700
Equipment	5,000	Wages Expense	1,500

Required:

1. Prepare an interim income statement and statement of changes in equity for the month ended March 31, 2011. Record the expenses in alphabetical order. Assume no share capital was issued during the month.
2. Prepare an interim balance sheet at March 31.

P 1–5

The following interim financial statement was prepared from the records of Laberge Sheathing Inc. for the eight-month period ended August 31, 2011.

Laberge Sheathing Inc.
Interim Financial Statement
For the Eight Month Period Ended August 31, 2011

Cash	$ 400	Accounts Payable	$ 7,800
Accounts Receivable	3,800	Share Capital	3,200
Unused Supplies	100	Service Revenue	6,000
Equipment	8,700		
Advertising Expense	300		
Interest Expense	500		
Maintenance Expense	475		
Supplies Used	125		
Wages Expense	2,600		
	$ 17,000		$17,000

Required:

1. When is the corporation's likely fiscal year-end?
2. Prepare an interim income statement and statement of changes in equity for the eight-month period ended August 31, 2011.
3. Prepare an interim balance sheet at August 31.

P 1–6

The following transactions took place in McIntyre Builders Corporation during June 2011, its first month of operations.

Jun. 1 Issued share capital for $8,000 cash
1 Purchased $5,000 equipment on credit
2 Collected $600 cash for renovations completed today
3 Paid $20 for supplies used June 2
4 Purchased $1,000 supplies on credit (record supplies as an asset)
5 Billed customers $2,500 for renovations completed to date
8 Collected $500 of the amount billed June 5
10 Paid half of the amount owing for equipment purchased June 1
15 Sold excess equipment for a promise from the buyer to pay $1,000 in the future. The same amount is the same as the original cost of this equipment. Record as a loan payable.
18 Paid for the supplies purchased June 4
20 Received a bill for $100 for electricity used to date (record as utilities expense)
22 Paid $600 to the landlord for June and July rent (record as prepaid expense)
23 Signed a union contract
25 Collected $1,000 of the amount billed June 5
27 Paid the following expenses: advertising, $150; telephone, $50; truck operation expense (repairs, gas), $1,000; wages, $2,500
30 Billed $2,000 for repairs completed to date
30 Transferred the amount for June rent to rent expense
30 Counted $150 of supplies still on hand (recorded the amount used as an expense).

Required:

1. Record the above transactions on a transactions worksheet and calculate the total of each column at the end of June. Use the following headings on your worksheet.

ASSETS									=	LIABILITY	+	EQUITY		
Cash	+	Accounts Receivable	+	Prepaid Expense	+	Unused Supplies	+	Equipment	=	Accounts Payable	+	Share Capital	+	Retained Earnings

2. Prepare an interim income statement and statement of changes in equity for the one-month period ended June 30, 2011 and a balance sheet at June 30. Identify the revenue earned as "Renovations". Record the expenses on the income statement in alphabetical order.

P 1–7

Clarke Limited had the following balances in its accounting equation at the end of September 30, 2011:

ASSETS		=	LIABILITIES		+	EQUITY	
Cash	$14,215		Accounts Payable	$ 3,853		Share Capital	$?
Accounts Receivable	11,785		Loan Payable	25,000			
Unused Supplies	1,220						
Land	?						
Building	?						
Furniture	8,000						
Equipment	60,000						
Truck	3,210						
	$?			$28,853			$?

Land and building were acquired at a cost of $30,000. It was estimated that one-third of the total cost should be applied to the cost of land. The following transactions were completed during the month of October:

Oct. 2 Paid $110 to satisfy an account payable
3 Collected in full an account receivable of $670
4 Purchased office supplies for $400 for credit (record supplies as an asset)
8 Issued additional share capital for $16,000 cash
10 Collected $1,000 cash owed by a customer
11 Purchased equipment for $22,000; made a cash payment of $2,000, the balance to be paid within 30 days
15 Paid $400 cash to satisfy an account payable
20 Paid $10,000 in cash in partial settlement of the liability of October 11; took out a long-term loan for the balance
31 Collected in full an account receivable of $300.

Required:

1. Calculate the missing figures in the September 30 accounting equation.
2. Record the September 30 balances on a transactions worksheet and record the October transactions. Total the columns and ensure that the accounting equation balances.
3. Calculate net income for the month of October.

Alternate Problems

AP 1–1

The following amounts appeared on the transactions worksheet of Snider Truck Rentals Corporation on May 1, 2011.

ASSETS									=	LIABILITY	+	EQUITY		
		Prepaid		Unused						Accounts		Share		Retained
Cash	+	Expense	+	Supplies	+	Equipment	+	Truck	=	Payable	+	Capital	+	Earnings
1,600				400		3,000		7,000		4,000		8,000		

The following transactions occurred during May:

a. Collected $5,000 cash for tool rental during the month
b. Paid $500 rent expense
c. Paid $1,500 cash to satisfy an account payable
d. Paid $600 for a one-year insurance policy effective May 1 (record the asset as prepaid expense)
e. Purchased used truck for $5,000 on credit
f. Paid the following expenses: advertising, $300; salaries, $2,500; telephone, $150; truck operation, $550
g. Transferred the amount of May's insurance ($50) to insurance expense
h. Estimated $200 of supplies to have been used during May
i. Issued additional share capital and received $1,000 cash.

View Solution

Required: Record the above transactions on a transactions worksheet and calculate the total of each column at the end of May.

AP 1–2

Jewell Contractors Corporation was incorporated on May 1, 2011 and had the following transactions during its first month of operations.

May 1 Issued share capital for $5,000 cash
1 Paid $1,500 rent in advance for three months: May, June, and July (recorded as prepaid expense)
2 Purchased $1,000 of supplies on credit (record the asset as unused supplies)
2 Received $1,000 cash from a customer for work to be performed at a later date
3 Billed a customer $1,500 for repairs performed
4 Paid $50 for an advertisement in The News
5 Received $250 cash for work completed today
10 Collected the amount billed on May 3
15 Paid $500 cash to a creditor
18 Borrowed $2,000 cash from the bank
20 Signed a major contract for work to be done in June
22 Purchased for cash $3,000 of equipment
25 Billed customers $3,500 for work completed to date
27 Paid the following expenses: electricity, $75; telephone, $25; and wages, $2,000

31 Transferred the amount of May’s rent ($500) from prepaid expense to rent expense
31 Counted $200 of supplies still on hand: the rest had been used during May
31 Completed $600 of work that had been paid on May2 and billed the customer.

View Solution

Required:

1. Record the above transactions on a transactions worksheet and calculate the total of each column at the end of May. Use the following headings on your worksheet.

ASSETS									=	LIABILITIES					+	EQUITY		
Cash	+	Accounts Receivable	+	Prepaid Expense	+	Unused Supplies	+	Equipment	=	Bank Loan	+	Accounts Payable	+	Unearned Revenue	+	Share Capital	+	Retained Earnings

2. Prepare an interim income statement for the month of May. Identify the revenue earned as “Repairs”. Record the expenses in alphabetical order.

AP 1–3

The following asset, liability, and equity accounts are taken from the transactions worksheet of Arthur Products Corporation at December 31, 2011, its first month of operations.

ASSETS		=	LIABILITIES		+	EQUITY	
Cash	$ 1,000		Accounts Payable	$17,000		Share Capital	$25,000
Accounts Receivable	9,000		Salaries Payable	2,000		Fees Earned	13,600
Prepaid Expenses	2,250					Advertising Expense	1,000
Land	10,000					Insurance Expense	250
Building	25,000					Property Tax Expense	200
Equipment	5,800					Salaries Expense	3,000
						Telephone Expense	100

View Solution

Required:

1. Prepare an interim income statement and statement of changes in equity for the month ending December 31, 2011. Record the expenses in alphabetical order.
2. Prepare an interim balance sheet at December 31, 2011.

AP 1–4

The following is an alphabetical list of data from the records of Slemko Bookkeeping Corporation at September 30, 2011.

Accounts payable	$2,200	Repair revenue	$6,550
Accounts receivable	6,000	Rent expense	400
Advertising expense	50	Salaries expense	2,350
Cash	700	Supplies expense	100
Share capital	5,000	Telephone expense	75
Equipment	2,000	Truck operation expense	325
Maintenance expense	250	Wages expense	1,500

View Solution

Required:

1. Prepare an interim income statement and statement of changes in equity for the month ended September 30, 2011. Record the expenses on the income

statement in alphabetical order. Assume no share capital was issued during the month.

2. Prepare an interim balance sheet at September 30.

AP 1–5

The following financial statement was prepared from the records of Armfeld Industries Ltd.:

Armfeld Industries Ltd.
Financial Statement
For the Three-Month Period Ended November 30, 2011

Cash	$ 750	Bank Loan	$ 5,000
Accounts Receivable	2,200	Accounts Payable	3,000
Prepaid Insurance	550	Share Capital	1,000
Unused Supplies	300	Repair Revenue	5,000
Equipment	6,000		
Advertising Expense	200		
Commissions Expense	1,500		
Insurance Expense	50		
Rent Expense	450		
Wages Expense	2,000		
	$14,000		$14,000

View Solution

Required:

1. When is the corporation's likely fiscal year-end?
2. Prepare an interim income statement and statement of changes in equity for the three-month period ended November 30, 2011. Record the expenses on the income statement in alphabetical order. Assume no share capital was issued during the month.
3. Prepare a balance sheet at November 30.

AP 1–6

Polarscape Snow Services Ltd. was incorporated on December 1, 2011 and had the following transactions during its first month of operations.

Dec. 1 Issued share capital for $6,000 cash
1 Purchased a used truck for $9,000: paid $4 ,000 cash, balance due January 15
2 Purchased a $2,000 snowplough on credit to be attached to the truck (record as an increase in the cost of the truck)
5 Purchased salt, sand, and gravel on credit for $500 (recorded as an asset, unused supplies)
6 Paid truck operation expenses of $200
7 Paid $360 for a one-year truck insurance policy effective December 1 (record as an asset, prepaid expense)
14 Paid $1,500 in wages for two weeks
16 Paid $40 traffic ticket (record as truck operation expense)
20 Received a bill for $350 of truck repairs
24 Purchased tire chains on credit for $100 (recorded as truck operation expense)

24 Collected $3,500 of the amount billed December 3
27 Paid for the purchase made on December 5
28 Collected $400 for snow removal performed today for a new customer
28 Paid $1,500 in wages for two weeks
30 Called customers owing $1,500 billed December 3
31 Transferred the amount of December's truck insurance ($30) to insurance expense
31 Counted $100 of salt, sand, and gravel still on hand (record the amount used as supplies expense)
31 Recorded unpaid wages for three days applicable to December in the amount of $450
31 Billed customers $5,000 for December snow removal.

View Solution

Required:

1. Record the above transactions on a transactions worksheet and calculate the total of each column at the end of December. Use the following headings on your worksheet.

ASSETS									=	LIABILITIES				EQUITY		
Cash	+	Accounts Receivable	+	Prepaid Expense	+	Unused Supplies	+	Truck	=	Accounts Payable	+	Wages Payable	+	Share Capital	+	Retained Earnings

2. Prepare an income statement and a statement of changes in equity for the month-ended December 31, 2011, and a balance sheet at December 31. Identify the revenue as "Service Revenue". Record the expenses in alphabetical order.

CHAPTER TWO

The Accounting Process

Accounting information is prepared and communicated in accordance with accepted practice and pronouncements by authoritative accounting bodies. The answers to the following questions are discussed in Chapter 2:

1. What are the most significant generally accepted accounting principles (GAAP)?
2. What are some limitations on the application of GAAP?
3. How are accounts used in the accounting process?
4. What are the meanings of the terms *debit* and *credit*?
5. How does use of debits and credits facilitate and control the accounting process?
6. What is the function of a trial balance? a general journal? a general ledger?
7. What are the sequential steps performed by the accountant in converting economic data into financial information?

A. Generally Accepted Accounting Principles

Financial statements are prepared according to a number of conventions and underlying assumptions. These are codified in a framework of guiding principles called **generally accepted accounting principles (GAAP)** . This framework provides consistency and predictability to the way financial information is presented in financial statements.

Objectives of Financial Statements

Though there are a wide variety of potential users of financial statement information, pre-eminence is given to the needs of existing and potential shareholders and creditors under GAAP (as opposed to unions and taxation authorities, for instance). Shareholders and creditors need information to help them make investing and lending decisions about a corporation. Useful financial information must be *relevant* and *accurate.* Information is relevant if it makes a difference to the decisions made by investors and creditors. It is accurate if it is complete, and free from errors and bias.

Useful financial information also enables users to *compare* differences and similarities between corporations and within a corporation over time. It is *verifiable*, meaning that independent and reasonably knowledgeable users would agree that financial statement information is accurate. It is *timely*, in that users have information available soon enough to influence their decisions. Finally, financial information should be *understandable*. That is, it should be classified and presented clearly and concisely. To facilitate the preparation of useful financial statements, several other assumptions are necessary. These are discussed below.

Generally Accepted Assumptions

Several assumptions are used to produce financial statements that are more informative for readers.

Assumption 1: The Entity

The **entity concept** assumes that each organization is seen as an individual unit of accountability separate from its owners. Separate records are kept for the transactions of each entity; the assets and liabilities of each entity are kept separate from the assets and liabilities of those who own it.

Assumption 2: The Going Concern

One of the most fundamental assumptions in financial accounting is the **going concern** or *continuity* concept. This assumes that an entity will continue to operate for an indefinite period of time. The going concern concept provides the rationale for using historical cost as the basis for the measurement of assets and liabilities. For example, valuing a long-lived asset like a building at its estimated selling price on the balance sheet is not seen as important, since it is assumed that the corporation will continue into the future and retain the building.

Assumption 3: The Measuring Unit

Accounting transactions are recorded and measured around the world in monetary terms; for instance, in Canada they are recorded in Canadian dollars. By expressing all assets and liabilities in a common form of monetary **measuring units**, accountants create a common denominator that aids in the preparation of uniform and readily understandable accounting information. The chosen measuring unit is also assumed to be stable; that is, changes to the general purchasing power of the dollar (inflation or deflation) are considered insignificant.

Assumption 4: Historical Cost

Financial transactions are recorded at **historical cost.** This cost is generally measured in terms of economic resources given up or exchanged to acquire other goods and services at the time; it is measured in units of money. Cost is viewed as a reasonable measure of an acquired asset because it is usually determined as a result of negotiations between two independent parties. Financial transactions based on historical cost can be substantiated by documents such as invoices, receipts for cash paid or received, cancelled cheques, cash register tapes, and sales tickets.

Assumption 5: Periodicity

The **periodicity concept** assumes that an entity's business activities can be separated into reporting periods so that financial statements can be prepared regularly. One implication is that revenues must be allocated to time periods in a consistent manner, and expenses matched with relevant revenues.

Assumption 6: Accrual Accounting and Matching

As noted above, the measurement of financial performance for an accounting time period requires the matching of expenses incurred and revenue generated during that particular time period. Matching is accomplished through use of the **accrual basis of accounting**. Accounts receivable, prepaid expenses, and accounts payable accounts are balance sheet items that arise through the use of accrual accounting.

Assumption 7: Revenue Recognition

A corporation's **revenue recognition** policy establishes the point at which the revenue of the entity is earned. Revenue is often assumed to be earned after goods have been exchanged but before payment in cash has been received, for instance.

There are exceptions to this assumption. Revenue can sometimes be recognised before a service has been completed or the goods have been exchanged. For example, in the case of a long-term construction contract, revenue can be recognised as various stages are completed, not when the entire project is done.

There are times when revenue is recognised when cash is received. In most of these cases, goods and services are provided simultaneously with payment in cash. A grocery purchase is one common example. However, it is important to recognise that the receipt of cash is often *not* the point at which revenue is chosen to be recorded on the income statement by an entity.

Limitations on the Disclosure of Useful Accounting Information

Financial statements are prepared and distributed at regular accounting time periods so that useful information is available for decision makers. Useful information is not always reported. Preparers of financial statements apply **materiality** considerations to determine whether particular items of information need to be disclosed. Some information may not be sufficiently large in amount or importance to affect the judgement of a reasonably knowledgeable user. For example, the cost of a calculator is not material when compared to the cost of Big Dog Carworks Ltd.'s tow truck. Although both are assets until their useful lives expire, the calculator's cost would not be shown as an asset on the balance sheet; rather, it would be recorded on the income statement as an expense when purchased because its cost is not significant.

In actual practice, no clear-cut distinction can be drawn between material and immaterial amounts. Each case has to be considered on its own merits. As a matter of expediency, management usually establishes materiality guidelines. The could state, for example, that expenditures below a certain amount will be immediately expensed on the income statement, even if the purchased item has a long useful life and could be recorded as an asset on the balance sheet.

Useful information is also not reported if the costs associated with its preparation exceed the expected benefits. This is an application of **cost-benefit considerations**. For example, a corporation may group long-lived assets into a few categories and disclose their decline in value through age or use as a group, rather than individually, because the costs of doing this for an individual asset outweighs the expected benefits to the reader.

B. Use of Accounts

The preceding chapter illustrated how accounting converts information from financial transactions into financial statements through the use of an expanded accounting equation. A simplified alternative is to record each transaction in an **account** and accumulate these amounts.

A separate account is used for each asset, liability, equity, type of revenue, and type of expense. A simplified account, called a **T–account** (because it resembles the letter T), is often used to represent this process. The term **debit** is used to describe the left side of the account, the term **credit** describes the right side:

Debit	*Credit*
(always the left side)	(always the right side)

The terms also mean "place an amount on the left side of an account" for debit and "place an amount on the right side of an account" for credit.

The *type* of account determines whether an increase or a decrease in a particular transaction is represented by a debit or credit. For financial transactions that affect *assets* and *expenses,* increases are recorded by debits and decreases by credits. This guideline can be explained using the following T–account.

Debit	*Credit*
(always the left side)	(always the right side)
A debit records an increase in assets and expenses.	A credit records a decrease in assets and expenses.

For financial transactions that affect *liabilities, equity,* and *revenues*, increases are recorded by credits and decreases by debits, as follows:

Debit	*Credit*
(always the left side)	(always the right side)
A debit records a	A credit records an
decrease in liabilities,	increase in liabilities,
equity, and revenues.	equity, and revenues.

The following summary shows how debits and credits are used to record increases and decreases in various types of accounts.

ASSESTS EXPENSES	LIABILITIES EQUITY REVENUE
Increases are DEBITED	Increases are CREDITED
Decreases are CREDITED	Decreases are DEBITED

This summary is used in the following pages to illustrate transactions of Big Dog Carworks Ltd. introduced in chapter 1.

Classification of Accounting Entries

The equal and offsetting nature of accounting transactions was illustrated in the preceding chapter. Transactions were first analysed to determine the change in each item of the accounting equation. Increases and decreases were then recorded in an expanded accounting equation that showed individual balance sheet items.

In the expanded BDCL example that follows, there will be similarly-named T-accounts used for cash, accounts receivable, prepaid insurance, equipment, truck, bank loan, accounts payable, unearned repair revenue, and share capital. However, new T-accounts will be used for income statement items that were previously combined into the retained earnings column – repair revenue, rent expense, salaries expense, supplies expense, and truck operation expense.

Again, each financial transaction affects at least two accounts. If a transaction affects the left side of one account, it affects the right side of another account, and vice versa. The first three BDCL transactions from chapter 1 illustrate this. They are shown in T-account form in Figure 2–1.

	ASSET		=	LIABILITY		+	EQUITY	
Type of Transaction	*Debit* (increase)	Credit (decrease)		*Debit* (decrease)	*Credit* (increase)		*Debit* (decrease)	*Credit* (increase)
1. An increase in an asset and an increase in equity: For example, the first transaction of BDCL was to issue share capital for $10,000 cash.	10,000							10,000
2. An increase in an asset and an increase in a liability: The next transaction was the receipt of a bank loan.	3,000				3,000			
3. An increase in an asset and a decrease in another asset: The corporation purchased equipment for $3,000 cash.	3,000	3,000						

Figure 2–1 Double–entry accounting using T–accounts

Notice that in transaction, a change on one side of a T-account always results in an equal change on the other side of an account. This debit-credit mechanism is another way to illustrate the double-entry accounting model.

C. Transactions Analysis Using Accounts

The debit and credit system and use of accounts is an efficient way to keep track of even millions of financial transactions that may occur in a business.

Illustrative Problem— The Debit–Credit Mechanism and Use of Accounts

Below, all the transactions of Big Dog Carworks Ltd. described in chapter 1 are recorded using debits and credits. Refer to the following chart as you analyse each transaction.

ASSESTS EXPENSES	LIABILITIES EQUITY REVENUE
Increases are DEBITED	Increases are CREDITED
Decreases are CREDITED	Decreases are DEBITED

Using T-accounts, the actual transactions would be recorded as follows:

Jan. 1 Transaction 1: Share capital issued for cash
Big Dog Carworks Ltd. issued 1,000 shares for a total of $10,000 cash.

			Application of Debit–Credit Methodology	
Transaction Number	*Date*	*Description of the Transaction*	*Debit*	*Credit*
1	Jan. 1	Issued 1,000 shares for $10,000 cash to Bob Baldwin, the owner	Cash	Share Capital
2	2	The company borrowed $3,000 from the bank. The funds were deposited into the company's bank account	Cash	Bank Loan
3	2	Purchased $3,000 of equipment for cash	Equipment	Cash
4	3	The corporation purchased a tow truck for $8,000, paying $3,000 cash and incurring an additional bank loan for the balance	Truck	Cash, Bank Loan
5	5	Paid $2,400 for a one-year insurance policy effective January 1	Prepaid Insurance	Cash
6	10	Paid $2,000 cash to the bank to reduce the loan outstanding	Bank Loan	Cash
7	15	Received $400 as an advance payment from a customer for services to be performed over the next two months: $300 for February, $100 for March	Cash	Unearned Repair Revenue
8	31	Performed vehicle repairs amounting to $10,000 for a customer as follows: a. $8,000 of repairs were made for cash, b. $2,000 of repairs will be paid next month	Cash Accounts Receivable	Repair Revenue
9	31	Paid $7,800 of operating expenses in cash for the month as follows:		
		$1,600 for rent,	Rent Expense	Cash
		$3,500 for salaries,	Salaries Expense	Cash
		$2,000 for supplies expense,	Supplies Expense	Cash
		$700 for truck expenses.	Truck Operation Expense	Cash
10	31	Received a $200 bill from a supplier for parts purchased and used in January	Supplies Expense	Accounts Payable

Analysis: An asset account, Cash, is increased by this transaction.
Debit: An asset is increased by a debit.
Debit Cash 10,000

Cash

Dr.	*Cr.*
10,000	

An equity account, Share Capital, is also increased.
Credit: An equity is increased by a credit.
Credit Share Capital 10,000

Share Capital

Dr.	*Cr.*
	10,000

Jan. 2 Transaction 2: A bank loan is received

A $3,000 bank loan is received.

Analysis: The asset account Cash is increased.
Debit: An asset is increased by a debit.

Debit Cash 3,000

Cash

Dr.	Cr.
3,000	

A liability account, Bank Loan, is increased.
Credit: A liability is increased by a credit.

Credit Bank Loan 3,000

Bank Loan

Dr.	Cr.
	3,000

Jan. 3 Transaction 3: Equipment is purchased for cash

Equipment is purchased for $3,000 cash.

Analysis: As asset is acquired in exchange for another asset. The asset account Equipment is increased.
Debit: An asset is increased by a debit.

Debit Equipment 3,000

Equipment

Dr.	Cr.
3,000	

The asset account Cash is decreased.
Credit: An asset is decreased by a credit.

Credit Cash 3,000

Cash

Dr.	Cr.
	3,000

Jan. 3 Transaction 4: A truck is purchased in part for cash and in part with a bank loan

A truck was purchased for $8,000; BDCL paid $3,000 cash and incurred a bank loan for the balance.

Analysis: As asset is acquired in exchange for another asset and a liability is incurred. The asset account Truck is increased.
Debit: An asset is increased by a debit.

Debit Truck 8,000

Truck

Dr.	Cr.
8,000	

The asset account Cash is decreased.
Credit: An asset is decreased by a credit.

Credit Cash 3,000

Cash

Dr.	Cr.
	3,000

A liability account, Bank Loan, is increased.
Credit: A liability is increased by a credit.

Credit Bank Loan 5,000

Bank Loan

Dr.	Cr.
	5,000

Jan. 5 Transaction 5: An asset is exchanged for another asset

Big Dog Carworks Ltd. paid $2,400 cash for a one-year insurance policy, effective January 1.

Analysis: Since the one-year period will not expire by the time financial statements are prepared, the insurance cost has a future benefit and is considered to be an asset at the payment date. The asset account, Prepaid Insurance, is increased by this transaction.
Debit: An asset is increased by a debit.

Debit Prepaid Insurance 2,400

Prepaid Insurance

Dr.	Cr.
2,400	

Payment of the insurance results in a decrease in the asset account, Cash.

Cash

Credit: An asset is decreased by a credit.

Credit Cash 2,400

Dr.	*Cr.*
	2,400

Jan. 10 Transaction 6: A liability is paid

The corporation paid $2,000 cash to reduce the bank loan.

Analysis: This payment decreases the liability Bank Loan.

Debit: A liability is decreased by a debit.

Debit Bank Loan 2,000

Bank Loan

Dr.	*Cr.*
2,000	

The payment also decreases the asset Cash.

Credit: An asset is decreased by a credit.

Credit Cash 2,000

Cash

Dr.	*Cr.*
	2,000

Jan. 15 Transaction 7: Cash is received in advance of being earned

The corporation received an advance payment of $400 for repair services to be performed as follows: $300 in February and $100 in March.

Analysis: The asset account Cash is increased at the time the cash is received.

Debit: An asset is increased by a debit.

Debit Cash 500

Cash

Dr.	*Cr.*
500	

Since the revenue relating to this cash receipt will not be earned by the end of January, a liability account, Unearned Repair Revenue, is created to record this transaction.

Credit: A liability is increased by a credit.

Credit Unearned Repair Revenue 500

Unearned Repair Revenue

Dr.	*Cr.*
	500

Jan. 31 Transaction 8: Revenue is earned

A total of $10,000 of automotive repair services is performed for a customer. The company is paid $8,000 cash. $2,000 is still owing to BDCL by the customer.

Analysis:

a. The asset Cash is increased.

Debit: An asset is increased by a debit.

Debit Cash 8,000

Cash

Dr.	*Cr.*
8,000	

This revenue of the corporation is increased.

Credit: A revenue is increased by a credit.

Credit Repair Revenue 8,000

Repair Revenue

Dr.	*Cr.*
	8,000

b. An asset Accounts Receivable is created for the balance

Debit: An asset is increased by a debit.

Debit Accounts Receivable 2,000

Accounts Receivable

Dr.	*Cr.*
2,000	

This also increases revenue of the corporation.

Credit: A revenue is increased by a credit.

Credit Repair Revenue 2,000

Repair Revenue

Dr.	*Cr.*
	2,000

Jan. 31 Transaction 9: Expenses are paid in cash

Operating expenses of $7,800 were paid in cash during the month to earn the repair revenue described in transaction 8. These expenses consisted of rent, $1,600; salaries expense, $3,500; supplies expense, $2,000; and truck operation expense, $700.

Analysis: These transactions increase expenses and result in an outflow of cash.
Debit: Expenses are increased by a debit.

Debit	Rent Expense	1,600 →
Debit	Salaries Expense	3,500 →
Debit	Supplies Expense	2,000 →
Debit	Truck Operation Expense	700 →

Rent Expense	
1,600	

Salaries Expense	
3,500	

Supplies Expense	
2,000	

Truck Operation Expense	
700	

Note that each expense is recorded in an individual T-account. The total payment of these expenses amounts to $7,800 ($1,600 + $3,500 + $2,000 + $700). Since they have been paid in cash, the Cash account is decreased by $7,800.
Credit: An asset is decreased by a credit.

Credit	Cash	7,800 →

Cash	
Dr.	*Cr.*
	7,800

Jan. 31 Transaction 10: A bill is received from a supplier
The corporation received a bill for $200 from a supplier for parts used during January.

Analysis: This transaction increases an expense and incurs a liability.
Debit: An expense is increased by a debit.

Debit	Supplies Expense	200 →

Supplies Expense	
Dr.	*Cr.*
200	

This transaction will be added to the $2,000 debited to Supplies Expense in transaction 9 above.

Credit: A liability is increased by a credit.

Credit	Accounts Payable	200 →

Accounts Payable	
Dr.	*Cr.*
	500

Trial Balance Preparation

After the January transactions of the Big Dog Carworks Ltd. have been posted, each account is totalled and the difference between the debit balance and the credit balance is calculated, as shown in the following diagram. For instance, the ending balance of the Cash account is a debit of $3,200 ($21,400 – 18,200). The numbers in parentheses refer to the transaction numbers used in the preceding pages.

ASSETS
(Economic resources owned
by the company)

Cash

(1)	10,000	(3)	3,000
(2)	3,000	(4)	3,000
(7)	400	(5)	2,400
(8a)	8,000	(6)	2,000
		(9)	7,800
	21,400		18,200
Bal.	3,200		

Accounts Receivable

(8b)	2,000		

Prepaid Insurance

(5)	2,400		

Equipment

(3)	3,000		

Truck

(4)	8,000		

LIABILITIES
(Creditors' claims to
assets)

Bank Loan

(6)	2,000	(2)	3,000
		(4)	5,000
	2,000		8,000
		Bal.	6,000

Accounts Payable

		(10)	200

Unearned Repair Revenue

		(7)	400

SHAREHOLDERS' EQUITY
(Owners' claims to assets)

Share Capital

		(1)	10,000

Repair Revenue

		(8a)	8,000
		(8b)	2,000
		Bal.	10,000

Rent Expense

(9)	1,600		

Salaries Expense

(9)	3,500		

Supplies Expense

(9)	2,000		
(10)	200		
Bal.	2,200		

Truck Operation Expense

(9)	700		

A **trial balance** is then prepared. This lists and totals all the debit and credit account balances in a two-column schedule. It is prepared after all transactions for the accounting period (January in this case) have been recorded in appropriate accounts, and before the preparation of the financial statements. The form and content of a trial balance is illustrated below, using the account labels and account balances of Big Dog Carworks Ltd.:

Big Dog Carworks Ltd.
Trial Balance
At January 31, 2011

	Account Balances	
	Debit	*Credit*
Cash	$ 3,200	
Accounts Receivable	2,000	
Prepaid Insurance	2,400	
Equipment	3,000	
Truck	8,000	
Bank Loan		$ 6,000
Accounts Payable		200
Unearned Repair Revenue		400
Share Capital		10,000
Repair Revenue		10,000
Rent Expense	1,600	
Salaries Expense	3,500	
Supplies Expense	2,200	
Truck Operation Expense	700	
Debits = Credits	$26,600	$26,600

These accounts are used to prepare the income statement.

Since a double-entry system has been used in recording the transactions of Big Dog Carworks Ltd., the total of debit account balances must equal the total of credit account balances ($26,600 in this case). The trial balance establishes that this equality actually exists, but it does not ensure that each item has been entered in the proper account. Neither does it ensure that all items that should have been entered have in fact been entered. Both of these errors could occur and the trial balance would still balance. In addition, a transaction may be recorded twice. Nevertheless, a trial balance provides a useful mathematical check before preparing financial statements.

Preparation of Financial Statements

Financial statements for the one-month period ended January 31, 2011 can now be prepared from the trial balance figures, similar to the process shown in Figures 1-2a and 1-2b in chapter 1. First, an income statement is prepared.

Big Dog Carworks Ltd.
Trial Balance
At January 31, 2011

	Account Balances	
	Debit	*Credit*
Cash	$ 3,200	
Accounts Receivable	2,000	
Prepaid Insurance	2,400	
Equipment	3,000	
Truck	8,000	
Bank Loan		$ 6,000
Accounts Payable		200
Unearned Revenue		400
Share Capital		10,000
Repair Revenue		10,000
Rent Expense	1,600	
Salaries Expense	3,500	
Supplies Expense	2,200	
Truck Operation Expense	700	
	$26,600	$26,600

Big Dog Carworks Ltd.
Income Statement
For the Month Ended Jan. 31, 2011

Revenue		
Repairs		$10,000
Expenses		
Rent	1,600	
Salaries	3,500	
Supplies	2,200	
Truck Operation	700	
Total Expenses		8,000
Net Income		$2,000

Expenses are deducted from revenue to measure the amount of net income for January.

Big Dog Carworks Ltd.
Statement Of Changes In Equity
For the Month Ended January 31, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Balance at Beginning of Period	$ -0-	$ -0-	$ -0-
Shares Issued	10,000		10,000
Net Income		2,000	2,000
Balance at End of Period	$10,000	$ 2,000	$12,000

Net income is transferred to the statement of changes in equity as part of retained earnings.

The asset and liability accounts from the trial balance and the ending balances for share capital and retained earnings on the statement of changes in equity are used to prepare the balance sheet.

These accounts are used to prepare the balance sheet.

Big Dog Carworks Ltd.
Trial Balance
At January 31, 2011

	Account Balances	
	Debit	*Credit*
Cash	$ 3,200	
Accounts Receivable	2,000	
Prepaid Insurance	2,400	
Equipment	3,000	
Truck	8,000	
Bank Loan		$ 6,000
Accounts Payable		200
Unearned Repair Revenue		400
Share Capital		10,000
Repair Revenue		10,000
Rent Expense	1,600	
Salaries Expense	3,500	
Supplies Expense	2,200	
Truck Operation Expense	700	
	$26,600	$26,600

Big Dog Carworks Ltd.
Balance Sheet
At January 31, 2011

Assets		
Cash	$ 3,200	
Accounts Receivable	2,000	
Prepaid Insurance	2,400	
Equipment	3,000	
Truck	8,000	
Total Assets		$18,600
Liabilities		
Bank Loan	$ 6,000	
Accounts Payable	200	
Unearned Repair Rev.	400	$6,600
Shareholders' Equity		
Share Capital	$10,000	
Retained Earnings	2,000	12,000
Total Liabilities and Shareholders' Equity		$18,600

The retained earnings balance is transferred to the balance sheet from the statement of changes in equity.

D. Using Formal Accounting Records

The preceding analysis of financial transactions included a debit and credit entry for each transaction as well as the accumulation of dollar amounts in T–accounts. This method will be used for illustrative purposes throughout the remainder of the text. In actual practice, accounting transactions are recorded in a **general journal** and **general ledger**.

A general journal is a ruled form used to chronologically record the debit and credit analysis of the entity's financial transactions (see Figure 2-2). It is often referred to as a *book of original entry*. **Journalising** is the process of recording a financial transaction (called a **journal entry**) in a journal. In addition to a general journal, formal accounting records also include specialised journals. Some of these will be discussed later.

A general ledger is a ruled form used to maintain all the accounts of the entity in one place. **Posting** is the process of transferring amounts from the journal to the applicable general ledger account. Because balances recorded in the general ledger are used to prepare a financial statements, the general ledger is sometimes referred to as a *book of final entry*.

Recording Transactions in the General Journal

A general journal provides a complete record of transactions in chronological order in one place. Each transaction is recorded first in the journal. The January transactions of Big Dog Carworks Ltd. are recorded in its general journal in Figure 2-2. The journalising procedure follows these steps (refer to diagram for corresponding numbers):

1. The year is recorded at the top and the month is entered on the first line of page 1. This information is repeated only on each new journal page used to record transactions.
2. The date of the first transaction is entered in the second column, on the first line. The day of each transaction is always recorded in this second column.
3. The name of the account to be debited is entered in the description column on the first line. By convention, accounts to be debited are usually recorded before accounts to be credited. The column titled ‘F’ (for Folio) indicates the number given to the account in the general ledger. For example, the account number for Cash is 101. The amount of the debit is recorded in the debit column. A dash is often used by accountants in place of “.00”.
4. The name of the account to be credited is on the second line of the description column and is indented about one centimetre into the column. Accounts to be credited are always indented in this way in the journal. The amount of the credit is recorded in the credit column. Again, a dash may be used in place of “.00”.
5. An explanation of the transaction is entered also in the description column on the next line. It is not indented.
6. A line is usually skipped after each journal entry to separate individual journal entries and the date of the next entry recorded. It is unnecessary to repeat the month (January here) if it is unchanged from that recorded at the top of the page.

This entry instructs:
1. Post $10,000 to the debit side of the Cash account (increasing cash by $10,000), and
2. Post $10,000 to the credit side of the share capital account (increasing this account by $10,000).

GENERAL JOURNAL

Page 1

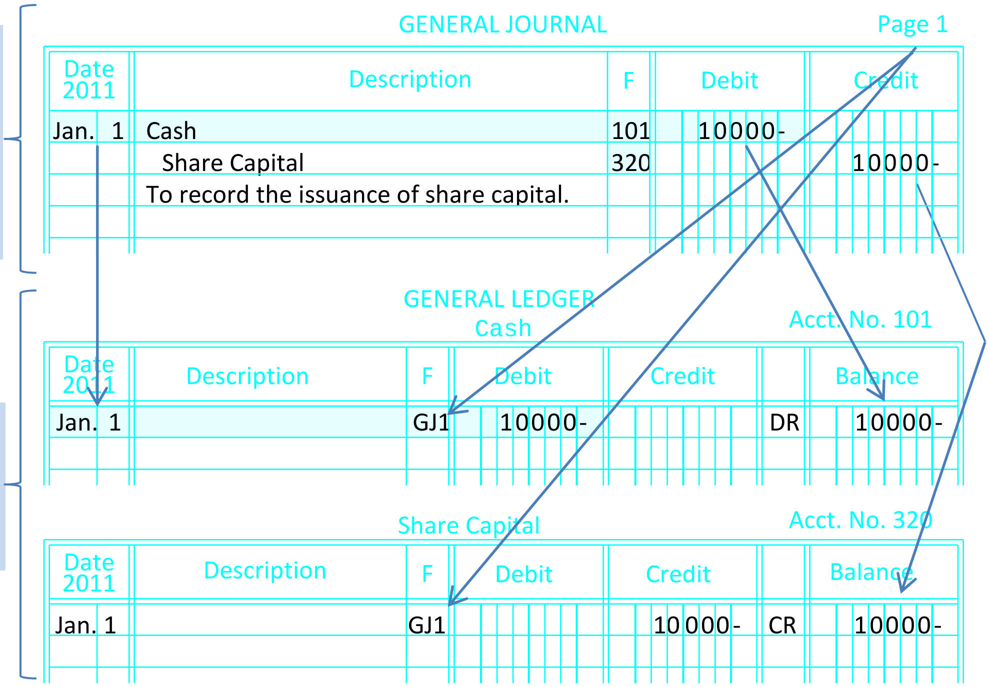
	Date		Description	F	Debit	Credit
1	2011					
	Jan.	1	Cash	101	10000-	
2			Share Capital	320		10000-
			To record the issuance of share capital.			
3		2	Cash	101	3000-	
4			Bank Loan	201		3000-
5			To record receipt of a bank loan.			
6						
		2	Equipment	183	3000-	
			Cash	101		3000-
			To record the purchase of equipment for cash.			
		3	Truck	184	8000-	
			Bank Loan	201		5000-
			Cash	101		3000-
			To record the purchase of a tow truck; paid cash and incurred additional bank loan.			
		5	Prepaid Insurance	161	2400-	
			Cash	101		2400-
			To record payment for a one-year insurance policy.			
		10	Bank Loan	201	2000-	
			Cash	101		2000-
			To record payment on bank loan.			
		15	Cash	101	400-	
			Unearned Repair Revenue	247		400-
			To record receipt of payment for services not performed: $300 for February, $100 for March			
		31	Cash	101	8000-	
			Accounts Receivable	110	2000-	
			Repair Revenue	450		10000-
			To record repair revenue earned in January.			
		31	Rent Expense	654	1600-	
			Salaries Expense	656	3500-	
			Supplies Expense	668	2000-	
			Truck Operation Expense	670	700-	
			Cash	101		7800-
			To record cash payment of expenses for the month.			
		31	Supplies Expense	668	200-	
			Accounts Payable	210		200-
			To record bill from supplier.			

Figure 2–2 General journal transactions for BDCL in January

BDCL's first two journal entries have one debit and credit. An entry can also have more than one debit or credit, in which case it is referred to as a *compound* entry. The entry of January 3 is an example of a compound entry.

Posting Transactions to the General Ledger

The **general ledger account** is a more formal variation of the general ledger T–account. In a manual accounting system, these ledger accounts are kept in the general ledger, often in the form of a loose–leaf binder. Debits and credits recorded in the general journal are posted to appropriate ledger accounts so that the balance of each account can be found easily at any time. The posting of amounts and recording of other information is illustrated in Figure 2-3, using the first transaction of Big Dog Carworks Ltd.



The general journal records each financial transaction in double entry form. Each side of the entry is transferred to a separate general ledger account.

GENERAL JOURNAL Page 1

Date 2011	Description	F	Debit	Credit
Jan. 1	Cash	101	10000-	
	Share Capital	320		10000-
	To record the issuance of share capital.			

The general ledger stores transactions according to account and keeps a running total of each account balance.

GENERAL LEDGER

Cash Acct. No. 101

Date 2011	Description	F	Debit	Credit		Balance
Jan. 1		GJ1	10000-		DR	10000-

Share Capital Acct. No. 320

Date 2011	Description	F	Debit	Credit		Balance
Jan. 1		GJ1		10 000-	CR	10000-

Figure 2–3 Illustration of a transaction posted to two accounts in the general ledger

1. The date and amount are posted to the appropriate ledger account. Here the debit entry is posted to the Cash ledger account and the credit entry is posted to the Share Capital ledger account.
2. The journal page number is recorded in the folio (F) column of each ledger account as a cross reference. In this case, the posting has been made from general journal page 1; the reference is recorded as GJ1.
3. The appropriate ledger account number is recorded in the folio (F) column of the general journal to indicate the posting has been made to that particular account. Here the debit entry has been posted to account number 101 and the credit entry to account number 320.
4. Following the posting process, a balance is calculated for each ledger account. A notation is recorded in the Dr./Cr. column of the general ledger indicating whether the balance in the account is a debit or credit. A brief description can explain non-routine transactions, but this is generally not necessary since the general journal entry includes a detailed description.

This manual process of recording, posting, summarising, and preparing financial statements is cumbersome and time-consuming. In virtually all businesses, the procedures are now performed by computers using accounting software. In this and subsequent chapters, either the conceptual T–account or the more formal three–column ledger account can be used in completing assignment material. Both types of accounts are used in subsequent chapters.

Chart of Accounts

The general ledger accounts used by an entity are organised using a **chart of accounts.** Typically, accounts are grouped within asset, liability, equity, revenue, and expense classifications; a number is assigned to each account to be used. Gaps are left in the numerical sequence so that other accounts can be added if needed. Following is the chart of accounts for Big Dog Carworks Ltd. that is also used in the assignment material and throughout the text. It is for illustrative purposes only. In practice, many numbering and naming systems can be used to organise an entity's ledger accounts. Many of these accounts are likely unfamiliar, but will be introduced and explained later as necessary.

BALANCE SHEET

100 – 199 ASSETS

Current Assets

100	Petty Cash
101	Cash
106	Temporary Investments
110	Accounts Receivable
111	Allowance for Doubtful Accounts
116	Interest Receivable
120	Notes Receivable
150	Merchandise Inventory
160	Prepaid Advertising
161	Prepaid Insurance
162	Prepaid Rent
170	Unused Office Supplies
171	Unused Repair Supplies
172	Unused Service Supplies
173	Unused Supplies

Property, Plant, and Equipment

180	Land
181	Building
182	Furniture
183	Equipment
184	Truck
191	Accum. Depreciation—Building
192	Accum. Depreciation—Furniture
193	Accum. Depreciation—Equipment
194	Accum. Depreciation—Truck
195	Intangible Assets
196	Accum Amortisation—Intangible Assets

200 – 299 LIABILITIES

Current Liabilities

201	Bank Loan—Current
210	Accounts Payable
214	Loans Payable
215	Mortgage Payable—Current
220	Notes Payable—Current
221	Dividends Payable
222	Interest Payable
226	Salaries Payable
231	Property Tax Payable
236	Utilities Payable
237	Wages Payable
240	Unearned Advertising Revenue
242	Unearned Commissions Revenue
244	Unearned Fees Revenue
246	Unearned Interest Revenue
247	Unearned Repair Revenue
248	Unearned Rent Revenue
249	Other Unearned Revenue
250	Unearned Subscriptions Revenue
260	Income Taxes Payable

Non-current Liabilities

271	Bank Loan—Non-Current
272	Bonds Payable—Non-Current
275	Mortgage Payable—Non-Current
280	Notes Payable—Non-Current

300 – 399 SHAREHOLDERS' EQUITY

320	Share Capital/Common Shares
325	Preferred Shares
340	Retained Earnings
350	Dividends Declared
360	Income Summary

INCOME STATEMENT

400 – 499 Revenue	
410	Commissions Earned
420	Fees Earned
430	Interest Earned
440	Rent Earned
450	Repair Revenue
460	Other Revenue
470	Service Revenue
480	Subscription Revenue
500 – 549 Sales Accounts	
500	Sales
508	Sales Returns and Allowances
509	Sales Discounts
550 – 599 Purchases Accounts	
550	Purchases (Periodic Inventory)
558	Purchases Returns and Allowances (Per.)
559	Purchases Discounts (Periodic Inventory)
560	Transportation In (Periodic Inventory)
570	Cost of Goods Sold (Perpetual Inventory)

600 – 699 Expenses	
610	Advertising Expense
613	Bad Debt Expense
615	Commissions Expense
620	Delivery Expense
621	Depreciation Expense—Building
622	Depreciation Expense—Furniture
623	Depreciation Expense—Equipment
624	Depreciation Expense—Truck
625	Impairment Loss
630	Equipment Rental Expense
631	Insurance Expense
632	Interest and Bank Charges Expense
641	Maintenance Expense
650	Office Supplies Expense
651	Property Taxes Expense
652	Miscellaneous General Expense
653	Miscellaneous Selling Expense
654	Rent Expense
655	Repair Supplies Expense
656	Salaries Expense
657	Salespersons' Salaries Expense
668	Supplies Expense
669	Telephone Expense
670	Truck Operation Expense
676	Utilities Expense
677	Wages Expense
750 – 799 Gains and Losses	
750	Gain on Disposal
760	Loss on Disposal
800 – 899 *Other Accounts*	
830	Income Taxes Expense

A common practice is to have the accounts arranged in a manner that is compatible with the order of their use in financial statements. For instance, Asset accounts begin with the digit '1', Liability accounts with the digit '2'. Although it is not a rigid rule to number accounts in this manner, it does have considerable advantages and is recommended.

The Accounting Cycle

In the preceding pages, the January transactions of Big Dog Carworks Ltd. were used to demonstrate the sequential steps performed by the accountant in converting economic data into financial information. This conversion was carried out in accordance with the basic double–entry accounting model. These sequential steps can be visually summarised as shown in Figure 2-4:

Step 1: Transactions are analysed and recorded.
Journalising consists of analysing transactions as they occur to see how they affect the accounting equation. Then, the transactions are recorded chronologically in the general journal.

Step 2: Transactions are summarized by account.
Posting consists of transferring debits and credits from the general journal to the appropriate general ledger accounts.

Step 3: The equality of debits and credits is established to ensure accuracy.
Preparing a trial balance consists of listing account names and balances to prove the equality to total debit balances with total credit balances.

Step 4: The summarised transactions are communicated.
Preparing the financial statements consists of using the balances listed in the columns of the trial balance to prepare the income statement, statement of changes in equity, and balance sheet.

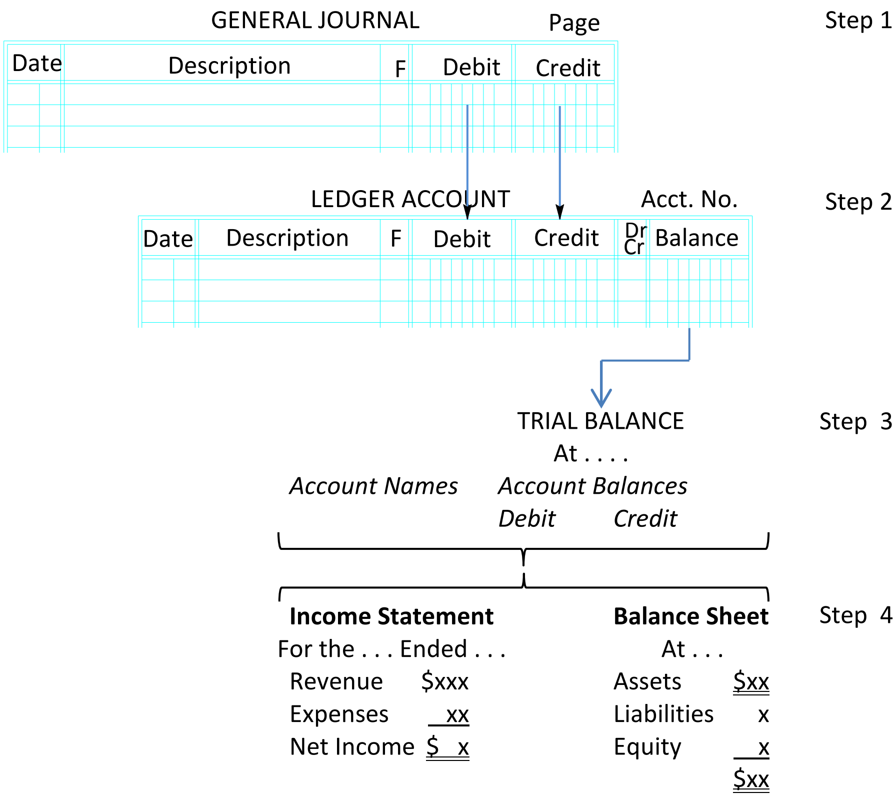


Figure 2–4 Illustration of steps in the accounting cycle

The sequence just described, beginning with the journalising of the transactions and ending with the communication of financial information in financial statements, is commonly referred to as the **accounting cycle**. Although the number of steps is expanded somewhat in chapter 3, the basic sequence is not changed; these additional steps are needed because of the large number of transactions facing the modern corporation and the special accounting procedures needed to communicate financial information in a given time period.

ASSIGNMENT MATERIALS

Discussion Questions

1. What are generally accepted accounting principles (GAAP)?
2. At what point is revenue often recognised?
3. How does the matching concept more accurately determine the net income of a business?
4. What are the qualities that accounting information is expected to have? What are the limitations on the disclosure of useful accounting information?
5. Why is the use of a transactions worksheet impractical in actual practice?
6. What is an ‘account’? How are debits and credits used to record transactions?
7. Some tend to associate “good” and “bad” or “increase” and “decrease” with credits and debits. Is this a valid association? Explain.
8. The pattern of recording increases as debits and decreases as credits is common to asset and expense accounts. Provide an example.
9. The pattern of recording increases and credits and decreases as debits is common to liabilities, equity, and revenue accounts. Provide an example.
10. Summarise the rules for using debits and credits to record assets, expenses, liabilities, equity, and revenues.
11. What is a trial balance? Why is it prepared?
12. How is a trial balance used to prepare financial statements?
13. A general journal is often called a book of original entry. Why?
14. The positioning of a debit–credit entry in the general journal is similar in some respects to instructions written in a computer program. Explain, using an example.
15. What is a general ledger? Why is it prepared?
16. What is a chart of accounts? How are the accounts generally arranged and why?
17. List the steps in the accounting cycle.

Comprehension Problems

CP 2–1

The following T–accounts show the relationship of increases and decreases to debits and credits:

Transaction	Any Asset		Any Liability		Share Capital		Any Revenue		Any Expense	
	Debit (increase)	*Credit* (decrease)	*Debit* (decrease)	*Credit* (increase)	*Debit* (decrease)	*Credit* (increase)	*Debit* (decrease)	*Credit* (increase)	*Debit* (decrease)	*Credit* (increase)
(1)	X					X				
(2)										
(3)										
(4)										
(5)										
(6)										
(7)										
(8)										
(9)										
(10)										
(11)										
(12)										
(13)										

View Solution

Required: For each of the following transactions, indicate in the chart above with an 'X' which accounts are debited and credited (transaction 1 is done for you):

1. Issued share capital for cash
2. Paid cash for a truck
3. Paid for prepaid insurance
4. Borrowed cash from the bank to purchase machinery
5. Received a bill from a local garage for truck repairs done last week
6. Collected cash for services performed today
7. Billed customers for services performed last week
8. Repaid part of the bank loan

9. Made a deposit for utility services to be used in the future
10. Paid cash for truck operation expenses related to 5. above
11. Received a bill for repair supplies used during the month
12. Made a cash payment to a creditor
13. Received a cash payment to satisfy an amount owed by a customer.

CP 2–2

The following lists show selected statement totals for four different companies: A, B, C, and D. In each case, the amount is omitted for one total.

	A	*B*	*C*	*D*
Current assets	$100	$ 72	$?	$ 20
Capital assets	200	130	71	200
Current liabilities	50	10	5	10
Long–term liabilities	75	?	25	61
Share capital	175	50	100	?
Net income	?	20	6	10

View Solution

Required: In each case, compute the missing figure.

CP 2–3

View Solution

Required: Record the debit and credit for each of the following transactions (transaction 1 is done for you):

	Assets		Liabilities		Equity	
	Debit (increase)	*Credit* (decrease)	*Debit* (decrease)	*Credit* (increase)	*Debit* (decrease)	*Credit* (increase)
1. Purchased a $10,000 truck on credit	10,000			10,000		
2. Borrowed $5,000 cash from the bank						
3. Paid $2,000 of the bank loan in cash						
4. Paid $600 in advance for a one–year insurance policy						
5. Received $500 in advance from a renter for next month's rental of office space.						

CP 2–4

View Solution

Required: Record the debit and credit in the appropriate account for each of the following transactions (transaction 1 is done for you):

		Debit	*Credit*
1.	Issued share capital for cash	Cash	Share Capital
2.	Purchased equipment on credit		
3.	Paid for a one–year insurance policy		
4.	Billed a customer for repairs completed today		
5.	Paid this month's rent		
6.	Collected the amount billed in transaction 4 above		
7.	Collected cash for repairs completed today		
8.	Paid for the equipment purchased in transaction 2 above		
9.	Signed a union contract		
10.	Collected cash for repairs to be made for customers next month		
11.	Transferred this month's portion of prepaid insurance to insurance expense.		

CP 2–5

View Solution

Required: Post the following transactions to the appropriate accounts:

1. Issued share capital for $5,000 cash (posted as an example)
2. Paid $900 in advance for three months' rent, $300 for each month
3. Billed $1,500 to customers for repairs completed today
4. Purchased on credit $2,000 of supplies to be used next
5. Borrowed $7,500 from the bank
6. Collected $500 for the amount billed in transaction 3
7. Received a $200 bill for electricity used to date (the bill will be paid next month)
8. Repaid $2,500 of the bank loan
9. Used $800 of the supplies purchased in transaction 4
10. Paid $2,000 for the supplies purchased in transaction 4
11. Re. transaction 2: transferred this month's rent to expenses.

Cash	
(1) 5,000	

Bank Loan	

Share Capital	
	(1) 5,000

Repair Revenue	

Accounts Receivable	

Accounts Payable	

Electricity Expense	

Prepaid Expense	

Rent Expense	

Unused Supplies	

Supplies Expense	

CP 2–6

View Solution

Required: Prepare journal entries for each of the following transactions:

1. Issued share capital for $3,000 cash
2. Purchased $2,000 of equipment on credit
3. Paid $400 cash for this month's rent
4. Purchased on credit $4,000 of supplies to be used next month
5. Billed $2,500 to customers for repairs made to date
6. Paid cash for one-half of the amount owing in transaction 4
7. Collected $500 of the amount billed in transaction 5
8. Sold one-half of the equipment purchased in transaction 2 above for $1,000 in cash.

CP 2–7

View Solution

Required: Prepare the journal entries and likely descriptions of the eleven transactions that were posted to the following general ledger accounts for the month ended January 31, 2011. Do not include amounts. For instance, the first entry would be:

1. Cash
    Share Capital
To record issuance of share capital.

Cash

1	2
3	5
8	10
11	

Bank Loan

	11

Share Capital

	1

Service Revenue

	3
	4

Accounts Receivable

4	

Accounts Payable

10	2
	6
	7

Rent Expense

9	

Prepaid Expenses

5	9

Supplies Expense

7	

Equipment

2	8

Truck Operation Expense

6	

CP 2–8

The following trial balance was prepared from the books of Cross Corporation at its year–end, December 31, 2011. After the company's bookkeeper left, the office staff was unable to balance the accounts or place them in their proper order. Individual account balances are correct, but debits may be incorrectly recorded as credits and vice-versa.

Account Title	*Account Balances*	
	Debits	*Credits*
Cash	$120,400	
Commissions earned	5,000	
Share capital		$170,000
Accounts payable	30,000	
Insurance expense	100	
Land		8,000
Building		120,000
Rent expense		1,000
Accounts receivable		26,000
Unused supplies	6,000	
Supplies expense		300
Loan payable		80,000
Salaries expense		3,000
Telephone expense	200	
Totals	$161,700	$408,300

View Solution

Required: Prepare a corrected trial balance showing the accounts in proper order and balances in the correct column. List expenses in alphabetical order. Total the columns and ensure total debits equal total credits.

CP 2–9

The following is Schulte Corporation’s transactions worksheet for the month of March. Each line represents the dollar amount of a transaction for the month.

	ASSETS							=	LIABILITY	+	EQUITY			
			Accounts		*Prepaid*		*Equipment*		*Accounts*		*Share*			
March	*Cash*	+	*Receivable*	+	*Rent*	+		=	*Payable*	+	*Capital*	+	*Retained Earnings*	
													Revenue	*Expenses*
1	+5										+5			
2	-3						+6		+3					
3	-2				+2									
15	+4		+2										+6 (Service)	
17	+1						-1							
18									+3					-3 (Supplies)
24			+1										+1 (Service)	
31					-1									-1 (Rent)
31									+2					-2 (Truck Op’n)
31	-1								-1					

View Solution

Required:

1. Prepare journal entries for the ten transactions including the likely description of the transaction. Include account numbers (Folio) using the chart of accounts section of this chapter.
2. Post the journal entries to T–accounts and total the accounts.
3. From the T–accounts, prepare a trial balance. List expenses in alphabetical order.
4. Prepare an income statement and statement of changes in equity for the month ended March 31, 2011 and a balance sheet at March 31, 2011.

CP 2–10

The following trial balance was prepared from the books of McQueen Corp. at its year–end, December 31, 2011. The new bookkeeper was unable to balance the accounts or to list them in their proper order. Individual account balances are correct, but debits may be classified as credits and vice-versa.

Account Title	*Account Balances*	
	Debit	*Credit*
Accounts payable	$ 8,550	
Accounts receivable		$10,000
Building	50,000	
Share capital	75,000	
Cash	15,500	
Furniture	6,000	
Land		12,000
Temporary investments		9,600
Mortgage payable		20,000
Notes payable	10,350	
Prepaid expenses		8,000
Unused supplies	2,800	
Totals	$168,200	$59,600

View Solution

Required: Prepare a corrected trial balance showing the accounts in proper order and balances in the correct column. List expenses in alphabetical order. Total the columns and ensure total debits equal total credits.

CP 2–11

The following general ledger accounts are taken from the books of Collins Corporation at June 30, 2011, the end of the first month of operation.

Cash

Jn. 1	25,000	Jn. 1	500
20	5,000	15	1,000
		23	4,000
		30	1,000
		30	2,000
		30	16,000

Loan Payable

		Jn. 30	4,000

Share Capital

		Jn. 1	25,000

Repair Revenue

		Jn. 20	5,000
		30	3,000

Temporary Investments

Jn. 30	2,000		

Accounts Payable

		Jn. 27	100

Rent Expense

Jn. 1	500		

Accounts Receivable

Jn. 30	3,000		

Salaries Expense

Jn. 15	1,000		
30	1,000		

Unused Supplies

Jn. 23	4,000	Jn. 30	200

Supplies Expense

Jn. 30	200		

Land

Jn. 30	5,000		

Telephone Expense

Jn. 27	100		

Building

Jn. 30	15,000		

View Solution

Required:

1. Prepare journal entries to record the June transactions, including likely descriptions of the transactions.
2. Total the T-accounts and prepare a trial balance at June 30.
3. Prepare an income statement and statement of changes in equity for the month ended June 30, 2011 and a balance sheet at June 30.

CP 2–12

The following trial balance has been prepared from the ledger of Sabre Travels Inc.

Sabre Travels Inc.
Trial Balance
January 31, 2011

	Account Balances	
	Debits	*Credits*
Cash	$ 60	
Accounts Receivable	140	
Unused Supplies	10	
Equipment	300	
Building	700	
Land	300	
Bank Loan		$100
Accounts Payable		20
Share Capital		250
Fees Earned		1,875
Advertising Expense	200	
Repairs Expense	100	
Supplies Expense	20	
Telephone Expense	10	
Utilities Expense	5	
Wages Expense	400	

View Solution

Required:

1. Calculate the total debits and credits.
2. Prepare an income statement and statement of changes in equity for the year ended January 31, 2011, and a balance sheet at January 31. Assume share capital was issued in the prior fiscal year and that opening retained earnings is zero.

CP 2–13

The following journal entries were prepared for Elgert Corporation for its first month of operation, January 2011.

		Debit	*Credit*
Jan. 1	Cash	10,000	
	Share Capital		10,000
	To record the issuance of shares.		
5	Rent Expense	200	
	Cash		200
	To record the payment of rent for the month.		
9	Unused Supplies	4,000	
	Cash		4,000
	To record the purchase of supplies.		
11	Cash	1,300	
	Service Revenue		1,300
	To record service revenue earned.		
28	Truck Operation Expense	450	
	Accounts Payable		450
	To record truck repairs.		
30	Salaries Expense	1,800	
	Cash		1,800
	To record payment of salaries for the month.		
31	Accounts Receivable	1,600	
	Service Revenue		1,600
	To record service revenue earned during the month.		
31.	Supplies Expense	200	
	Unused Supplies		200
	To record supplies used during the month.		

View Solution

Required:

1. Prepare necessary general ledger T-accounts and post the transactions.
2. Prepare a trial balance at January 31, 2011.
3. Prepare an income statement and statement of changes in equity for the month ended January 31, 2011 and a balance sheet at January 31, 2011.

Problems

P 2–1

Financial statements are prepared according to a number of accounting assumptions, qualities, and limitations, some of which are listed below:

1. Entity
2. Going concern
3. Measuring unit
4. Historical cost
5. Time period
6. Accrual accounting and matching
7. Revenue recognition
8. Relevance
9. Accuracy
10. Comparability
11. Verifiability
12. Timeliness
13 Understandability
14. Materiality
15. Cost-benefit judgements

Required: Identify the assumption, quality, or limitation that would apply in each of the following situations. Explain your choice.

Assumption, quality, or limitation

______________ a. The MAC Corporation accountants close its books each December 31 and prepare financial statements for the year.

______________ b. A Robbins Limited accountant records a $25 stapler with a five–year life as an expense. Caldwell has total assets of $1,000,000.

______________ c. Fred Rozak, an independent consultant, must keep a set of books for his consulting firm and a separate set of books for his personal records.

______________ d. A machine is recorded at its purchase price of $9,000 and is not revalued at the end of the accounting period to reflect its market value of $10,000.

______________ e. An asset purchased in 2011 for $10,000 and an asset purchased in 2018 for $10,000 are both recorded as $10,000, even though inflation has reduced the purchasing power of the dollar by 50 per cent in the meantime.

______________ f. Accountants of Hull Corporation do not record the value of its property, plant, and equipment at the much lower amount for which they could be sold in the near future.

______________ g. A potential creditor of Laboucan Corporation decides not to lend money to the corporation because of the large amount of debt repayments that the corporation will need to make next year.

______________ h. Lee Corporation's senior managers decide not to include estimated fair values of property, plant, and equipment in the company's Notes to the Financial Statements.

______________ i. Investors of Spellman Corporation note that revenue of the company has increased 10% compared to the prior fiscal year.

______________ j. Looten Corporation senior managers decide to record a recent $2 million lawsuit settlement as expense in the current fiscal year, even though this amount will not likely be paid in cash for two years.

P 2–2

The following account balances are taken from the records of Fox Creek Service Limited at October 31, 2011 after its first year of operation:

Accounts Payable	$9,000
Accounts Receivable	6,000
Advertising Expense	2,200
Bank Loan	5,000
Cash	1,000
Share Capital	2,000
Commissions Expense	4,500
Equipment	7,000
Insurance Expense	$ 500
Repair Revenue	19,000
Supplies Expense	800
Telephone Expense	250
Truck	9,000
Truck Operation Expense	1,250
Wages Expense	4,000
Wages Payable	1,500

Required:

1. Prepare a trial balance at October 31, 2011.
2. Prepare an income statement and statement of changes in equity for the year ended October 31, 2011.
3. Prepare a balance sheet at October 31, 2011.

P 2–3

The following ledger accounts were prepared for Davidson Tool Rentals Corporation during the first month of operation ending May 31, 2011. No journal entries were prepared in support of the amounts recorded in the ledger accounts.

Cash

May 1	5,000	May 11	1,000
6	2,000	16	500
10	1,500	20	300
15	1,200	22	600
21	800	28	400
		29	3,500

Accounts Receivable

May 5	3,000	May 10	1,500
18	2,500	15	1,200

Prepaid Advertising

May 16	500	May 31	250

Unused Supplies

May 20	300	May 30	100

Equipment

May 11	2,000	May 21	800

Accounts Payable

May 22	600	May 11	1,000
		23	150
		24	1,100

Share Capital

		May 1	5,000

Service Revenue

		May 5	3,000
		6	2,000
		18	2,500

Advertising Expense

May 31	250		

Commissions Expense

May 24	1,100		

Rent Expense

May 28	400		

Salaries Expense

May 29	3,500		

Supplies Expense

May 30	100		

Telephone Expense

May 23	150		

Required:

1. Reconstruct the transactions that occurred during the month and prepare journal entries to record these transactions, including appropriate descriptions. Include accounts numbers (Folio) using the chart of accounts section of this chapter. Calculate the balance in each account.
2. Total the transactions in each T-account above. Prepare a trial balance in proper order (list assets, liabilities, equity, revenue, then expenses) at May 31, 2011.

P 2–4

The following trial balance was prepared for Findlay Consultants Corp. at January 31, 2011, its first month of operation.

Findlay Consultants Corp.
Trial Balance
At January 31, 2011

	Account Balances	
	Debits	*Credits*
Accounts Payable	$ 9,000	
Accounts Receivable		
Advertising Expense	150	
Cash		$ 3,625
Share Capital	2,000	
Equipment		7,000
Furniture		4,000
Utilities Payable		1,000
Insurance Expense	200	
Maintenance Expense		250
Prepaid Advertising	300	
Fees Earned	9,500	
Rent Expense		400
Salaries Expense		2,600
Salaries Payable		1,500
Supplies Expense	350	
Telephone Expense	125	
Truck	9,000	
Truck Operation Expense		750
Wages Expense		1,500
	$30,625	$30,625

Required:

1. Prepare a corrected trial balance at January 31. List the accounts according to the sequence and classification of accounts shown in the chart of accounts in this chapter. Record the amounts in their proper debit or credit positions. Re-add total debits and credits and ensure they are equal.
2. Prepare an income statement and statement of changes in equity for the month ended January 31, 2011.
3. Prepare a balance sheet at January 31, 2011.

P 2–5

The following balances appeared in the general ledger accounts of Fenton Table Rentals Corporation at April 1, 2011.

Cash	$1,400	Accounts Payable	$2,000
Accounts Receivable	3,600	Share Capital	4,350
Prepaid Rent	1,000		
Unused Supplies	350		

The following transactions occurred during April:

a. Collected $2,000 cash owed by a customer
b. Billed $3,000 to customers for tables rented to date
c. Paid the following expenses: advertising, $300; salaries, $2,000; telephone, $100
d. Paid half of the accounts payable owing at April 1
e. Received a $500 bill for April truck repair expenses
f. Collected $2,500 owed by a customer
g. Billed $1,500 to customers for tables rented to date
h. Transferred $500 of prepaid rent to rent expense
i. Counted $200 of supplies on hand at April 30; recorded the amount used as an expense.

Required:

1. Open general ledger T-accounts for the following and enter the April 1 balances: Cash, Accounts Receivable, Prepaid Rent, Unused Supplies, Accounts Payable, Share Capital, Service Fees, Advertising Expense, Rent Expense, Salaries Expense, Supplies Expense, Telephone Expense, and Truck Operation Expense. Include account numbers on the T-accounts (see the chart of accounts in this chapter).
2. Prepare journal entries to record the April transactions, including general ledger account numbers from the chart of accounts.
3. Post transactions a through i to the T- accounts.
4. Prepare a trial balance at April 30, 2011.
5. Prepare an interim income statement and statement of changes in equity for the month ended April 30, 2011 and interim balance sheet at April 30.

P 2–6

The following transactions occurred in Thorn Accounting Services Inc. during August 2011, its first month of operation.

Aug. 1 Issued share capital for $3,000 cash
1 Borrowed $10,000 cash from the bank
1 Paid $8,000 cash for a used truck
4 Paid $600 for a one–year truck insurance policy effective August 1
5 Collected $2,000 fees in cash from a client for work performed today (recorded as Fees Earned)
7 Billed $5,000 fees to clients for services performed to date (recorded as fees earned)
9 Paid $250 for supplies used to date
12 Purchased $500 of supplies on credit (recorded as unused supplies)
15 Collected $1,000 of the amount billed on August 7
16 Paid $200 for advertising in *The News* during the first two weeks of August
20 Paid half of the amount owing for the supplies purchased on August 12
25 Paid cash for the following expenses: rent for August, $350; salaries, $2,150; telephone, $50; truck repairs, $250
28 Called clients for payment of the balance owing from August 7
29 Billed $6,000 of fees to clients for services performed to date (recorded as fees earned)
31 Transferred the amount of August's truck insurance ($50) to insurance expense
31 Counted $100 of supplies still on hand (recorded the amount used as supplies expense).

Required:

1. Open general ledger T-accounts for the following: Cash, Accounts Receivable, Prepaid Insurance, Unused Supplies, Truck, Bank Loan, Accounts Payable, Share Capital, Fees Earned, Advertising Expense, Insurance Expense, Rent Expense, Salaries Expense, Supplies Expense, Telephone Expense, and Truck Operation Expense. Include account numbers on the T-accounts (see the chart of accounts section of this chapter).
2. Prepare journal entries to record the August transactions including general ledger account numbers.
3. Post these entries to the T-accounts. Total each account.
4. Prepare a trial balance at August 31, 2011.
5. Prepare an income statement and statement of changes in equity for the month ended August 31, 2011 and a balance sheet at August 31.

P 2–7

The following transactions took place in Chan Renovations Corporation during June 2011, its first month of operation.

Jun. 1 Issued share capital for $8,000 cash
1 Purchased $5,000 of equipment on credit
2 Collected $600 cash for repairs completed today
3 Paid $20 for supplies used today
4 Purchased $1,000 of supplies on credit (recorded as unused supplies)
5 Billed customers $2,500 for repairs performed to date
8 Collected $500 of the amount billed on June 5
10 Paid half of the amount owing for equipment purchased on June 1
15 Sold excess equipment for $1,000 (its original cost). The buyer will pay this amount in several months. (Recorded as accounts receivable).
18 Paid for the supplies purchased on June 4
20 Received a $100 bill for electricity used to date (recorded as utilities expense)
22 Paid $600 to the landlord for June and July rent (recorded as prepaid rent)
23 Signed a union contract that will increase wages 5% this year.
25 Collected $1,000 of the amount billed on June 5
27 Paid the following expenses in cash: advertising, $150; telephone, $50; truck operation expense, $1,000; wages, $2,500
30 Billed customers $2,000 for repairs completed to date
30 Transferred the amount for June's rent to rent expense ($300)
30 Counted $150 of supplies still on hand (recorded the amount used as supplies expense).

Required:

1. Open general ledger T-accounts for the following: Cash, Accounts Receivable, Prepaid Rent, Unused Supplies, Equipment, Accounts Payable, Share Capital, Repair Revenue, Advertising Expense, Rent Expense, Supplies Expense, Telephone Expense, Truck Operation Expense, Utilities Expense, and Wages Expense. Include account numbers on the T-accounts (see the chart of accounts section of this chapter).
2. Prepare journal entries to record the June transactions including general ledger account numbers.
3. Post the June entries to the T-accounts.
4. Prepare a trial balance at June 30, 2011
5. Prepare an income statement and statement of changes in equity for the month ended June 30, 2011 and a balance sheet at June 30.

Alternate Problems

AP 2–1

The following account balances are taken from the records of Chipcura Repairs Corporation at November 30, 2011.

Accounts Payable	$5,000	Rent Expense	$ 700
Accounts Receivable	6,000	Repair Revenue	8,350
Advertising Expense	500	Salaries Expense	3,000
Bank Loan	4,500	Salaries Payable	1,000
Cash	2,000	Unused Supplies	500
Share Capital	8,000	Supplies Expense	250
Commissions Expense	1,500	Truck	8,000
Equipment	3,500	Truck Operation Expense	900

View Solution

Required:

1. Prepare a trial balance at November 30, 2011. Ensure total debits equal total credits.
2. Prepare an interim income statement and statement of changes in equity for the month ended November 30, 2011.
3. Prepare an interim balance sheet at November 30.

AP 2–2

The following accounts were prepared for McRann Auto Repairs Corporation during the first month of operation ending July 31, 2011. No journal entries were prepared in support of the amounts recorded in the ledger accounts.

Cash

a.	3,000	b.	1,000
e.	1,500	f.	400
g.	1,200	h.	600
j.	2,000	i.	300
		k.	1,100
		l.	3,200

Accounts Receivable

c.	2,500	g.	1,200
m.	3,500	j.	2,000

Prepaid Insurance

h.	600	n.	50

Unused Supplies

d.	500	q.	150

Truck

b.	7,000		

Accounts Payable

i.	300	b.	6,000
k.	1,100	d.	500
		o.	200
		p.	100

Share Capital

		a.	3,000

Repair Revenue

		c.	2,500
		e.	1,500
		m.	3,500

Advertising Expense

p.	100		

Insurance Expense

n.	50		

Rent Expense

f.	400		

Salaries Expense

l.	3,200		

Supplies Expense

q.	150		

Truck Operation Expense

o.	200		

View Solution

Required:

1. Reconstruct the transactions that occurred during the month and prepare journal entries to record them, including descriptions. Include account numbers as shown in the chart of accounts section of this chapter.
2. Calculate the balance in each general ledger T-account.
3. Prepare a trial balance at July 31, 2011. Ensure total debits equal total credits.

AP 2–3

The following trial balance was prepared for Overeen Consulting Corporation at March 31, 2011, its first month of operation.

Overeen Consulting Corporation
Trial Balance
March 31, 2011

	Account Balances	
	Debits	*Credits*
Accounts Payable	$ 5,000	
Accounts Receivable		$ 3,000
Cash	1,500	
Share Capital	3,000	
Equipment	2,000	
Utilities Payable		3,550
Fees Earned	6,900	
Advertising Expense		100
Insurance Expense	50	
Rent Expense		600
Truck		8,000
Utilities Expense		200
Wages Expense		3,000
	$18,450	$18,450

View Solution

Required:

1. Prepare a correct trial balance at March 31. List the accounts according to the sequence in the chart of accounts in this chapter (assets, liabilities, equity, revenue, and then expenses) and record the amounts in their proper debit–credit positions. Ensure total debits equal total credits.
2. Prepare an income statement and statement of changes in equity for the month ended March 31, 2011.
3. Prepare a balance sheet at March 31, 2011.

AP 2–4

The following balances appeared in the general ledger of Owens Truck Rentals Incorporated at May 1, 2011.

Cash	$1,600	Accounts Payable	$4,000
Unused Supplies	400	Share Capital	8,000
Equipment	3,000		
Trucks	7,000		

The following transactions occurred during May:

a. Collected $5,000 cash for truck rentals during the month
b. Paid $500 rent expense
c. Paid $1,500 to a creditor
d. Paid $600 for a one–year insurance policy effective May 1
e. Purchased a rental truck for $5,000 on credit
f. Paid the following expenses: advertising, $300; salaries, $2,500; telephone, $150; truck repairs, $550
g. Transferred the amount of May's insurance ($50) to Insurance Expense.
h. Estimated $200 of supplies to have been used during May (record as supplies expense)
i. Issued additional share capital for $2,000 cash.

View Solution

Required:

1. Open general ledger T-accounts for the following and enter the May 1 balances: Cash, Prepaid Insurance, Unused Supplies, Equipment, Trucks, Accounts Payable, Share Capital, Rent Earned, Advertising Expense, Insurance Expense, Rent Expense, Salaries Expense, Supplies Expense, Telephone Expense, and Truck Operation Expense.
2. Prepare journal entries to record the May transactions including general ledger account numbers from the chart of accounts.
3. Post these entries to the T-accounts. Total each account.
4. Prepare a trial balance at May 31, 2011.
5. Prepare an interim income statement and statement of changes in equity for the month ended May 31, 2011 and an interim balance sheet at May 31.

AP 2–5

Oneschuk Contractors Corporation had the following transactions during its first month of operation ended May 31, 2011:

May 1 Issued share capital for $5,000 cash
1 Paid $1,500 for three months' rent in advance: May, June, and July (recorded as Prepaid Rent)
2 Purchased $1,000 of supplies on credit (recorded as unused supplies)
3 Billed a customer $1,500 for repairs performed
4 Paid $50 for an advertisement in *The Daily Bugle*
5 Received $250 cash for contracting work completed today
10 Collected the amount billed on May 3
15 Paid $500 to a creditor
18 Borrowed $2,000 cash from the bank
20 Signed a contract for $10,000 work to be done in June
22 Purchased $3,000 of equipment; paid cash
25 Billed customers $3,500 for work completed to date
27 Paid the following expenses: electricity, $75; telephone, $25; wages, $2,000
31 Transferred the amount of May's rent from prepaid rent to rent expense ($500)
31 Counted $200 of supplies still on hand; the rest had been used during May.

View Solution

Required:

1. Open general ledger T-accounts for the following: Cash, Accounts Receivable, Prepaid Rent, Unused Supplies, Equipment, Bank Loan, Accounts Payable, Share Capital, Repair Revenue, Advertising Expense, Rent Expense, Supplies Expense, Telephone Expense, Utilities Expense, and Wages Expense. Include account numbers on the T-accounts (see the chart of accounts section of this chapter).
2. Prepare journal entries to record the May transactions.
3. Post these transactions to the T-accounts. Total each account.
4. Prepare a trial balance at May 31, 2011. Ensure total debits equals total credits.
5. Prepare an interim income statement and statement of changes in equity for the month ended May 31, 2011 and an interim balance sheet at May 31.

AP 2–6

Sandul Snow Removal Corporation had the following transactions during its first month of operation, December 2011:

Dec. 1 Issued share capital for $6,000 cash
1 Purchased a used truck for $9,000: paid $4,000 cash, balance borrowed from the bank
2 Purchased a $2,000 snow plough on credit (recorded as an increase in the cost of the truck)
3 Billed customers $5,000 for December snow removal (Sandul's customers are billed at the beginning of each month)
5 Purchased salt, sand, and gravel for $500 on credit (recorded as unused supplies)
6 Paid truck repair expenses of $200
7 Paid $360 for a one–year insurance policy effective December 1 (recorded as prepaid insurance)
14 Paid $1,500 for two weeks wages
16 Paid $40 cash for advertising
20 Received a bill for $350 for truck repairs
24 Purchased tire chains on credit for $100 (recorded as truck operation expense)
24 Collected $3,500 from customers billed on December 3
27 Paid for the purchase made on December 5
28 Collected $400 for snow removal performed today for a new customer
28 Paid $1,500 for two weeks wages
30 Called customers owing $1,500 billed on December 3 and not yet paid
31 Transferred the amount of December's truck insurance to insurance expense ($30)
31 Counted $100 of salt, sand, and gravel still on hand (recorded the amount used as supplies expense)
31 Recorded three days wages of $450 applicable to December 29, 30, and 31, to be paid in January.

View Solution

Required:

1. Open general ledger T-accounts accounts for the following: Cash, Accounts Receivable, Prepaid Insurance, Unused Supplies, Truck, Accounts Payable, Wages Payable, Share Capital, Service Revenue, Insurance Expense, Supplies Expense, Truck Operation Expense, and Wages Expense. Include account numbers on the T-accounts (see the chart of accounts section of this chapter).
2. Prepare journal entries to record the December transactions including general ledger account numbers from the chart of accounts.
3. Post transactions to the T-accounts. Total each account.
4. Prepare a trial balance at December 31, 2011. Ensure total debits equal total credits.
5. Prepare an income statement and statement of changes in equity for the month ended December 31, 2011 and a balance sheet at December 31.

AP 2–7

Accounts included in the trial balance of the John Saul Corporation as of November 30, 2011 were as follows:

Account Title	*Account Balance*
Cash	$25,200
Accounts Receivable	12,000
Prepaid Rent	1,500
Land	12,000
Building	24,000
Furniture	9,000
Equipment	75,000
Truck	3,500
Accounts Payable	4,000
Share Capital	?
Retained Earnings	-0-

The following transactions were completed during the month of December:

Dec.	2	Paid $200 of the accounts payable
	3	Collected in full an account receivable of $700
	4	Purchased equipment for $500 cash
	5	Billed customers for $2,000 of services provided in December
	8	Issued additional shares for $20,000 cash
	10	Collected $1,500 owing from a customer
	11	Purchased equipment for $25,000; paid $5,000 cash, the balance to be paid within 30 days (recorded as accounts payable)
	15	Paid salaries of $1,000
	16	Paid $600 of the accounts payable
	20	Paid $15,000 cash in partial settlement of the liability of December 11; issued a note payable for the balance
	24	Paid utilities of $50
	30	Received a bill for December telephone services
	31	Collected in full an account receivable of $400
	31	Paid salaries of $1,000
	31	Transferred $500 prepaid rent to rent expense for December
	31	Received $1,000 cash for services to be performed in January 2012.

View Solution

Required:

1. Open general ledger T-accounts for the accounts listed in the trial balance above, as well as necessary revenue and expense T-accounts. Include account numbers (see the chart of accounts section of this chapter).
2. Enter the November 30 balances and ensure total debits equal total credits. Journalise the December transactions.
3. Post the December entries and determine the balances for each general ledger account at December 31.
4. Prepare a trial balance as at December 31, 2011. Ensure total debits equals total credits.
5. Prepare an income statement and statement of changes in equity for the month ended December 31, 2011 and a balance sheet as at December 31.

Decision Problem

DP 2–1

Stan Samuelson, a second–year university business student, had a hard time finding an enjoyable summer job that paid well. He decided to begin his own business. He and two high school friends established a home repair company. Stan runs the business side of the operation while his two friends, Owen Saltz and Mort Schnitzler, do the majority of the home repairs. Stan fills in as needed.

A corporation was formed. It issued $1,000 of share capital to each student on June 1 for total cash consideration of $3,000. The three called the company Sam, Salt, and Schnitz Corp. (SSS). SSS agreed to rent a van from Jim Stephens for $200 per month; under this agreement, SSS was liable for all fuel and repair bills. After this transaction, the corporation was ready to begin business.

The business proved to be successful from the start. Stan spent most of his time promoting the business, making sales calls, and writing up estimates. He devoted little effort toward establishing an accounting system. He thought that SSS could get by with only a chequebook. So that all transactions would pass through the chequebook, Stan arranged with local businesses to pay all the corporation's expenses by cheque.

On August 31, the students had completed their summer's work and prepared to return to school. All payments from customers were received and all suppliers' bills were paid. The students asked Owen's sister, Amanda, to determine the financial position of SSS at August 31.

From the records, Amanda discovered that receipts from customers for the summer totalled $35,542. The materials bought for use by SSS amounted to $24,500, with $2,500 of unused material (paint, lumber, nails, and electrical fixtures) remaining; of these 80 per cent could be returned for full credit, while 20 per cent had to be expensed. Other expenses incurred were $75 for advertising, and $375 for fuel and oil for the van. The three students paid themselves $1,500 each on August 31 for the summer. The bank balance for SSS on August 31 was $8,492. The unused supplies had not yet been returned. Amanda was still owed $300 for her work.

Required:

1. Open general ledger T-accounts as needed and post the transactions.
2. Prepare an income statement and statement of changes in equity for the three months ended August 31, 2011 and a balance sheet at August 31.
3. If each student worked 190 hours per month from June 1 through August 31, how successful have they been?

CHAPTER THREE

Financial Accounting and the Operating Cycle

Each business entity has a series of financial transactions that occur continuously during the accounting time period. These repeated activities comprise the operating cycle. The following questions are answered in chapter 3:

1. What is the basic sequence of an operating cycle?
2. Why do incomplete operating cycles exist at the end of an accounting time period?
3. How are accounting records adjusted to more accurately reflect economic activity of a business for a given period?
4. What theoretical problems are involved with revenue recognition? In actual practice, at what point is revenue often recognised?
5. How is revenue recognised when the recognition point differs from receipt of related cash?
6. When are expenses recognised?
7. What are three categories of expenses requiring alignment with revenue? How is this accomplished through the recording of adjusting entries?
8. What are mixed balance sheet accounts, income statement accounts, and accruals?
9. How are general ledger income and expense accounts closed?
10. What are reversing entries?

A. The Operating Cycle

Financial transactions occur continuously during an accounting time period as part of a sequence of activities. In Big Dog Carworks Ltd., this sequence of activities takes the following form:

1. Operations begin with some cash on hand.
2. This cash is used to purchase supplies and to pay expenses incurred to perform automobile repairs.
3. Revenue is earned as repair services are performed.
4. Cash is collected, and the cycle continues.

This cash-to-cash sequence of events is commonly referred to as an *operating cycle*, as described in chapter 2. This cycle is illustrated in Figure 3–1.

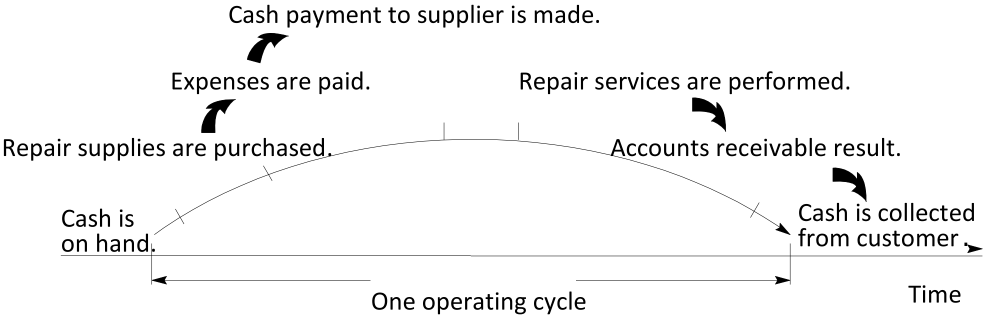


Figure 3–1 One operating cycle

During this operating cycle, financial statements are prepared at specific time intervals. For example, a balance sheet is prepared at December 31, 2013 and 2014, and an income statement is prepared for the year ended December 31, 2014. The timeframe of these statements is illustrated in Figure 3–2. Balance sheets, income statements, statement of changes in equity, and statement of cash flows, are often prepared monthly and quarterly as well as annually.

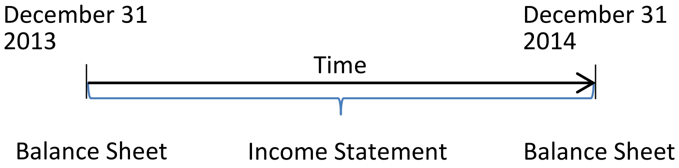


Figure 3–2 Periodic preparation of financial statements

Because they cover specific periods of time, these financial statements are based on some operating cycles that have been completed and others that are still incomplete. The overlapping of these cycles is illustrated in Figure 3–3.

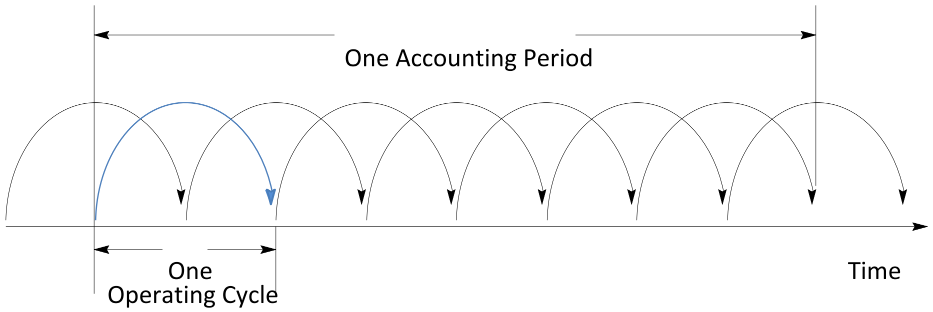


Figure 3–3 **Overlapping operating cycles**

As some transactions in one cycle are being completed, others are only beginning. For example, while repairs are being completed in one cycle, repair supplies are being purchased for use in another cycle; while expenses are being paid in one cycle, repairs are beginning in another cycle; and, while all this is going on, cash is being collected and being paid out continuously. A similar operating cycle exists for every entity, whether it provides a service, buys and sells merchandise, or manufactures products. Although the cycle of each type of entity may have different components, the basic sequence remains the same.

Under the going–concern assumption, it is assumed that any incomplete cycles that exist at the beginning and end of each operating cycle will be completed during a following period. How to accurately measure revenues and expenses generated within a particular point in time, like the end of a fiscal year, is important to accountants because these measures affect amounts reported in the financial statements. Later in this chapter, we focus on two major categories of transactions that cause recording problems for accountants. These two categories are:

Transactions involving services performed or goods sold by the corporation (because of the need to establish the point at which revenue is earned.)

Transactions involving expenses incurred to earn revenues.

Revenue Recognition

Accounting concepts provide guidance about when an economic activity should be recognised in financial statements. An economic activity is recognised when it meets four criteria:

1. Risks and rewards of ownership have been transferred (for example, when a buyer takes undisputed delivery of goods);
2. Revenues can be measured reliably;
3. There are probable future economic benefits; and
4. Related costs can be measured reliably.

Revenue recognition is the process of recording revenue in the appropriate time period. In practice, most corporations assume that revenue has been earned at a certain objectively-determined point in the accounting cycle. For instance, it is often convenient to recognise revenue at the point when a sales invoice has been sent to a customer and the related goods have been received or services performed. This point often occurs before receipt of cash from a customer. When these types of transactions occur, it creates assets called *accounts receivable,* which are exchanged for cash (another asset) when payment is received at a later date. When revenue is recognised, the following entry is made in the accounting records:

Debit	Accounts Receivable	XXX	
Credit	Sales Revenue		XXX

Big Dog Carworks Ltd. transaction 8 in chapter 2 illustrated this type of transaction. When cash payment is received, the asset *Account Receivable* is exchanged for the asset *Cash* and the following entry is made:

Debit	Cash	XXX	
Credit	Accounts Receivable		XXX

Notice that revenue recognition (the credit to Revenue) occurs with the first entry, prior to the receipt of cash. The second entry has no effect on revenue.

In some cases, such as the purchase of a small item at a convenience store, cash is immediately exchanged for goods sold. BDCL transaction 8 in chapter 2 also illustrated this type of transaction. When cash is received at the same time that revenue is recognised, the following entry is made:

Debit	Cash	XXX	
Credit	Sales Revenue		XXX

In other cases, a cash deposit or advance payment is obtained before the service is performed or the goods sold. When an advance payment is received, it is recorded as a liability until recognition criteria are met. It is transferred to revenue when, for example, goods have been shipped and a sales invoice sent to the customer.

When cash is first received, the following entry is recorded in the accounting records:

Debit	Cash	XXX	
Credit	Deferred Revenue (a Liability account)		XXX

BDCL transaction 7 in chapter 2 illustrated this. This entry has no effect on revenue shown on the income statement. Revenue is not recognised until the related goods have been shipped and a sales invoice sent to the customer, or services performed. At that time, the following entry is made:

Debit	Deferred Revenue	XXX	
Credit	Sales Revenue		XXX

The amount credited to Sales Revenue is then reported on the income statement, and the deferred revenue liability is eliminated.

The matching of revenue to a particular time period, regardless of when cash is received, is an example of *accrual accounting***.** This concept is also used when recognising expenses, as discussed in the following section.

Expense Recognition

Costs are incurred continuously in a business. As described previously, a cost is recorded as an **asset** if it will be incurred in producing revenue in future accounting time periods. A cost is recorded as an **expense** if it will be consumed during the current period to earn revenue. This distinction between types of cost outlays is illustrated in Figure 3–4.

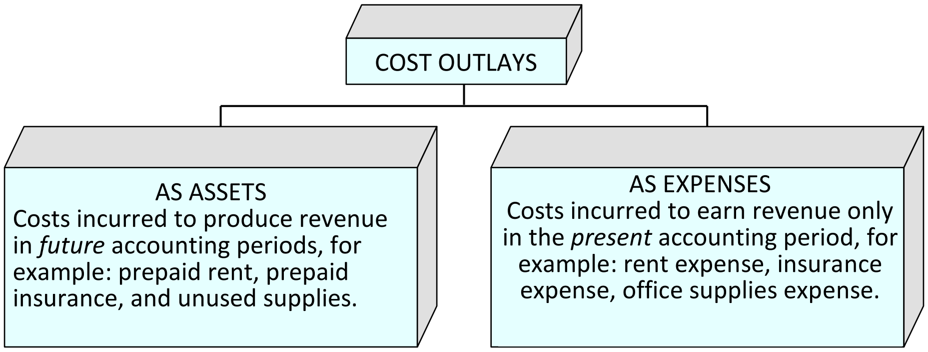


Figure 3–4 The interrelationship between assets and expenses

Under accrual accounting, three different categories of expenses arise:

Category 1
The cost of goods sold or services provided to customers can usually be identified when related revenue is recognised in the income statement. For example, at Big Dog Carworks Ltd., the use of parts in repairing vehicles can be identified with revenue generated by the repairs that required those parts.

Category 2
The cost of assets only partially consumed during the time period may be less-easily aligned with revenue generated. For example, BDCL’s equipment and tow truck were used to generate revenue in January and February 2011 but were not fully used up during its first months of operation; that is, they still have some future benefit. Accordingly, the amount of the useful “life” of the equipment and the truck that is used up must be estimated. This estimate is recorded as an expense incurred in the relevant time period.

Category 3
The cost of some expenses incurred during the period cannot be reasonably identified with revenue generated. For example, the president of BDCL might argue that part of his salary in January and February benefits future time periods because some time was spent soliciting future customers, even though this resulted in no revenue during the two months. However, in this and similar cases, his salary is all recorded as an expense because no future benefit can be clearly identified.

In the previous section, journal entries illustrated three scenarios where *revenue* was recognised before, at the same time as, and after cash was received. Similarly, expenses can be incurred before, at the same time as, or after cash is paid out. An example of when expenses are incurred before cash is paid out occurs when supplies expense for January is not paid until the following month. In this case, and *account payable* is created as follows:

Debit	Supplies Expense	XXX	
Credit	Accounts Payable		XXX

The expense is recorded in the January income statement. BDCL transaction 10 in chapter 2 illustrated this.

When the supplier is actually paid the following month, this entry is made:

Debit	Accounts Payable	XXX	
Credit	Cash		XXX

This entry has no effect on expenses shown on the income statement in subsequent periods.

Expenses also can be recorded at the same time that cash is paid. BDCL transaction 9 is an example. Expenses amounting to $7,800 were paid in cash; all of these related to January operations. The general form of the journal entry to record this type of transaction is:

Debit	Expense Account	XXX	
Credit	Cash		XXX

As a result of this entry, expenses are recognised on the income statement when cash is paid.

Finally, expenses can be recorded after cash has been paid. BDCL transaction 5 illustrates this. Here, insurance has been paid in advance of the period to which it applies. Thus an asset *Prepaid Insurance* has been created. The general form of the journal entry to record this type of transaction is:

Debit	Prepaid Expense (or other asset)	XXX	
Credit	Cash		XXX

When it is appropriate to recognise the expense on the income statement, the following entry is made:

Debit	Expense Account (for example, Insurance Expense)	XXX	
Credit	Prepaid Expense		XXX

All of these accrual accounting techniques for expenses are examples of the **matching principle**. That is, expenses are reported on the income statement a) when related revenue is recognised, or b) during the appropriate time period. Expenses are reported without considering when cash is paid out.

Accrual accounting techniques are designed to provide consistent points at which revenue and expenses are recognised, and to thereby better-reflect underlying economic events of a corporation as reported in its financial statements.

The relationship between accrual and matching concepts is illustrated as in Figure 3–5.

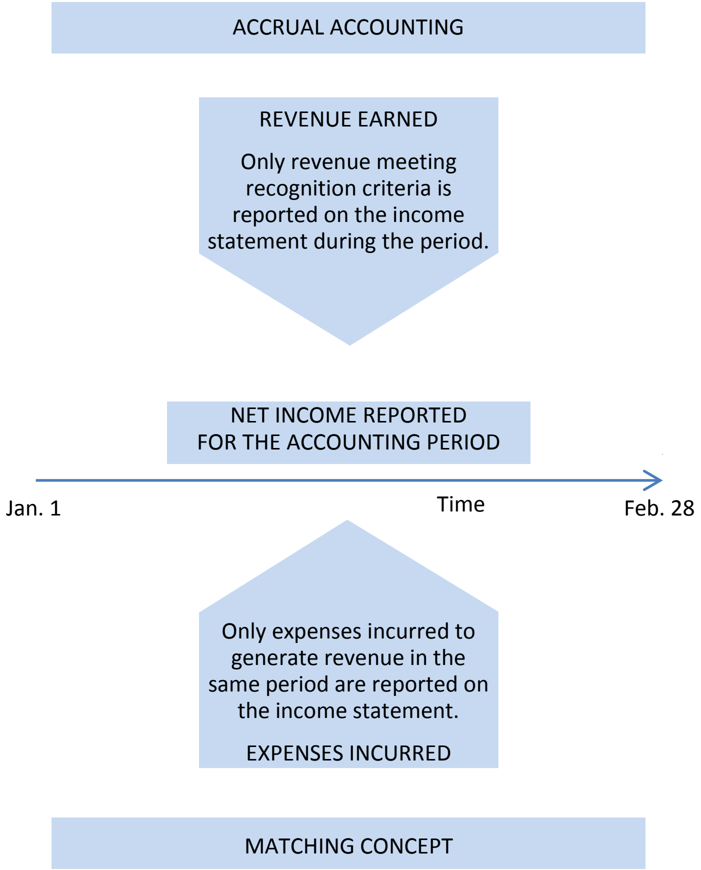


Figure 3–5 **The relationship among accrual accounting, revenue recognition and matching principles**

The following section illustrates accrual accounting techniques using the example of Big Dog Carworks Ltd.

B. Transactions Analysis Involving Expense and Revenue Recognition

The January and February transactions of Big Dog Carworks Ltd. will be used to demonstrate the preceding expense and revenue principles. January transactions 1 to 10 were previously recorded and discussed in chapters 1 and 2; this chapter continues with February transactions 11 to 15. The following summary of these February transactions appears with a guide to which assumption—expense or revenue recognition—is being discussed in each transaction.

Illustrative Problem—
Expense and Revenue Recognition Analysis

The analysis and recording of each transaction is described in detail in the following pages.

			Application of Accounting Assumption	
Transaction Number	*Date*	*Description of Transaction*	*Expense Recognition*	*Revenue Recognition*
11.	Feb. 5	The corporation purchased $900 of repair supplies on credit. These are expected to be used during February.	EXPENSE	
12.	Feb. 13	The corporation performed $5,000 of repairs for a customer who signed a 60-day, 6-per cent interest-bearing note as payment.		REVENUE
13.	Feb. 26	The corporation received $2,000 in advance from a customer for repairs that are expected to be done before the end of February.		REVENUE
14.	Feb. 28	Additional vehicle repairs were made for customers during February amounting to $9,895 as follows: $9,395 of repairs was paid in cash, $500 of repairs was still owing.		REVENUE
15.	Feb. 28	Miscellaneous expenses relating to February were paid in cash during the month: $1,600, rent expense; $2,500, salaries; $700, tow truck operation; and $300, utilities.	EXPENSE	

There are also certain types of transaction that relate to the above. Though these do not affect revenues and expenses, they are added here for illustrative purposes:

16.	Feb. 28	The $2,000 of accounts receivable owing at January 31 were paid by various customers during February.	N/A	N/A
17.	Feb. 28	The $200 account payable owing at January 31 was paid in cash during February, as well as $400 of the account payable incurred on February 5 (transaction 11).	N/A	N/A

Refer to the following as you analyse each transaction:

<u>EXPENSE RECOGNITION</u>	<u>REVENUE RECOGNITION</u>
A cash outlay is recorded as an ASSET if it will be used to produce revenue in future accounting accounting time periods.	A cash receipt is recorded as a LIABILITY if the service is not expected to be completed before the end of the current accounting time period.
A cash outlay is recorded as an EXPENSE if it will be used up during the current accounting period.	A cash receipt is recorded as a REVENUE if the service is expected to be completed in the current accounting period.
An asset like ACCOUNTS RECEIVABLE is recorded if revenue has been earned but cash has not been received.	A liability like ACCOUNTS PAYABLE is recorded if an asset has been acquired or an expense incurred prior to a cash outlay.

Transaction 11

The corporation purchased $900 of repair supplies on credit. These are expected to be used during February.

Analysis: This transaction is similar to transaction 10 in chapter 2. Since the repair supplies are expected to be used during the current accounting period, the cost of the supplies is recorded as an expense.

Journal Entry: An expense account, Supplies Expense, is increased by this transaction. (Recall that an expense is increased by a debit.) Since cash has not been paid, a liability account, Accounts Payable, is increased. (A liability is increased by a credit.) The journal and T-account entries appear as follows:

Feb. 5	Supplies Expense	668	900	
	Accounts Payable	210		900
	To record purchase of supplies.			

Supplies Expense

900	

Accounts Payable

	900

Transaction 12

The corporation performed $5,000 of repairs for a customer who signed a 60-day, 12-per cent per year, interest-bearing note as payment. The $5,000 principal and interest will be paid at the end of 60 days.

Analysis: These repairs were completed before the end of February; revenue has therefore been earned and must be recorded.

Journal Entry: An asset *Notes Receivable* (similar to an accounts receivable, but with specified repayment terms and interest attached) is increased by this transaction. (An asset increase is recorded by a debit.) A revenue account, Repair Revenue, is increased by this transaction. (A revenue increase is recorded by a credit.) The journal and T-account entries appear as follows:

Feb. 13	Notes Receivable	120	5,000	
	Repair Revenue	450		5,000
	To record payment for repairs paid by note receivable.			

Notes Receivable

5,000	

Repair Revenue

	5,000

Transaction 13

The corporation received $2,000 from a customer for repairs that are expected to be done before the end of February.

Analysis: Since the repairs are expected to be done before the current accounting period ends, the $2,000 is recorded as revenue.

Journal Entry: An asset account, Cash, is increased in this transaction. (An asset is increased by a debit.) A revenue account, Repair Revenue, is also increased by the transaction. (Revenue is increased by a credit.) The journal and T-account entries appear as follows:

Feb. 26	Cash	101	2,000	
	Repair Revenue	450		2,000
	To record payment for repairs made in February.			

Cash	
2,000	

Repair Revenue	
	2,000

Transaction 14

$9,895 of vehicle repairs was performed during February; $9,395 of these repairs was paid in cash; $500 was made on credit.

Analysis: This transaction is similar to transaction 8 in chapter 2. The repair activities increase two asset accounts, Cash and Accounts Receivable, as well as the income statement account, Repair Revenue. A *compound journal entry* can be prepared to record all components at one time.

Journal Entry: The asset accounts, Cash and Accounts Receivable, are increased by this transaction. (Assets are increased by a debit.) A revenue account, Repair Revenue, is increased by this transaction. (Revenue is increased by a credit.) The journal and T-account entries appear as follows:

Feb. 28	Cash	101	9,395	
	Accounts Receivable	110	500	
	Repair Revenue	450		9,895
	To record repairs made during February.			

Cash	
9,395	

Accounts Receivable	
500	

Repair Revenue	
	9,895

Transaction 15

Expenses paid in cash and incurred during February to earn repair revenue amount to $5,100 and consist of rent expense, $1,600; salaries expense for the period February 1 to 25, $2,500; truck operation expense, $700; and utility expense, $300.

Analysis: These summarised expenses are applicable to the current accounting period, since their benefits have been used up during the month.

Journal Entry: In actual practice, each paid expense would be recorded individually as each payment is made. The applicable expense category is increased in this transaction. (An increase in an expense is recorded by a debit to each expense account.) An asset account, Cash, is decreased by the amount of the expenditures. (A decrease in an asset is recorded by a credit.) Since the transactions are summarised here, only one credit of $4,100 is made to the Cash account. The journal and T-account entries appear as follows:

Feb. 28	Rent Expense	654	1,600	
	Salaries Expense	656	2,500	
	Truck Operation Expense	670	700	
	Utilities Expense	676	300	
	Cash	101		5,100
	To record miscellaneous expenses paid.			

Rent Expense	
1,600	

Salaries Expense	
2,500	

Truck Operation Exp.	
700	

Utilities Expense	
300	

Cash	
	5,100

Transaction 16
The $2,000 of accounts receivable owing at January 31 were paid by various customers during February.

Analysis: Each transaction increases the asset Cash and decreases the asset Accounts Receivable. There is no effect on any income statement accounts.

Journal Entry: The asset account, Cash, is increased by this transaction. (Assets are increased by a debit.) Another asset account, Accounts Receivable, is decreased by this transaction. The journal and T-account entry for the summarised cash receipts appears as follows:

Feb. 28	Cash	101	2,000	
	Accounts Receivable	110		2,000
	To record cash from customers paid on account during February.			

Cash	
2,000	

Accounts Receivable	
	2,000

Transaction 17
The $200 account payable owing at January 31 was paid during February, as well as $400 of the account payable incurred on February 5 (transaction 11).

Analysis: Accounts payable have been satisfied by payment of cash.

Journal Entry: The asset account, Cash, is decreased by this transaction. (Assets are decreased by a credit.) A liability account, Accounts Payable, is also decreased by this transaction. (Liabilities are decreased by a debit.) The journal and T-account entries appear as follows:

Feb. 28	Accounts Payable	210	600	
	Cash	101		600
	To record payment of accounts payable with cash.			

Accounts Payable	
600	

Cash	
	600

The Need for Adjusting Entries

At the end of an accounting period, accountants prepare financial statements. First, however, they must change some accounting entries. During the period, assets may expire, or goods or services may be provided that were paid in advance in a prior period, for instance. Also, the entity may incur liabilities that have not yet been recorded in the accounting records (see transaction 10 in chapter 2). These changes must be recorded with **adjusting entries.**

The purpose of adjusting entries is to report all asset, liability, and owners' equity amounts fairly and to recognise all revenues and expenses for the period on the accrual basis. These changes are made so that both the balance sheet and the income statement will reflect more accurate operating results and financial status at the end of the accounting period. All these are discussed in the following section.

C. Adjusting Balance Sheet Accounts

The trial balance of Big Dog Carworks Ltd. at February 28 includes cost outlays that have been recorded as *assets* of the corporation. These cost outlays are recorded as assets during an accounting period if they can be used to produce future revenue. At the end of the period, an accounting measurement is required. The amount of the asset that has expired during the period must be calculated and transferred to an expense account. In this way, expenses are matched to the appropriate time period.

The February 28 trial balance of the corporation also includes cash receipts that have been recorded in a liability account like Unearned Repair Revenue if they have not been earned when received. At the end of the period, an accounting measurement is also required. The amount of any unearned revenue that now has been earned during the period must be calculated and the amount transferred to revenue. In this way, revenues earned are matched to the appropriate time period.

Adjusting Asset and Liability Accounts

The asset and liability accounts referred to above are sometimes called **mixed accounts**. They are given this name because they include both a balance sheet portion and an income statement portion at the end of the accounting period. The income statement portion must be removed from the account by an adjusting entry.

Illustrative Problem—Adjusting Asset and Liability Accounts

The following balance sheet accounts of Big Dog Carworks Ltd. require this kind of adjustment at February 28:

Partial Trial Balance
February 28, 2011

	Account Balances		
	Debit	*Credit*	
a. Prepaid Insurance	$1,200		This is an ASSET account balance.
b. Unearned Repair Revenue		$500	This is a LIABILITY account balance.

Each of the above accounts is analysed in the following manner:

Step 1
At the end of the accounting period, determine which portion of the mixed account belongs in the balance sheet and which belongs in the income statement.

Step 2
The portion that does not belong in the asset or liability account must be transferred out. An adjusting entry is made in the general journal and posted to the proper accounts to accomplish this transfer.

(a) In January, the company paid for a 12-month insurance policy, effective January 1 (transaction 4).

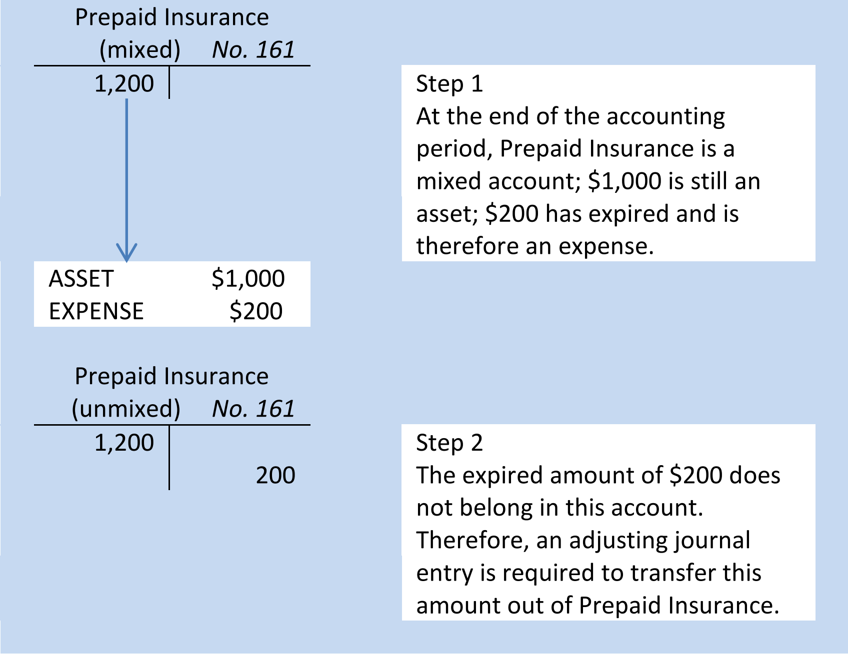
The general ledger shows the following Prepaid Insurance account:	The balance resulted when this journal entry was recorded:

Prepaid Insurance
(asset) *No. 161*

1,200	

Prepaid Insurance	1,200	
Cash		1,200

At February 28, two months of the policy have expired and $200 of insurance expenses has been incurred ($1,200/12 months x 2 months = $200).



Prepaid Insurance
(mixed) *No. 161*

1,200	

ASSET	$1,000
EXPENSE	$200

Step 1
At the end of the accounting period, Prepaid Insurance is a mixed account; $1,000 is still an asset; $200 has expired and is therefore an expense.

Prepaid Insurance
(unmixed) *No. 161*

1,200	
	200

Step 2
The expired amount of $200 does not belong in this account. Therefore, an adjusting journal entry is required to transfer this amount out of Prepaid Insurance.

This is the adjusting entry:

Feb. 28	Insurance Expense	631	200	
	Prepaid Insurance	161		200
	To record insurance expense for January and February.			

This adjusting entry transfers the expired $200 of prepaid insurance to the Insurance Expense account. The balance remaining in the Prepaid Insurance account after the entry is posted ($1,000) represents the unexpired asset that will benefit future periods.

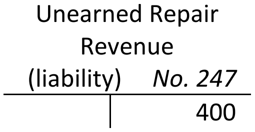
When the adjusting entry is posted, the expense portion is transferred as follows:

An expense account, Insurance Expense, is increased by the expired $200. An expense is increased by a debit.

An asset account, Prepaid Insurance, is decreased by the $200 of insurance coverage that has expired during January and February. An asset is decreased by a credit.

(b) On January 15, the corporation received a $400 cash payment in advance of services to be performed as follows: $300 for February, and $100 for March.

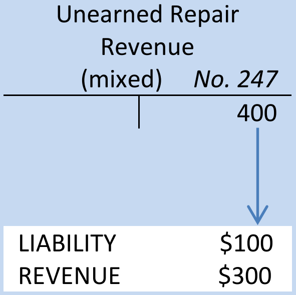
The Unearned Repair Revenue general ledger account is reproduced below:



The receipt of this advance payment was recorded as follows:

Cash	400	
Unearned Repair Rev.		400

This advance payment was originally recorded as unearned, since it was received before related repair services were performed. At February 28, however, services for one month have been performed ($300).



Step 1
At the end of the accounting period, Unearned Repair Revenue is a mixed account; $100 remains as a liability because the corporation must provide the repair services for March; $300 for January and February has been earned and is recorded as revenue.

Unearned Repair Revenue (unmixed) *No. 247*

	400
300	

Step 2
The earned amount of $300 does not belong in this account. Therefore, an adjusting entry is required to transfer this amount out of Unearned Repair Revenue.

This is the adjusting entry:

Feb. 28	Unearned Repair Revenue	247	300	
	Repair Revenue	440		300
	To reallocate repair revenue earned during February.			

This adjusting entry transfers the $300 to revenue. The $100 balance ($400 – 300) remaining in Unearned Repair Revenue after the entry is posted represents the amount at the end of February that will be earned in March.

The balance in the Repair Revenue account prior to this adjustment is $26,895, composed of a number of transactions listed in prior examples (#8: $10,000; #12: 5,000; #13: 2,000; #14: 9,895). When the adjusting entry above is posted, the revenue element is removed from the mixed account and Repair Revenue is increased by the same amount, as follows:

Unearned Repair Revenue (liability) *No. 247*

	400
300	
	Bal. 100

A liability account, Unearned Repair Revenue, is decreased by the $300 that has been earned in January and February. A liability is decreased by a debit.

Repair Revenue (revenue) *No. 450*

	26,895
	300
	Bal. 27,195

A revenue account, Repair Revenue, is increased by $300. Revenue is increased by a credit.

Adjusting Long-Lived Asset Accounts

Long-lived assets are expected to have future economic benefits for more than one account period and are used to produce goods, supply services, or service administrative purposes. The truck and equipment purchased by Big Dog Carworks Ltd. in January are examples of long-lived assets. Hereafter, these types of assets will be called **property, plant, and equipment (PPE)** or **capital assets**.

The process of allocating the cost of PPE to an expense over the period of time it is expected to be used is called **depreciation**. The amount of depreciation is calculated using an estimate of the **useful life** of a long-lived asset.

Land is not depreciated, as it is assumed to not be used up over time. (Different considerations apply to assets used in resource extraction - mining operations, for example - which are not covered here.)

It is useful to retain the original cost information of PPE in the accounting records. An example is an asset like a piece of equipment that may be used in the business for many years. When it is sold, perhaps years later, it is usually necessary to know the original cost for accounting and taxation purposes.

At the same time, it is necessary to record the value of the equipment that is used up during the intervening years. A **valuation account** or **contra account** is used to accomplish this. The valuation account records the amount of the original cost of an asset that has been allocated to expense as depreciation since it was acquired.

Adjusting journal entries to record depreciation take the following form:

Debit	Depreciation Expense	XXX	
Credit	Accumulated Depreciation		XXX

The Depreciation Expense account records the amount of estimated expense that belongs in the income statement for the accounting period. The balance in the Accumulated Depreciation valuation account represents the amount of the original cost of the asset that has been allocated to expense. Combining the original asset account balance and the valuation account gives the **carrying amount** or **net book value** of the capital asset. This is reported on the balance sheet. The concept is illustrated in the examples that follow.

Illustrative Problem—Adjusting Capital Asset Accounts

The following capital assets of Big Dog Carworks Ltd. consist of mixed balances at the end of the accounting period:

Partial Trial Balance
February 28, 2011

	Account Balances	
	Debit	*Credit*
c. Equipment	$3,000	
d. Truck	8,000	

Each account is analysed in the following manner:

Step 1
At the end of the accounting period, determine the amount of depreciation expense.

Step 2
The estimated depreciation is *not* transferred from the asset account; rather, an adjusting journal entry is prepared using two new accounts, one of which is a contra-asset account. Note that a contra-asset account *always has a credit balance*. Recall transaction 2 for BDCL noted in chapter 2:

(c) Purchased a $3,000 piece of equipment for cash.

The Equipment general ledger account appears as follows:	The balance resulted when this journal entry was recorded:

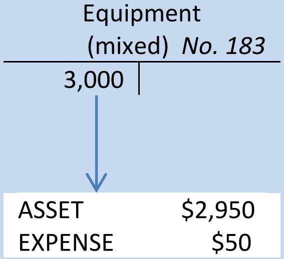
Equipment
(asset) *No. 183*

3,000	

Equipment	3,000	
Cash		3,000

The equipment was recorded as a capital asset because it has a useful life greater than one year. Assume its actual useful life is 10 years (120 months) and the equipment is estimated to be worth $0 at the end of its useful life. Assume further that at February 28, two months of the asset cost has expired. For illustrative purposes, we allocate the cost of the equipment in equal amounts over its useful life. This is calculated by dividing the cost of the equipment by its estimated useful life, or

$$\frac{\text{Cost}}{\text{Useful life}} = \frac{\$3,000}{120 \text{ months}} = \$25 \text{ per month x } 2 \text{ months} = \$50$$



Step 1
At the end of the accounting period, Equipment is a mixed account: $2,950 is still and asset; $50 has expired and is recorded as an expense.

Equipment
(mixed) *No. 183*

3,000	

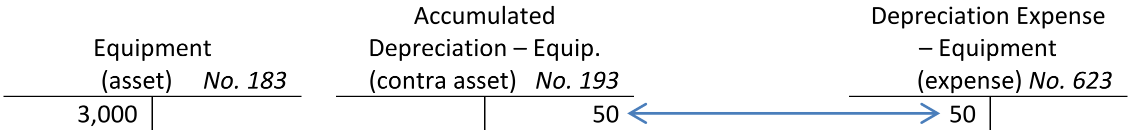
Step 2
The expired amount of $50 does not belong in an asset account. By accounting convention, the expired portion is *not* removed from the Equipment account but rather recorded in a *valuation* (contra) account. In this way, the original cost is retained in the accounting records in case the asset is sold.

The following adjusting journal entry is made:

Feb. 28	Depreciation Expense—Equipment	623	50	
	Accumulated Depreciation—Equipment	193		50
	To record depreciation for January and February.			

This adjusting entry records the $50 of depreciation on equipment. The mixed balance remains in the Equipment account.

When the adjusting entry is posted, the accounts appear as follows:



This account remains unchanged

A valuation account, Accumulated Depreciation, is increased by $50 to reflect the decline in the carrying amount of the asset.

Depreciation Expense is increased by $50, the amount of the equipment cost that has expired. An expense is increased by a debit.

For financial statement reporting, the asset and contra asset accounts are combined. The carrying amount of the equipment is shown as $2,950 ($3,000 – 50) on the balance sheet.

(d) The next transaction is: BDCL purchased a tow truck for $8,000 (transaction 4).

The Truck general ledger account appears as follows:

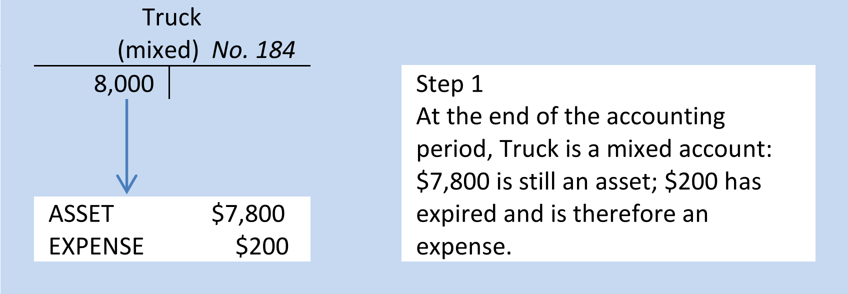
The journal entry to record the purchase of the truck was as follows:

Truck
(asset) *No. 184*

8,000	

Truck	8,000	
Bank Loan		5,000
Cash		3,000

Assume the tow truck also has a useful life of 80 months. At February 28, two months of the truck cost have expired since it was put into operation in January. Using the straight-line method of depreciation, the depreciation expense is calculated as: $8,000/80 months x 2 months = $200.



Step 1
At the end of the accounting period, Truck is a mixed account: $7,800 is still an asset; $200 has expired and is therefore an expense.

Equipment
(mixed) *No. 184*

8,000	

Step 2
The expired amount of $200 does not belong in an asset account. By accounting convention, the expired portion is *not* removed from the Truck account but rather recorded in a *valuation* (contra) account.

The following adjusting journal entry is made:

Feb. 28	Depreciation Expense—Truck	624	200	
	Accumulated Depreciation—Truck	194		200
	To record depreciation for January and February.			

When the adjusting entry is posted, the accounts appear as follows:

Truck
(asset) *No. 184*

8,000	

This account remains unchanged

Accumulated
Depreciation - Truck
(contra asset) *No. 194*

	200

A valuation account, Accumulated Depreciation, is increased by $200 to reflect the decline in the carrying amount of the asset.

Depreciation Expense-
Truck
(expense) *No. 624*

200	

Depreciation Expense is increased by $200, the amount of the truck's cost that has expired. An expense is increased by a debit.

For financial statement reporting, the asset and contra asset accounts are combined. The carrying value of the truck is shown as $7,800 ($8,000 – 200) on the balance sheet.

D. Adjusting Income Statement Accounts

The trial balance of Big Dog Carworks Ltd. at February 28 includes a cash receipt of $2,000 received on February 26 and recorded as revenue of the corporation. Assume now though, that the corporation does not expect to perform these services until March or April. Receipts are recorded as revenues during an accounting period if they are earned. If not, the amount of unearned revenue should be recognised as a *liability* at the end of the period and reported as *unearned revenue*.

The trial balance of the corporation also includes a cost outlay for supplies that has been recorded as an expense of the corporation. Assume, however, that at February 28, supplies on hand are counted and found to total $500. Cost outlays are recorded as expenses if they are used up during the period. If not, the amount of the expense that has not been consumed has future benefit, and is therefore an asset, Prepaid Expense. In this way, expenses like supplies can be matched to the period in which they are used.

Thus, the revenue and expense accounts referred to above are also mixed accounts, since they include both an income statement portion and a balance sheet portion at the end of the period. Adjusting entries are needed to correct the accounting records.

Illustrative Problem—Adjusting Income Statement Accounts

The following income statement accounts of Big Dog Carworks Ltd. require adjustment at February 28:

Partial Trial Balance
February 28, 2011

	Account Balances	
	Debit	*Credit*
e. Repair Revenue		$27,195*
f. Supplies Expense	$2,100	

*10,000 + 5,000 + 2,000 + 9,895 + 300 = 27,195

This is a REVENUE account
This is an EXPENSE account

These accounts are analysed and adjusted as follows:

Step 1
At the end of the accounting period, determine which portion of the mixed account belongs in the balance sheet and which belongs in the income statement.

Step 2
The portion that does not belong in the revenue or expense account must be transferred out. An adjusting entry is made in the general journal and posted to the proper accounts to make this transfer.

(e) Recall the related transaction: BDCL received $2,000 on February 26 for repairs to be made in February (transaction 13). Now, according to its best estimates, the company would begin the repairs in March and hopefully have the work completed by mid-April.

The Repair Revenue general ledger account appears as follows:

The revenue has been recorded by a number of different journal entries that are summarised below:

Repair Revenue
(revenue) *No. 450*

	27,195

Cash (10,000 + 9,395 + 2,000)	21,395	
Notes Receivable	5,000	
Accounts Receivable	500	
Unearned Revenue	300	
Repair Revenue		27,195

Repair Revenue
(mixed) *No. 450*

	27,195

REVENUE	$25,195
LIABILITY	$2,000

Step 1
At February, the Repair Revenue account is a mixed account: $2,000 has not been earned at February 28. The amount of revenue earned should be $25,195.

Repair Revenue
(unmixed) *No. 450*

	27,195
2,000	

Step 2
The revenue account must be decreased by $2,000 to leave a balance of $25,195 – the amount of revenue earned during January and February.

This is the adjusting journal entry:

Feb. 28	Repair Revenue	450	2,000	
	Unearned Repair Revenue	247		2,000
	To record unearned repair revenue at February 28.			

The revenue account, Repair Revenue, is decreased by the $2,000 that has not yet been earned. In this way, the mixed revenue account is split into two portions. The unearned amount is transferred to the balance sheet liability account; what remains in the account is the appropriate income statement portion.

Recall that the Unearned Repair Revenue has a $100 credit balance as a result of prior adjusting entry (b). When the above adjusting entry is posted, the unearned portion is transferred from the mixed account as follows:

Unearned Repair Revenue
(liability) *No. 247*

	400
300	
	2,000
	Bal. 2,100

Repair Revenue
(revenue) *No. 450*

	26,895
	300
2,000	
	Bal. 25,195

A liability account, Unearned Repair Revenue, is increased by the $2,000 that has not been earned a February 28. A liability is increased by a credit.

A revenue account, Repair Revenue, is decreased by $2,000. Revenue is decreased by a debit.

The unearned revenue of $2,100 will be reported as a liability on the BDCL balance sheet at February 28.

(f) BDCL purchased $3,100 of supplies to be used during January and February (#9: $2,000; #10: 200; #11: 900). Since these supplies were expected to be used during that accounting period, their cost was recorded as an expense.

The Supplies Expense account appears as follows at February 28:

The expense has been recorded by two different journal entries that are summarised below:

Supplies Expense
(expense) *No. 668*

3,100	

Supplies Expense	3,100	
Cash		2,000
Accounts Payable (200 + 900)		1,100

At February 28, a physical count of supplies showed that $500 of supplies were still on hand. Not all the supplies were used by February 28.

Supplies Expense
(mixed) *No. 668*

3,100	

EXPENSE	$2,600
ASSET	$ 500

Step 1
At the end of the accounting period, Supplies Expense is a mixed account; $500 needs to be recorded as an asset.

Supplies Expense
(unmixed) *No. 668*

3,100	
	500

Step 2
This expense account has to be decreased by $500. An adjusting entry is required.

This is the adjusting entry:

Feb. 28	Unused Supplies	173	500	
	Supplies Expense	668		500
	To record unused supplies at February 28.			

When this adjusting entry is posted, the unexpired portion is transferred from the mixed account as follows:

An expense account, Supplies Expense, is decreased by the unused supplies valued at $500. An expense is decreased by a credit.

An asset account, Unused Supplies, is increased by the $500 of unused supplies at the end of February. An asset is increased by a debit.

The unused supplies of $500 will be reported as an asset on the BDCL balance sheet at February 28.

E. Accruals

Some revenues and expenses increase as time passes and are therefore said to *accrue*. **Accrued revenues** and **accrued expenses** are items that need to be reported in the income statement for a certain time period. However, they are not recognised by the accounting system until they are received or paid in cash, because there are no source documents like sales invoices or purchase invoices to trigger their recording. Often these types or revenue and expenses need to be recognised earlier in the accounting records. This is done by adjusting entries. Common types of accrued revenues and expenses are:

Revenues that Accrue	*Expenses that Accrue*
Interest Earned	Interest Expense
Rent Earned	Rent Expense
	Salaries Expense
	Income Taxes Expense
These revenues are usually recorded only when cash is received.	These expenses are usually recorded only when cash is paid.

Interest, as an example, accrues (increases) daily but is received or paid only at certain times: perhaps monthly or semi-annually, in the case of funds on deposit with a bank, or at the due date of a note receivable when the principal and interest are received. The matching principle requires that revenues earned and expenses incurred during the period should be measured and recorded in the accounts, not when cash is received or paid. Accordingly, at the end of the period an adjusting journal entry is made so that accrued revenues and expenses are matched to the appropriate time period.

Illustrative Problem—Recording Accruals

The following accounts of Big Dog Carworks Ltd. need to be accrued at February 28:

Income Statement Account	*Related Balance Sheet Account*
Interest Earned	Interest Receivable
Salaries Expense	Salaries Payable
Interest Expense	Interest Payable
Income Taxes Expense	Income Taxes Payable

The accounts are discussed and adjusting entries are prepared in the following pages, under headings *g*, *h*, *i*, and *j*.

Unrecorded Revenues

Unrecorded revenues consist of revenues that have been earned during the accounting period but that are not due to be collected until sometime in the next period.

(g) Big Dog Carworks Ltd. performed $5,000 of repairs for one of its customers, who signed a 60-day, 6-per cent, interest-bearing note dated February 13 (transaction 12).

Although interest accrues daily on the $5,000 loan, the interest will be received only at the maturity date of the note, April 14, when the amount due (principal plus interest) is paid by the customer. At February 28, the end of the accounting period for BDCL, interest has been earned for 15 days in February (February 13–28), as shown in Figure 3–6. However, this interest has not yet been recorded in the accounting records.

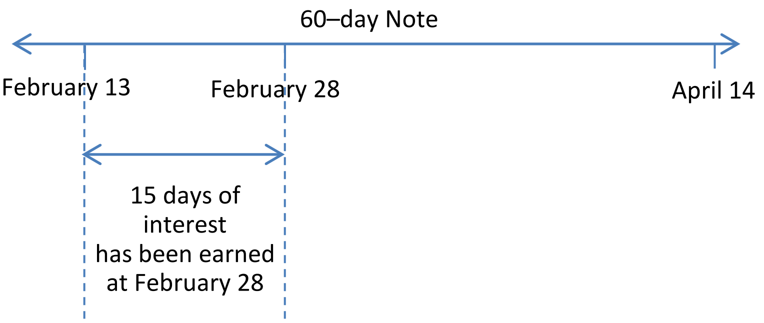


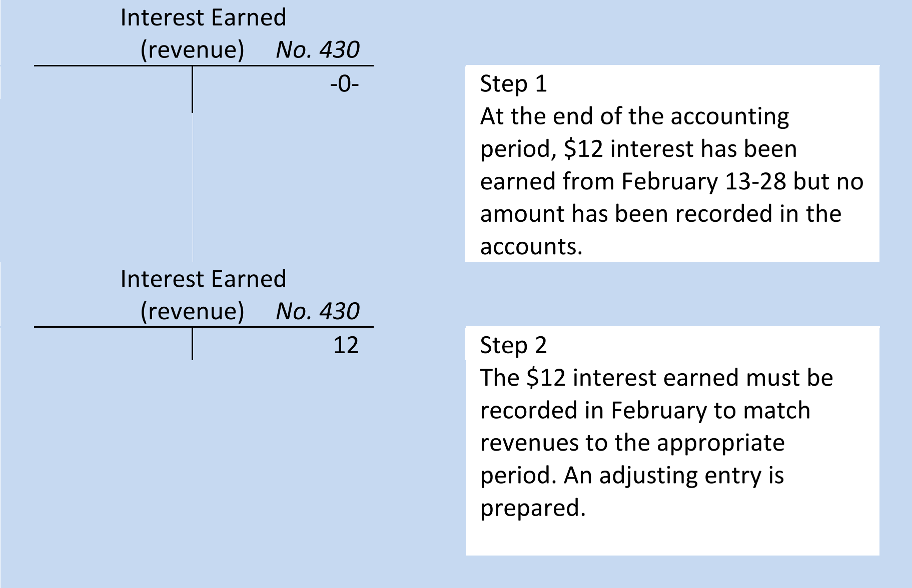
Figure 3–6 Interest earned during an accounting period

The formula for computing interest is shown below:

$$\text{Interest} = \text{Principal} \times \text{Interest rate} \times \frac{\text{Elapsed time in days}}{365}$$

The interest revenue accrued at February 28 is computed as follows:

$$\text{Interest} = \$5{,}000 \times 0.06 \times \frac{15}{365} = \$12 \text{ (rounded)}$$



Step 1
At the end of the accounting period, $12 interest has been earned from February 13-28 but no amount has been recorded in the accounts.

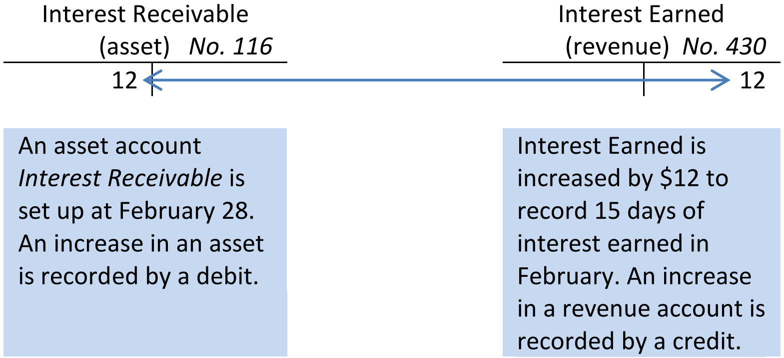
Step 2
The $12 interest earned must be recorded in February to match revenues to the appropriate period. An adjusting entry is prepared.

This is the adjusting journal entry:

Feb. 28	Interest Receivable	116	12	
	Interest Earned	430		12
	To record interest accrued on 60-day note to February 28.			

This adjusting entry enables BDCL to include the interest earned as income of the period even though the payment has not yet been received. The entry creates a receivable that will be reported as an asset on the balance sheet at February 28.

When the adjusting entry is posted, the accounts appear as follows:



An asset account *Interest Receivable* is set up at February 28. An increase in an asset is recorded by a debit.

Interest Earned is increased by $12 to record 15 days of interest earned in February. An increase in a revenue account is recorded by a credit.

Unrecorded Expenses

Unrecorded expenses are expenses that have been incurred during the accounting period but have not been paid during the accounting period or that are not due to be paid until sometime in the next period.

(h) At February 28 salary expense had been incurred for three days, but this expense has not been recorded.

Salaries Expense
(expense) *No. 656*

5,000	

Step 1
During the two-month period, employees have been paid $5,000 salaries in cash. This amount has already been recorded in the Salaries Expense account. At the end of the accounting period, employees have earned additional salaries of $150 for work done on February 26, 27, and 28, the last three days of the period. This amount is not yet recorded in the accounting records, since it will be paid in March.

Salaries Expense
(expense) *No. 656*

5,000	
150	

Step 2
The matching principle requires that this amount be recorded as an expense in the accounting period ended February 28.

This is the adjusting entry:

Feb. 28	Salaries Expense	656	150	
	Salaries Payable	226		150
	To accrue salaries for February 26-28.			

This entry enables the company to include in expense all salaries earned by employees, even though these amounts have not been paid in cash. The entry creates an accrued liability for an expense incurred during one accounting period (February) but paid in another accounting period (March).

When the adjusting entry is posted, the accounts appear as follows:

Salaries Expense
(expense) *No. 656*

5,000	
150	
Bal. 5,150	

An additional $150 expense is recorded for the period ended February 28. An increase in an expense is recorded by a debit.

Salaries Payable
(liability) *No. 226*

	150

A liability, Salaries Payable, is created at February 28. An increase in a liability is recorded as a credit.

(i) Big Dog Carworks Ltd. owes the bank $6,000 at February 28. Assume the interest rate is 7-per cent each year. Although interest accrues daily on this bank loan, no interest has yet been paid at the end of the accounting period.

At February 28, the end of the accounting period for BDCL, assume interest has accrued for 53 days (January 6 to February 28), but this interest expense has not yet been recorded in the accounting records. The interest expense accrued at February 28 is computed as follows:

$$\text{Interest} = \$6,000 \text{ x } 7\% \text{ x } \frac{53}{365} = \$61 \text{ (rounded)}$$

Interest Expense
(expense) *No. 632*

-0-	

Step 1
At the end of the accounting period, $61 interest expense has accrued for a period of 53 days. This amount is not yet recorded in the accounting records, since it will be paid in March.

Interest Expense
(expense) *No. 632*

61	

Step 2
The matching principle requires that this amount be recorded as an expense in the accounting period ended February 28.

This is the adjusting entry:

Feb. 28	Interest Expense	632	61	
	Interest Payable	222		61
	To record interest expense accrued at February 28 ($6,000 x 7% x 53/365days).			

The entry creates a liability for an expense incurred during the current accounting period (February) but paid in cash in another accounting period (March).

When the adjusting entry is posted, the accounts appear as follows:

Interest Expense
(expense) *No. 632*

61	

Interest Payable
(liability) *No. 222*

	61

Interest expense has accrued to February 28. An increase in an expense is recorded by a debit.

A liability, Interest Payable, is created at February 28. An increase in a liability is recorded as a credit.

As applicable, other adjusting entries for expenses (such as utilities, telephone, and so on) that have been incurred by the company during the accounting period but that are not due to be paid until the next period are recorded in a manner similar to the adjustment for salaries and interest expenses. The amount of the expense is recorded in the following type of entry:

Date	Expense	XXX	
	Expense Payable		XXX
	To accrue an expense.		

Recording Income Taxes

Another adjustment that is required for Big Dog Carworks Ltd. involves the recording of corporate income taxes due for the period in question. In most jurisdictions, a corporation is taxed as an entity separate from its shareholders. Assume BDCL's income tax rate is 20% of Income Before Income Taxes.

(j) Income before taxes is $11,046, (as will be shown on the income statement later in the chapter). If the income tax rate is 20%, income taxes expense amounts to $2,209 (rounded).

Income Taxes Expense
(expense) *No. 830*

-0-	

Step 1
At the end of the accounting period, $2,209 income taxes expense has been incurred. This amount is not yet recorded in the accounting records, since it will be after February 28.

Income Taxes Expense
(expense) *No. 830*

2,209	

Step 2
The matching principle requires that this amount be recorded as an expense in the accounting period ended February 28.

This is the adjusting entry:

Feb. 28	Income Taxes Expense	830	2,209	
	Income Taxes Payable	260		2,209
	To accrue income taxes for January and February ($11,046 x 20%).			

When the adjusting entry is posted, the accounts appear as follows:

Income Taxes Expense
(expense) *No. 830*

2,209	

Income taxes expense has accrued to February 28. An increase in an expense is recorded by a debit.

Income Taxes Payable
(liability) *No. 260*

	2,209

A liability, Income Taxes Payable, is created at February 28. An increase in a liability is recorded as a credit.

The above adjusting entry enables the company to match the income taxes to the income earned during the period.

F. The Accounting Process—Review of Steps 1–6

In this chapter, six individual steps of the accounting process have been reviewed. The first two steps occur continuously through the time period; the third to sixth steps occur at the end of the accounting period. The seventh step, preparing financial statements, is discussed in section G.

Step 1: Transactions are Analysed and Recorded in the General Journal

The general journal provides a complete record of a corporation's transactions, listed in chronological order. Because this journal is the first place a transaction is recorded, the general journal is commonly referred to as a *book of original entry*.

GENERAL JOURNAL

2011					
		(11)			
Feb.	5	Supplies Expense	668	900	
		Accounts Payable	210		900
		To record purchase of supplies.			
		(12)			
	13	Notes Receivable	120	5,000	
		Repair Revenue	450		5,000
		To record payment for repairs by note.			
		(13)			
	26	Cash	101	2,000	
		Repair Revenue	450		2,000
		To record payment for repairs to be made in February.			
		(14)			
	28	Cash	101	9,395	
		Accounts Receivable	110	500	
		Repair Revenue	450		9,895
		To record repairs made during February.			

(15)

28	Rent Expense	654	1,600	
	Salaries Expense	656	2,500	
	Truck Operation Expense	670	700	
	Utilities Expense	676	300	
	Cash	101		5,100
	To record miscellaneous expenses paid in cash.			

(16)

28	Cash	101	2,000	
	Accounts Receivable	110		2,000
	To record receipt of cash on account.			

(17)

28	Accounts Payable	210	600	
	Cash	101		600
	To record payment of amounts owing.			

Step 2: The Journal Entries Are Posted to General Ledger Accounts

When the posting of February transactions has been completed, the general ledger accounts are footed and a net debit or credit balance calculated for each account. In the case of the Cash account, for example, a debit balance of $10,895 remains at the end of February.

The general ledger T-accounts for Big Dog Carworks Ltd. follow. The conceptual T-account is used in place of the more formal general ledger account to emphasise the relationship between the accounting equation and the accounts that fall under each equation component. Because of space limitations, the January transactions are not repeated here; rather the January 31 balance of each account is carried forward from chapter 2 (see “Trial Balance Preparation”).

Note: The highlighted (blue) items are the February 28 balances.

ASSETS = LIABILITIES + SHAREHOLDERS' EQUITY

Cash *No. 101*

Bal.	3,200	(15)	5,100
(13)	2,000	(17)	600
(14)	9,395		
(16)	2,000		
	16,395		5,700
Bal.	10,895		

Accounts Receivable *No. 110*

Bal.	2,000	(16)	2,000
(14)	500		
Bal.	500		

Note Receivable *No. 120*

(12)	5,000		

Prepaid Insurance *No. 161*

Bal.	2,400		

Equipment *No. 183*

Bal.	3,000		

Truck *No. 184*

Bal.	8,000		

Bank Loan *No. 201*

		Bal.	6,000

Accounts Payable *No. 210*

(17)	600	Bal.	200
		(11)	900
		Bal.	500

Unearned Repair Revenue

		Bal.	400

Share Capital *No. 320*

		Bal.	10,000

Repair Revenue *No. 450*

		Bal.	10,000
		(12)	5,000
		(13)	2,000
		(14)	9,895
		Bal.	25,195

Rent Expense *No. 654*

Bal.	1,600		
(15)	1,600		
Bal.	3,200		

Salaries Expense *No. 656*

Bal.	3,500		
(15)	2,500		
Bal.	6,000		

Supplies Expense *No. 668*

Bal.	2,200		
(11)	900		
Bal.	3,100		

Truck Operation Expense *No. 670*

Bal.	700		
(15)	700		
Bal.	1,400		

Utilities Expense *No. 676*

(13)	300		

Step 3: An Unadjusted Trial Balance is Prepared to Ensure Accuracy of the Accounting Records

The account balances are listed in the unadjusted trial balance ("unadjusted" because adjusting entries *g* though *j* have not yet been posted) to establish the equality of total debit balances with total credit balances. The February unadjusted trial balance for Big Dog Carworks Ltd. is as follows:

Big Dog Carworks Ltd.
Unadjusted Trial Balance
February 28, 2011

Account	*Account Balance*	
	Debit	*Credit*
Cash	$10,895	
Accounts Receivable	500	
Notes Receivable	5,000	
Prepaid Insurance	2,400	
Equipment	3,000	
Truck	8,000	
Bank Loan		$ 6,000
Accounts Payable		500
Unearned Repair Revenue		400
Share Capital		10,000
Repair Revenue		26,895
Rent Expense	3,200	
Salaries Expense	6,000	
Supplies Expense	3,100	
Truck Operation Expense	1,400	
Utilities Expense	300	
	$43,795	$43,795
	Total debit balances =	Total credit balances

These are BALANCE SHEEET account balances.

These are INCOME STATEMENT account balances.

Step 4: The Account Balances are Analysed; Adjusting Entries Are Prepared and Posted

As is the case with the February transactions (recorded in section B of this chapter), adjusting entries *a* through *j* are also recorded in the journal of the Big Dog Carworks Ltd. at the end of February.

The caption *Adjusting Entries* is written in the journal on the line following the last regular journal entry of the corporation. The general journal showing adjusting entries *a* through *j* would appear as follows:

GENERAL JOURNAL

2011	Adjusting Entries			
Feb. 28				
	(a)			
	Insurance Expense	631	200	
	Prepaid Insurance	161		200
	To record insurance expense for January and February.			
	(b)			
	Unearned Repair Revenue	247	300	
	Repair Revenue	440		300
	To reallocate repair revenue earned during February.			

(c)

Depreciation Expense – Equipment	623	50	
Accumulated Depreciation – Equipment	193		50

To record depreciation for January and February.

(d)

Depreciation Expense – Truck	624	200	
Accumulated Depreciation – Truck	194		200

To record depreciation for January and February.

(e)

Repair Revenue	450	2,000	
Unearned Repair Revenue	247		2,000

To record unearned repair revenue at February 28.

(f)

Unused Supplies	173	500	
Supplies Expense	668		500

To record unused supplies at February 28.

(g)

Interest Receivable	116	12	
Interest Earned	430		12

To record interest accrued on 60-day note
to February 28 ($5,000 x 6% x 15/365 days).

(h)

Salaries Expense	656	150	
Salaries Payable	226		150

To accrue salaries for February 26-28.

(i)

Interest Expense	632	61	
Interest Payable	222		61

To record interest expense accrued at February 28
($6,000 x 7% x 53/365days).

(j)

Income Taxes Expense	830	2,209	
Income Taxes Payable	260		2,209

To accrue income taxes for January and February
($11,046 x 20%).

After the adjusting entries have been posted, the mixed elements in the accounts have been eliminated. Account numbers are recorded in the folio column to indicate where the amounts have been posted in the general ledger.

Step 5: The General Ledger Account Balances are Calculated

When the February adjusting entries have been posted to the general ledger accounts, debit and credit balances are calculated for each, as shown in the following general ledger T-accounts.

ASSETS = LIABILITIES + SHAREHOLDERS' EQUITY

Cash *No. 101*

Bal.	3,200	(15)	5,100
(13)	2,000	(17)	600
(14)	9,395		
(16)	2,000		
	16,595		5,700
Bal.	10,895		

Accounts Receivable *No. 110*

Bal.	2,000	(16)	2,000
(14)	500		
	2,500		2,000
Bal.	500		

Interest Receivable *No. 116*

(g)	12		

Note Receivable *No. 120*

(12)	5,000		

Prepaid Insurance *No. 161*

Bal.	2,400		
		(a)	200
Bal.	2,200		

Unused Supplies *No. 173*

(f)	500		

Equipment *No. 183*

Bal.	3,000		

Truck *No. 184*

Bal.	8,000		

Accumulated Depreciation – Equipment *No. 193*

		(c)	50

Accumulated Depreciation – Truck *No. 194*

		(d)	200

Bank Loan *No. 201*

		Bal.	6,000

Accounts Payable *No. 210*

		Bal.	200
(17)	600	(11)	900
		Bal.	500

Interest Payable *No. 222*

		(i)	61

Salaries Payable *No. 226*

		(h)	150

Un. Rep. Rev. *No. 247*

		Bal.	400
(b)	300	(e)	2,000
		Bal.	2,100

Income Taxes Payable *No.* 260

		(j)	2,209

Share Capital *No. 320*

		Bal.	10,000

Interest Earned *No. 430*

		(g)	12

Repair Revenue *No. 450*

		Bal.	10,000
		(12)	5,000
		(13)	2,000
		(14)	9,895
		Bal.	26,895
(e)	2,000	(b)	300
		Bal.	25,195

Depreciation Expense - Equipment *No. 623*

(c)	50		

Depreciation Expense – Truck *No. 624*

(d)	200		

Insurance Expense *No. 631*

(a)	200		

Interest Expense *No. 632*

(i)	61		

Rent Expense *No. 654*

Bal.	1,600		
(13)	1,600		
Bal.	3,200		

Salaries Expense *No. 656*

Bal.	3,500		
(13)	2,500		
Bal.	6,000		
(b)	150		
Bal.	6,150		

Supplies Expense *No. 668*

Bal.	2,200		
(11)	900		
Bal.	3,100		
		(f)	500
Bal.	2,600		

Truck Operation Expense *No. 670*

Bal.	700		
(15)	700		
Bal.	1,400		

Utilities Expense *No. 676*

(15)	300		

Inc. Taxes Expense *No. 830*

(j)	2,209		

Step 6: An Adjusted Trial Balance is Prepared to Prove the Equality of Debits and Credits

A trial balance prepared after the posting of adjusting entries to the general ledger would contain the accounts and account balances shown below. Note that new accounts have been included as required by the adjusting entries, and that this trial balance is called an **adjusted trial balance** to distinguish it from the unadjusted trial balance prepared earlier. The purpose of any trial balance is to establish the equality of debits and credits. This ensures the accuracy of the mechanical process of recording transactions and the posting of journal entries to the general ledger.

The trial balance is a useful device to prepare financial statements. Financial statements could be prepared directly from the general ledger T-accounts, but the trial balance is a convenient summary of this information prior to the preparation of financial statements. Preparation of a trial balance also allows the equality of debits and credits to be more easily established.

Big Dog Carworks Ltd.
Adjusted Trial Balance
February 28, 2011

	Account Balance	
Account	*Debit*	*Credit*
Cash	$10,895	
Accounts Receivable	500	
Interest Receivable	12	
Note Receivable	5,000	
Prepaid Insurance	2,200	
Unused Supplies	500	
Equipment	3,000	
Truck	8,000	
Accumulated Depreciation – Equipment		$ 50
Accumulated Depreciation – Truck		200
Bank Loan		6,000
Accounts Payable		500
Interest Payable		61
Salaries Payable		150
Unearned Repair Revenue		2,100
Income Taxes Payable		2,209
Share Capital		10,000
Interest Earned		12
Repair Revenue		25,195
Depreciation Expense – Equipment	50	
Depreciation Expense – Truck	200	
Insurance Expense	200	
Interest Expense	61	
Rent Expense	3,200	
Salaries Expense	6,150	
Supplies Expense	2,600	
Truck Operation Expense	1,400	
Utilities Expense	300	
Income Taxes Expense	2,209	
Total Debits and Credits	$46,477	$46,477

These are used to prepare the balance sheet

These are used to prepare the income statement.

G. Preparation of Financial Statements

The data listed in the trial balance can be used to prepare the entity's financial statements. This step is the seventh in the accounting process.

Income Statement Preparation

The income statement is the first statement to be prepared from the amounts listed in the adjusted trial balance. Notice that all revenue and expense amounts are repeated in the formal statement and that a net income amount is calculated. Since a corporation pays income taxes on its income, the income statement includes the estimated amount of income taxes payable. The income statement preparation process is illustrated in Figure 3–7 and the balance sheet preparation process is illustrated in Figure 3–8.

Big Dog Carworks Ltd.
Adjusted Trial Balance
February 28, 2011

	Account Balance	
Account	*Debit*	*Credit*
Cash	$10,895	
Accounts Receivable	500	
Interest Receivable	12	
Note Receivable	5,000	
Prepaid Insurance	2,200	
Unused Supplies	500	
Equipment	3,000	
Truck	8,000	
Accumulated Depreciation – Equipment		$ 50
Accumulated Depreciation – Truck		200
Bank Loan		6,000
Accounts Payable		500
Interest Payable		61
Salaries Payable		150
Unearned Repair Revenue		2,100
Income Taxes Payable		2,209
Share Capital		10,000
Interest Earned		12
Repair Revenue		25,195
Depreciation Expense – Equipment	50	
Depreciation Expense – Truck	200	
Income Taxes Expense	2,209	
Insurance Expense	200	
Interest Expense	61	
Rent Expense	3,200	
Salaries Expense	6,150	
Supplies Expense	2,600	
Truck Operation Expense	1,400	
Utilities Expense	300	
Total Debits and Credits	$46,477	$46,477

Big Dog Carworks Ltd.
Income Statement
For the Two Month Period Ended February 28, 2011

Revenue		
Interest	$ 12	
Repair Revenue	25,195	$25,207
Expenses		
Depreciation - Equipment	50	
Depreciation – Truck	200	
Insurance	200	
Interest	61	
Income Taxes	2,209	
Rent	3,200	
Salaries	6,150	
Supplies	2,600	
Truck Operation	1,400	
Utilities	300	16,370
Net Income		$ 8,837

Figure 3–7 The preparation of the income statement

The statement of changes in equity is then prepared:

Big Dog Carworks Ltd.
Statement of Changes in Equity
For the two Months Ended February 28, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Balance at Beginning of Period	$ -0-	$ -0-	$ -0-
Shares Issued	10,000		10,000
Net Income		8,837	8,837
Balance at End of Period	$10,000	$ 8,837	$18,837

Net income is transferred from the income statement.

Balance Sheet Preparation

The balance sheet is prepared from the asset, liability, and equity accounts. Note again that the retained earnings amount is carried forward from the statement of changes in equity. The balance sheet preparation process is illustrated in Figure 3–8. Note that the equipment and truck are shown at carrying amount on the balance sheet - the original cost less accumulated depreciation to date.

Big Dog Carworks Ltd.
Adjusted Trial Balance
February 28, 2011

	Account Balance	
Account	*Debit*	*Credit*
Cash	$10,895	
Accounts Receivable	500	
Interest Receivable	12	
Note Receivable	5,000	
Prepaid Insurance	2,200	
Unused Supplies	500	
Equipment	3,000	
Truck	8,000	
Accumulated Depreciation – Equipment		$ 50
Accumulated Depreciation – Truck		200
Bank Loan		6,000
Accounts Payable		500
Interest Payable		61
Salaries Payable		150
Unearned Repair Revenue		2,100
Income Taxes Payable		2,209
Share Capital		10,000
Interest Earned		12
Repair Revenue		25,195
Depreciation Expense – Equipment	50	
Depreciation Expense – Truck	200	
Income Taxes Expense	2,209	
Insurance Expense	200	
Interest Expense	61	
Rent Expense	3,200	
Salaries Expense	6,150	
Supplies Expense	2,600	
Truck Operation Expense	1,400	
Utilities Expense	300	
Total Debits and Credits	$46,477	$46,477

Big Dog Carworks Ltd.
Balance Sheet
At February 28, 2011

Assets		
Cash		$10,895
Accounts Receivable		500
Interest Receivable		12
Note Receivable		5,000
Prepaid Insurance		2,200
Unused Supplies		500
Equipment	$3,000	
Less: Acc. Dep'n.	50	2,950
Truck	8,000	
Less: Acc. Dep'n.	200	7,800
		$29,857
Liabilities		
Bank Loan		$ 6,000
Accounts Payable		500
Interest Payable		61
Salaries Payable		150
Unearned Repair Revenue		2,100
Income Taxes Payable		2,209
		11,020
Shareholders' Equity		
Share Capital	$10,000	
Retained Earnings	8,837	18,837
		$29,857

Retained earnings is transferred from the statement of changes in equity.

Figure 3–8 The preparation of the balance sheet

H. Closing the Accounting Records

At the end of a fiscal year, following the recording of all entries that belong to that period, the revenue and expense accounts have accumulated all the amounts; the revenue and expense accounts must be reduced to zero balances, so that they can begin to accumulate the amounts that belong to the new fiscal year. It is customary in business record-keeping that the books be *closed* at the end of every fiscal year. **Closing entries** are made to transfer the revenue and expense balances from the **temporary accounts** to **permanent accounts**. Permanent accounts have a continuing balance from one fiscal year to the next. The different types of temporary and permanent accounts are listed below.

At the end of the fiscal year, income statement accounts must be closed; that is, they must have a zero balance when the new fiscal year begins.

Temporary Accounts	*Permanent Accounts*
Revenue Accounts	Asset Accounts
Expense Accounts	Liability Accounts
	Share Capital Account
	Retained Earnings Account

Balance sheet accounts retain balances from year to year.

The Closing Procedure

The closing process involves shifting and summarising amounts already recorded in the worksheet. An intermediate summary account, called the **income summary**, is used to close the revenue and expense accounts. The balances in these accounts are transferred to the income summary account. The accounts of the Big Dog Carworks Ltd. at February 28 are used in Figure 3–9 to illustrate the closing procedure. *(Note:* closing procedures for the Big Dog Carworks Ltd. at February 28, 2011 are used for illustration only. Closing entries are normally prepared at the end of the fiscal year.)

Entry 1: Closing the revenue accounts

The revenue accounts are closed in one compound closing journal entry to the income summary account. That is, all revenue accounts with credit balances are debited to bring them to zero. Their balances are transferred to the income summary account as an offsetting credit.

Entry 2: Closing the expense accounts

The expense accounts are closed in one compound closing journal entry to the income summary account. All expense accounts with debit balance are credited to bring them to zero. Their balances are transferred to the income summary account as an offsetting debit.

Entry 3: Closing the Income Summary account

The Income Summary account is next closed to the Retained Earnings account. This procedure transfers amounts on the income summary to retained earnings in the accounting records. The caption *Closing Entries* is written in the general journal on the line following the last adjusting entry. The net amount closed to retained earnings is always equal to net income for the year.

The balance in the Income Summary account is transferred to retained earnings because the net income (or net loss) belongs to the shareholders. The closing entries for Big Dog Carworks Ltd. are shown in Figure 3–9.

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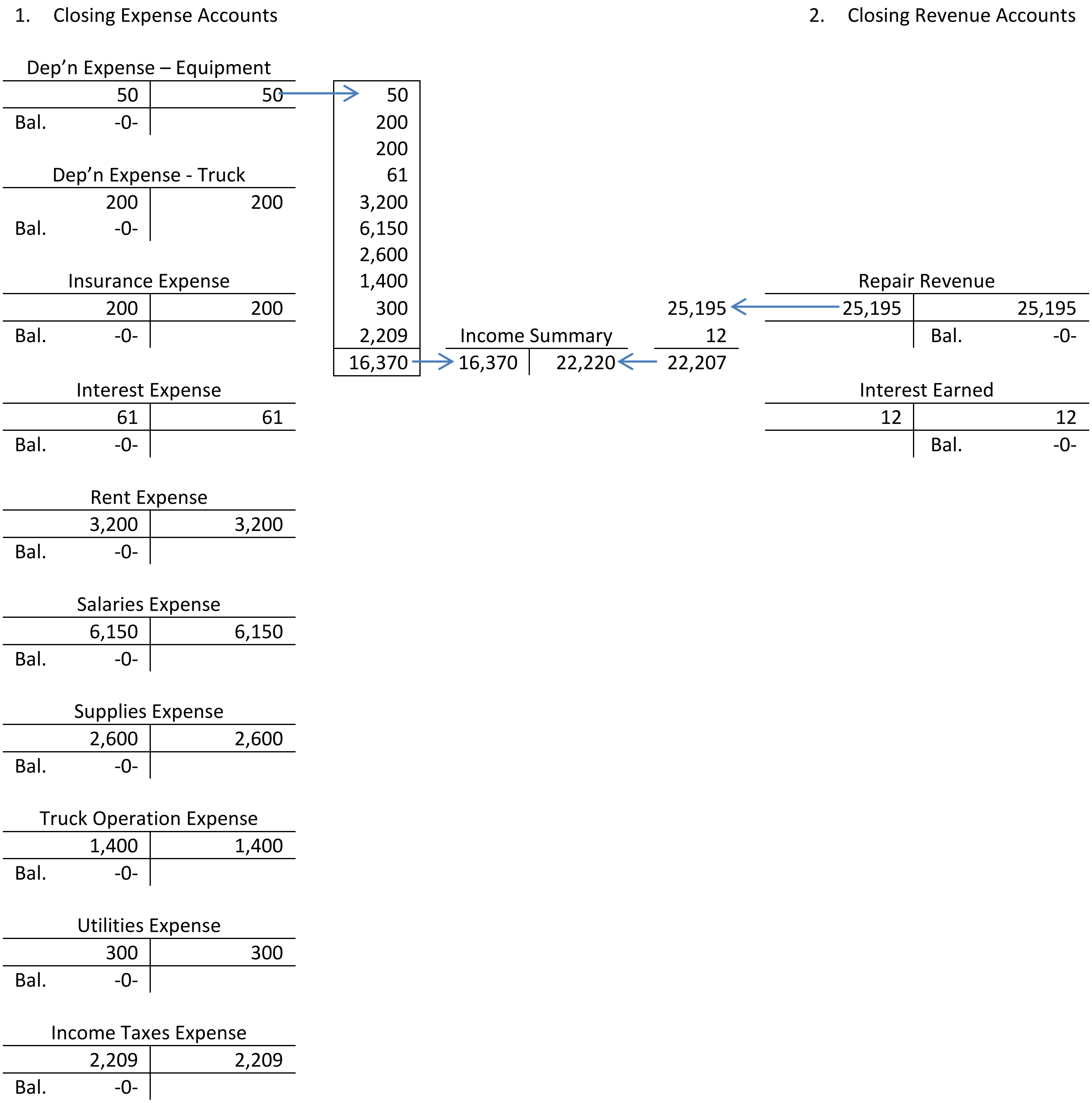
Date 2011	Description	F	Debit	Credit
	Closing Entries			
Feb. 28	Repair Revenue	450	25195-	
	Interest Earned	430	12-	
	Income Summary			25207-
	To close revenue account balances.			
	Income Summary		16370-	
	Depreciation Expense—Equipment	623		50-
	Depreciation Expense—Truck	624		200-
	Income Taxes Expense	830		2209-
	Insurance Expense	631		200-
	Interest Expense	632		61-
	Rent Expense	654		3200-
	Salaries Expense	656		6150-
	Supplies Expense	668		2600-
	Truck Operation Expense	670		1400-
	Utilities Expense	676		300-
	To close expense account balances.			
	Income Summary		8837-	
	Retained Earnings			8837-
	To close the income summary account balance to Retained Earnings.			

Figure 3–9 Closing entries

Posting the Closing Entries to the General Ledger

When entries 1 and 2 are posted to the general ledger, the balances in all revenue and expense accounts are transferred to the income summary account. The transfer of these balances is shown in Figure 3–10. Notice that a zero balance results for each revenue and expense account after the closing entries are posted.



1. Closing Expense Accounts

Dep’n Expense – Equipment

	50	50
Bal.	-0-	

Dep’n Expense - Truck

	200	200
Bal.	-0-	

Insurance Expense

	200	200
Bal.	-0-	

Interest Expense

	61	61
Bal.	-0-	

Rent Expense

	3,200	3,200
Bal.	-0-	

Salaries Expense

	6,150	6,150
Bal.	-0-	

Supplies Expense

	2,600	2,600
Bal.	-0-	

Truck Operation Expense

	1,400	1,400
Bal.	-0-	

Utilities Expense

	300	300
Bal.	-0-	

Income Taxes Expense

	2,209	2,209
Bal.	-0-	

50
200
200
61
3,200
6,150
2,600
1,400
300
2,209
16,370

Income Summary

16,370	22,220

25,195
12
22,207

2. Closing Revenue Accounts

Repair Revenue

25,195		25,195
	Bal.	-0-

Interest Earned

12		12
	Bal.	-0-

Figure 3–10 **Closing revenue and expense accounts**

Closing Revenue and Expense Accounts

Following the closing of the revenue and expense accounts to the income summary account, the balance in the income summary account is equal to the net income of $8,837.

Closing the Income Summary Account

The income summary account is now closed to retained earnings, as shown in Figure 3–11.

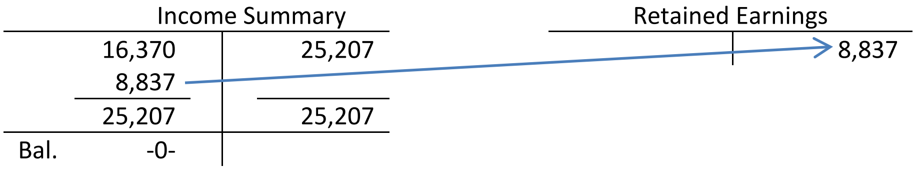


Figure 3–11 Closing the income summary account

The Post–Closing Trial Balance

A **post-closing trial balance** is prepared immediately following the posting of closing entries and before the posting of transactions for the next accounting time period. The purpose is to ensure that the debits and credits in the general ledger are equal and that all revenue and expense accounts have in fact been closed. Here is the post-closing trial balance of Big Dog Carworks Ltd.

Big Dog Carworks Ltd.
Post-closing Trial Balance
February 28, 2011

	Account Balance	
Account	*Debit*	*Credit*
Cash	$10,895	
Accounts Receivable	500	
Interest Receivable	12	
Note Receivable	5,000	
Prepaid Insurance	2,200	
Unused Supplies	500	
Equipment	3,000	
Truck	8,000	
Accumulated Depreciation – Equipment		$ 50
Accumulated Depreciation – Truck		200
Bank Loan		6,000
Accounts Payable		500
Interest Payable		61
Salaries Payable		150
Unearned Repair Revenue		2,100
Income Taxes Payable		2,209
Share Capital		10,000
Retained Earnings		8,837
Total Debits and Credits	$30,107	$30,107

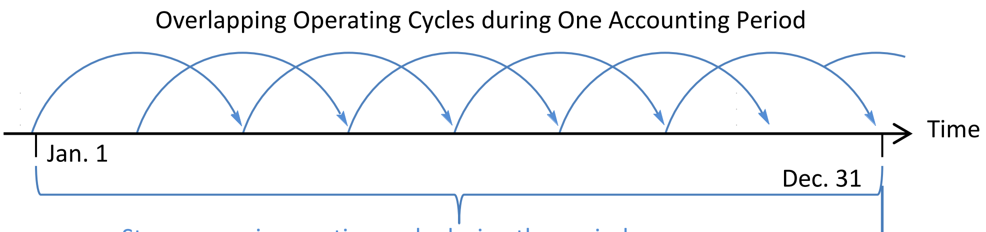
Only balance sheet accounts remain.

Note that only balance sheet accounts still have balances that are carried forward to the next accounting year. All revenue and expense accounts begin the new fiscal year with a zero balance, so that they can be used to accumulate amounts belonging to the new time period.

The Sequence of Steps in the Accounting Process

The periodicity assumption was introduced and its application explained in the preceding chapter; it assumes that an entity's business activities can be broken into meaningful accounting time periods for which financial statements are prepared. Certain accounting measurement problems result from the periodicity concept. To overcome these problems, the technique of accrual accounting to match revenues with expenses is used. This concept was illustrated in section F.

The accounting process is the way in which the dollar amount of transactions during the accounting time period is transformed into financial statement information. A sequence of steps is followed by the accountant during the time period; as noted in chapter 2, these steps are collectively referred to as the *accounting cycle*. This sequence of steps is shown in its relation to the accounting time period of Big Dog Carworks Ltd. in Figure 3–12.



Steps occurring continuously during the period

Step 1: Transactions are analysed and recorded in the general journal.
Step 2: The journal entries are posted to general ledger accounts.

Steps occurring whenever interim or year-end financial statements are prepared at the end of an accounting period

Step 3: An unadjusted trial balance is prepared to ensure accuracy of the accounting records.
Step 4: The account balances are analysed, and adjusting entries are prepared and posted.
Step 5: The general ledger account balances are calculated.
Step 6: An adjusted trial balance is prepared to prove the equality of debits and credits.
Step 7: Financial statements are prepared.

Steps occurring only at the fiscal year-end

Step 8: Closing entries are prepared
Step 9: Closing entries are posted to the general ledger.
Step 10: A post-closing trial balance is prepared.

Figure 3–12 Steps in the accounting cycle

Appendix: Reversing Entries

During the 2011 accounting period, regular business transactions of Big Dog Carworks Ltd. were recorded as they occurred. At the end of the period, BDCL's accountant found it necessary to prepare adjusting journal entries so that expenses incurred would be matched to the revenue generated during the same accounting period. Adjusting entries were prepared for mixed balance sheet accounts, mixed income statement accounts, and accruals.

Reversing entries offset adjusting entries that were used to accrue assets and liabilities at the immediately preceding period-end. They facilitate the subsequent recording of transactions in the new accounting time period. The use of reversing entries simplifies recordkeeping particularly in large corporations where numerous routine transactions are recorded.

Reversing entries are optional and are prepared at the beginning of the next accounting time period. In the case of Big Dog Carworks Ltd., reversing entries are prepared at March 1, 2011 to reverse accrual adjusting entries *g* through *j* made at February 28, 2011 (see section E above).

Preparation of Reversing Entries for Accruals

To demonstrate, consider the salary accrual prepared as adjusting entry (h):

February 28 Accrual Entry			*March 1 Reversing Entry*			*March 5 Payment of Salary*		
Salaries Expense	150		Salaries Payable	150		Salaries Expense	250	
Salaries Payable		150	Salaries Expense		150	Cash		250

The recording of the weekly (February 27 to March 5) salary payment is made in the normal way in the general journal by debiting the account Salaries Expense and crediting Cash. It is not necessary for the accountant to post part of the March 5 entry against Salaries Payable set up at February 28 ($150) that are part of the $250 payment of salaries, as the March 1 reversing entry has offset this already.

Note that when the reversing and salary payment entries are posted to general ledger accounts, the amount of expense applicable to March is only $100, the salary for four days of March.

	Salaries Expense		Salaries Payable	
Bal. March 1	-0-			Bal. 150
March reversing entry		150	150	
				Bal. -0-
Payment of salary March 5	250			
Salary expense in March	100			

The use of a reversing entry therefore results in the same salary expense figure in the next accounting period under both methods.

When no reversing entry is prepared, the following procedure can be followed. Three days of salary amounting to $150 was incurred in February but was payable at the end of the week—March 5, 2011. An accrual was recorded at February 28, so that revenues would match expenses incurred during the same period.

February 28 Accrual Entry			*March 5 Payment of Salaries*		
Salaries Expense	150		Salaries Expense	100	
Salaries Payable		150	Salaries Payable	150	
			Cash		250

Here, the accountant had to recall the previously-recorded February accrual entry. Since additional analysis of this transaction is needed, this is a less-efficient recording practice. Using reversing entries permits accountants to record subsequent payments in the normal way, thereby minimising errors.

At March 1, the following reversing entries are needed for BDCL:

	February Adjusting Entry			*March Reversing Entry*			*March Cash Payment or Receipt*		
(g)	Interest Receivable	12		Interest Earned	12		Cash	25[a]	
	Interest Earned		12	Interest Receivable		12	Interest Earned		25
(h)	Salaries Expense	150		Salaries Payable	150		Salaries Expense	250	
	Salaries Payable		150	Salaries Expense		150	Cash		250
(i)	Interest Expense	61		Interest Payable	61		Interest Expense	78[b]	
	Interest Payable		61	Interest Expense		61	Cash		78
(j)	Income Taxes Expense	2,209		Income Taxes Payable	2,209		Income Taxes Expense	2,209[c]	
	Income Taxes Payable		2,209	Income Taxes Expense		2,209	Cash		2,209

[a] This assumes interest on the 60-day note receivable is paid monthly (that is, on March 15): $5,000 x 6% x 30/365 days = $25 (rounded).

[b] This assumes interest on the bank loan is paid on March 15 (other assumptions are possible). Interest for the period January 6 to March 15 (68 days): $6,000 x 7% x 68/365 days = $78 (rounded).

[c] This assumes that income taxes owing are paid the following month.

Use this simple rule for reversing entries: *reverse any adjusting entry* (February, in this example) *that follows with a cash payment or cash receipt the next period* (March). Notice that all the reversing entries in the examples here resulted in a debit or a credit to the account Cash in the subsequent accounting period.

ASSIGNMENT MATERIALS

Discussion Questions

1. Explain the sequence of financial transactions that occur continuously during an accounting time period. What is this sequence of activities called?
2. Do you have to wait until the operating cycle is complete before you can measure income using the accrual basis of accounting?
3. What is the relationship between the matching concept and accrual accounting? Are revenues matched to expenses, or are expenses matched to revenues? Does it matter one way or the other?
4. What is the impact of the going concern concept on accrual accounting?
5. Identify three different categories of expenses.
6. What are adjusting entries and why are they required?
7. Why are asset accounts like Prepaid Insurance adjusted? How are they adjusted?
8. How are capital asset accounts adjusted? Is the procedure similar to the adjustment of other asset and liability accounts at the end of an accounting period?
9. What is a *contra account* and why is it used?
10. How are liability accounts like Unearned Repair Revenue adjusted?
11. Explain the term *accruals*. Give examples of items that accrue.
12. Why is an adjusted trial balance prepared?
13. How is the adjusted trial balance used to prepare financial statements?
14. List the first seven steps in the accounting cycle.
15. Which steps in the accounting cycle occur continuously throughout the accounting period?
16. Which steps in the accounting cycle occur only at the end of the accounting period? Explain how they differ from the other steps.
17. Give examples of revenue, expense, asset, and liability adjustments.
18. In general, income statement accounts accumulate amounts for a time period not exceeding one year. Why is this done?
19. Identify which types of general ledger accounts are temporary and which are permanent.
20. What is the income summary account and what is its purpose?
21. What is a post-closing trial balance and why is it prepared?
22. Why are reversing entries prepared?
23. Are reversing entries prepared when asset and liabilities are *adjusted* (as opposed to *accrued*)? Why or why not?
24. Are accrual adjustments reversed?

Comprehension Problems

Note: Complete solutions requiring reversing entries only if that appendix was studied.

CP 3–1

The following are account balances of Graham Corporation:

Account Title	*Amount in Unadjusted Trial Balance*	*Balance after Adjustment*
Interest Receivable	$ -0-	$110
Prepaid Insurance	1,800	600
Interest Payable	-0-	90
Salaries Payable	-0-	450
Unearned Rent	700	200

View Solution

Required:

1. Enter the unadjusted balance for each account in the following T-accounts: Interest Receivable, Prepaid Insurance, Interest Payable, Salaries Payable, Unearned Rent, Interest Earned, Rent Earned, Insurance Expense, Interest Expenses, and Salaries Expense.
2. Reconstruct the adjusting entry that must have been recorded for each account.
3. Post these adjusting entries and agree ending balances in each T-account to the adjusted balances above.
4. List revenue and expense amounts for the period.

CP 3–2

The following general ledger accounts are taken from the books of the Hynes Corporation at the end of its fiscal year, December 31, 2011:

Cash	No. 101
750	50
950	150
90	50
	24
	20
	70

Accounts Receivable	No. 110
228	90

Prepaid Insurance	No. 161
24	2

Unused Office Supplies	No. 170
50	25

Unused Repair Supplies	No. 171
145	80

Furniture	No. 182
150	

Acc. Dep’n – Furniture	No. 191
	2

Accounts Payable	No. 210
70	145

Share Capital	No. 320
	400

Ret. Earn.	No. 340
	350

Repair Rev.	No. 450
	950
	228

Dep’n Exp. - Furniture	No. 621
2	

Insurance Exp.	No. 631
2	

Office Supplies Exp.	No. 650
25	

Rent Expense	No. 654
50	

Repair Supplies Expense	No. 655
80	

Telephone Expense	No. 669
20	

View Solution

Required:

1. Label the debit and credit amounts that represent each adjusting entry made at December 31 (for example: a, b, c).
2. Prepare the adjusting entries made at December 31 in general journal form. Include general ledger account numbers (see chart of accounts in chapter 2) and plausible descriptions.

CP 3–3

The trial balance of Lauer Corporation at December 31, 2011 follows, before and after the posting of adjusting entries.

	Trial Balance		*Adjustments*		*Adjusted Trial Balance*	
	Dr.	*Cr.*	*Dr.*	*Cr.*	*Dr.*	*Cr.*
Cash	$ 4,000				$ 4,000	
Accounts Receivable	5,000				5,000	
Prepaid Insurance	3,600				3,300	
Prepaid Rent	1,000				500	
Truck	6,000				6,000	
Accumulated		$ -0-				$1,500
Depreciation		7,000				7,400
Accounts Payable						1,000
Salaries Payable		1,200				600
Unearned Rent		2,700				2,700
Share Capital		25,000				25,000
Revenue						600
Rent Earned	700				700	
Advertising Expense	2,000				2,000	
Commissions Expense					1,500	
Depreciation Expense					300	
Insurance Expense	100				500	
Interest Expense	5,500				6,000	
Rent Expense	8,000				9,000	
Salaries Expense						
Totals	$35,900	$35,900			$38,800	$38,800

View Solution

Required:

1. Indicate in the “Adjustments” column the debit or credit difference between the unadjusted trial balance and the adjusted trial balance.
2. Prepare in general journal format the adjusting entries that have been recorded. Include general ledger account numbers (see chart of accounts in chapter 2)and plausible descriptions.

CP 3–4

The preparation of adjusting entries requires a debit entry to one account and a credit entry to another account.

A	*B*
a. Insurance Expense	1. Commissions Earned
b. Rent Earned	2. Supplies Expense
c. Prepaid Rent	3. Salaries Expense
d. Interest Payable	4. Unearned Fees
e. Interest Receivable	5. Accumulated Depreciation
f. Fees Earned	6. Rent Expense
g. Unused Supplies	7. Prepaid Insurance
h. Unearned Commissions	8. Interest Earned
i. Salaries Payable	9. Interest Expense
j. Depreciation Expense	10. Unearned Rent

View Solution

Required: Match each account in column *A* with the appropriate account in column *B*.

CP 3–5

The following data are taken from an unadjusted trial balance at December 31, 2011:

Prepaid Rent	$ 600
Office Supplies	700
Income Taxes Payable	-0-
Unearned Commissions	1,500
Salaries Expense	5,000

Additional Information:

a. The prepaid rent consisted of a payment for three months' rent at $200 per month for December 2011, January 2012, and February 2012.
b. Office supplies on hand at December 31, 2011 amounted to $300.
c. The estimated income taxes for 2011 are $5,000.
d. All but $500 in the Unearned Commissions account has been earned in 2011.
e. Salaries for the last three days of December amounting to $300 have not yet been recorded.

View Solution

Required:

1. Prepare all necessary adjusting entries in general journal format.
2. Calculate the cumulative financial impact on assets, liabilities, equity, revenue and expense if these adjusting entries are not made.

CP 3–6

The following are general ledger accounts extracted from the records of Bernard Inc. at December 31, 2011, its year-end (‘UB’ = unadjusted balance):

Prepaid Advertising

UB	1,000		500

Unused Supplies

UB	750		400

Equipment

UB	21,750		

Acc. Dep’n – Equipment

			1,500
			250

Accounts Payable

		UB	15,000
			200
			100
			400
			800

Salaries Payable

			700

Unearned Subscriptions

	5,000	UB	10,000

Share Capital

		UB	8,000

Subscription Revenue

			5,000

Advertising Expense

	500		

Commissions Expense

UB	800		

Dep’n Expense – Equipment

	250		

Maintenance Expense

	200		

Salaries Expense

UB	9,500		
	700		

Supplies Expense

UB	2,500		
	400		

Telephone Expense

	100		

Utilities Expense

	400		

View Solution

Required: Prepare in general journal format the adjusting entries that were posted. Include general ledger account numbers (see chart of accounts in chapter 2) and plausible descriptions.

CP 3–7

An extract from the worksheet of Armstrong Corp. at June 30, 2011 is reproduced below:

Account	*Amount in Unadjusted Trial Balance*	*Amount in Adjusted Trial Balance*
Unused Office Supplies	$ 190	$ 55
Accumulated Depreciation –Truck	0	400
Prepaid Insurance	850	610
Interest Payable	0	100
Unearned Rent	1,000	500

View Solution

Required: Prepare in general journal format the entries that were posted, including a plausible description and general ledger account numbers (see chart of accounts in chapter 2).

CP 3–8

The following unadjusted accounts are extracted from the general ledger of A Corp. at December 31, 2011:

Truck		Depreciation Expense – Truck		Acc. Dep'n – Truck	
10,000		1,300			1,300

Additional Information: The truck was purchased January 1, 2011. It has an estimated useful life of 4 years.

View Solution

Required: Prepare the needed adjusting entry at December 31, 2011.

CP 3–9

The following unadjusted accounts are taken from the records of B Corp. at December 31, 2011:

Bank Loan		Interest Expense		Interest Payable	
	12,000	1,100			100

Additional Information: The bank loan was received on January 1, 2011. It bears interest at 10 per cent.

View Solution

Required: Prepare the adjusting entry at December 31, 2011.

CP 3–10

The following general ledger accounts and additional information are taken from the records of Wolfe Corporation at the end of its fiscal year, December 31, 2011.

Additional information:

a. The prepaid insurance is for a one-year policy, effective July 1, 2011.
b. A physical count indicated that $500 of supplies is still on hand.
c. A $50 December telephone bill has been received but not yet recorded.

Cash	*No. 101*	Unused Supplies	*No. 173*	Advertising Exp.	*No. 610*
Bal. 2,700		Bal. 700		Bal. 200	
Accounts Receivable	*No. 110*	Share Capital	*No. 320*	Salaries Expense	*No. 656*
Bal. 2,000			Bal. 3,800	Bal. 4,500	
Prepaid Insurance	*No. 161*	Repair Revenue	*No. 450*	Telephone Exp.	*No. 669*
Bal. 1,200			Bal. 7,750	Bal. 250	

View Solution

Required:

1. Record all necessary adjusting entries in general journal format.
2. Post the adjusting entries to T-accounts and calculate balances.
3. Prepare all closing entries in general journal format. Include general ledger account numbers (see chart of accounts in chapter 2).
4. Post the closing entries to the applicable general ledger accounts.
5. (Appendix) Prepare the necessary reversing entry.

Problems

P 3–1

The following unrelated accounts are extracted from the records of Meekins Limited at December 31, its fiscal year-end:

	Balance	
	Unadjusted	*Adjusted*
a. Prepaid Rent	$ 300	$ 600
b. Wages Payable	500	700
c. Income Taxes Payable	-0-	1,000
d. Unearned Commissions Revenue	2,000	3,000
e. Other Unearned Revenue	25,000	20,000
f. Advertising Expense	5,000	3,500
g. Depreciation Expense—Equipment	-0-	500
h. Supplies Expense	850	625
i. Truck Operation Expense	4,000	4,500

Required: For each of the above unrelated accounts, prepare the most likely adjusting entry, including general ledger account numbers (see chart of accounts in chapter 2) and plausible descriptions.

P 3–2

The unadjusted trial balance of Lukas Films Corporation includes the following account balances at December 31, 2011, its fiscal year-end. Assume all accounts have normal debit or credit balances as applicable.

Prepaid Rent	$ 1,500
Equipment	2,400
Unearned Advertising Revenue	1,000
Insurance Expense	900
Supplies Expense	600
Telephone Expense	825
Wages Expense	15,000

The following information applies at December 31:

a. A physical count of supplies indicates that $300 of supplies have not yet been used at December 31.
b. A $75 telephone bill for December has been received but not recorded.
c. One day of wages amounting to $125 remains unpaid and unrecorded at December 31; the amount will be included with the first Friday payment in January.
d. The equipment was purchased December 1; it is expected to last 2 years. No depreciation has yet been recorded.
e. The prepaid rent is for December 2011, and January and February 2012; rent is $500 per month.
f. Half of the advertising revenue has been earned at December 31.
g. The $900 amount in Insurance Expense is for a one-year policy, effective July 1, 2011.

Required: Prepare all necessary adjusting entries at December 31, 2011. Include general ledger account numbers (see chart of accounts in chapter 2). Descriptions are not needed.

P 3–3

The unadjusted trial balance of Mighty Fine Services Inc. includes the following account balances at December 31, 2011, its fiscal year-end. No adjustments have been recorded. Assume all accounts have normal debit or credit balances.

Temporary Investments	$10,000
Prepaid Insurance	600
Unused Supplies	500
Bank Loan	5,000
Subscription Revenue	9,000
Salaries Payable	500
Rent Expense	3,900
Truck Operation Expense	4,000

The following information applies to the fiscal year-end:

a. The Temporary Investment balance represents an investment of cash in interest-bearing investments; accrued interest of $250 has not yet been recorded.
b. The $600 prepaid insurance is for a one-year policy, effective September 1, 2011.
c. A physical count indicates that $300 of supplies is still on hand at December 31.

d. Interest on the bank loan is paid on the fifteenth day of each month; the unrecorded interest for the last 15 days of December amounts to $25.
e. The Subscription Revenue account consists of a cash receipts for 6-month subscriptions to the corporation's *Computer Trends* report; the subscription period began December 1.
f. Three days of salary amounting to $300 remain unpaid at December 31, in addition to the previous week's salaries of $500, which have not yet been paid.
g. The monthly rent expense amounts to $300.
h. A bill for December truck operation expense has not yet been received; an amount of $400 is owed.

Required: Prepare all necessary adjusting entries at December 31, 2011. Include general ledger account numbers (see chart of accounts in chapter 2). Descriptions are not needed.

P 3–4

The following accounts are taken from the records of Bill Pitt Corp. at the end of its first 12 months of operations ended December 31, 2011, prior to any adjustments.

In addition to the balances in each set of accounts, additional data are provided for adjustment purposes if applicable. Treat each set of accounts independently of the others.

a.

Truck		Depreciation Expense – Truck		Acc. Dep'n – Truck	
6,000		600			600

Additional information: The truck was purchased July 1; it has an estimated useful life of 4 years.

b.

Cash		Unearned Rent		Rent Earned	
600			-0-		600

Additional information: A part of Harrison's office was sublet during the entire 12 months for $50 per month.

c.

Unused Supplies		Supplies Expense	
		1,250	

Additional information: A physical inventory indicated $300 of supplies still on hand at December 31.

d.

Prepaid Rent		Rent Expense	
1,200		4,400	

Additional information: The monthly rent is $400.

e.

Wages Expense		Wages Payable	
6,000			500

Additional information: Unrecorded wages at December 31 amount to $250.

f.

Bank Loan		Interest Expense		Interest Payable	
	8,000	600			100

Additional information: The bank loan bears interest at 10 per cent. The money was borrowed on January 1, 2011.

g.

Cash		Utilities Expense		Utilities Payable	
	1,000	1,200			200

Additional information: The December bill has not yet been received or any accrual made; the amount owing at December 31 is estimated to be another $150.

h.

Cash		Prepaid Insurance		Insurance Expense	
	1,200	600		600	

Additional information: A $1,200 one-year insurance policy had been purchased effective February 1, 2011; there is no other insurance policy in effect.

i.

Unearned Rent Revenue		Rent Earned	
	900		300

Additional information: The Unearned Rent Revenue balance applies to the months of November and December 2011 and to January 2012 at $300 per month.

j.

Cash		Other Unearned Revenue		Commissions Earned	
25,200			-0-		25,200

Additional information: An amount of $2,000 commission revenue has not been earned at December 31.

Required: Prepare all necessary adjusting entries. Include general ledger account numbers (see chart of accounts in chapter 2) and descriptions.

P 3–5

The following unadjusted trial balance has been taken from the records of Pape Pens Corporation at the end of its first year of operations, December 31, 2011:

	Balance	
	Debit	*Credit*
Cash	$ 3,300	
Accounts Receivable	4,000	
Prepaid Insurance	1,200	
Unused Supplies	500	
Truck	8,000	
Accounts Payable		$ 5,000
Unearned Rent Revenue		2,400
Share Capital		6,000
Commission Revenue		16,100
Advertising Expense	200	
Commissions Expense	1,000	
Interest Expense	400	
Rent Expense	3,600	
Salaries Expense	7,000	
Telephone Expense	300	
	$29,500	$29,500

The following additional information is available:

a. Prepaid insurance at December 31 amounts to $600.

b. A physical count indicates that $300 of supplies is still on hand at December 31.

c. The truck was purchased on July 1; it has an estimated useful life of 4 years.

d. One day of salaries for December 31 is unpaid; the unpaid amount of $200 will be included in the first Friday payment in January.

e. The balance in the Unearned Rent Revenue account represents six months rental of warehouse space, effective October 1.

f. A $100 bill for December telephone charges has not yet been recorded.

Required:

1. Prepare all necessary adjusting entries at December 31, 2011. Descriptions are not needed.
2. Prepare an adjusted trial balance at December 31, 2011.
3. (Appendix) Prepare reversing entries at January 1, 2012. Include general ledger account numbers (see chart of accounts in chapter 2). Descriptions are not needed.

P 3–6

Roth Contractors Corporation was incorporated on December 1, 2011 and had the following transactions during December:

Part A

a. Issued share capital for $5,000 cash
b. Paid $1,200 for three months' rent: December 2011; January and February 2012
c. Purchased a used truck for $10,000 on credit (recorded as an account payable)
d. Purchased $1,000 of supplies on credit. These are expected to be used during the month (recorded as expense)
e. Paid $1,800 for a one-year truck insurance policy, effective December 1
f. Billed a customer $4,500 for work completed to date
g. Collected $800 for work completed to date
h. Paid the following expenses: advertising, $350; interest, $100; telephone, $75; truck operation, $425; wages, $2,500
i. Collected $2,000 of the amount billed in *f* above
j. Billed customers $6,500 for work completed to date
k. Signed a $9,000 contract for work to be performed in January
l. Paid the following expenses: advertising, $200; interest, $150; truck operation, $375; wages, $2,500
m. Collected a $2,000 advance on work to be done in January (the policy of the corporation is to record such advances as revenue at the time they are received)
n. Received a bill for $100 for electricity used during the month (recorded as utilities expense).

Required:

1. Open general ledger T-accounts for the following: Cash, Accounts Receivable, Prepaid Insurance, Prepaid Rent, Truck, Accounts Payable, Share Capital, Repair Revenue, Advertising Expense, Interest Expense, Supplies Expense, Telephone Expense, Truck Operation Expense, Utilities Expense, and Wages Expense.
2. Prepare journal entries to record the December transactions. Descriptions are not needed.
3. Post the entries to general ledger T-accounts.

Part B

At December 31, the following information is made available for the preparation of adjusting entries.

o. One month of the Prepaid Insurance has expired.
p. The December portion of the December 1 rent payment has expired.
q. A physical count indicates that $350 of supplies is still on hand.
r. The amount collected in transaction *m* is unearned at December 31.
s. Three days of wages for December 29, 30, and 31 are unpaid; the unpaid amount of $1,500 will be included in the first Friday wages payment in January.
t. The truck has an estimated useful life of 4 years.

Required:

4. Open additional general ledger T-accounts for the following: Unused Supplies, Accumulated Depreciation, Wages Payable, Unearned Revenue, Depreciation Expense, Insurance Expense, and Rent Expense.

5. Prepare all necessary adjusting entries. Include general ledger account numbers (see chart of accounts in chapter 2) and descriptions.
6. Post the entries to general ledger T-accounts and calculate balances.
7. Prepare an adjusted trial balance at December 31.

P 3–7

Part A

Snow Services Corporation performs snow removal services and sells advertising space on its vehicle. The company started operations on January 1, 2011 with $30,000 cash and $30,000 of share capital. It sublets some empty office space. The following transactions occurred during January 2011:

a. Purchased a truck for $15,000 cash on January 1
b. Collected snow removal revenue for January, February, and March amounting to $4,000 per month, $12,000 in total (recorded as Service Revenue)
c. Paid $600 for a one-year insurance policy, effective January 1
d. Invested $5,000 of temporarily-idle cash in a term deposit (recorded as Temporary Investments)
e. Purchased $500 of supplies on credit (recorded as Supplies Expense)
f. Received three months of advertising revenue amounting to $900 (recorded as Other Revenue)
g. Received two months of interest amounting to $150 (recorded as Interest Earned)
h. Paid $5,000 cash for equipment
i. Received $1,200 cash for January, February, and March rent of unused office space (recorded as Rent Earned)
j. Paid $3,000 of wages during the month.

Required:

1. Open general ledger T-accounts for the following: Cash, Temporary Investments, Prepaid Insurance, Equipment, Truck, Accounts Payable, Share Capital, Other Revenue, Interest Earned, Rent Earned, Service Revenue, Supplies Expense, and Wages Expense.
2. Prepare journal entries to record the January transactions. Descriptions are not needed.
3. Post the entries to the general ledger accounts.

Part B

At the end January, the following adjusting entries are needed:

k. The truck purchased in transaction *a* has a useful life of five years.
l. One-third of the snow removal revenue from transaction *b* has been earned.
m. The January portion of the insurance policy has expired.
n. Half of the interest revenue still has not been earned.
o. A physical count indicates $200 of supplies is still on hand.
p. The January component of the advertising revenue has been earned.
q. $50 interest for January is accrued on the term deposit; this amount will be included with the interest payment to be received at the end of February.
r. The equipment purchased in transaction *h* on January 1 is expected to have a useful life of four years.
s. January rent revenue has been earned.

t. Three days of wages amounting to $150 remain unpaid; the amount will be included in the first Friday payment in February.

Required:

4. Open additional general ledger T-accounts for the following: Interest Receivable, Unused Supplies, Accumulated Depreciation—Equipment, Accumulated Depreciation—Truck, Wages Payable, Unearned Advertising Revenue, Unearned Fees Revenue, Unearned Interest Revenue, Unearned Rent Revenue, Insurance Expense, Depreciation Expense—Equipment, and Depreciation Expense—Truck.
5. Prepare all necessary adjusting entries at January 31.
6. Post the entries to the general ledger accounts and post balances.
7. Prepare an adjusted trial balance at January 31.

Alternate Problems

View Solution

AP 3–1

The following unrelated accounts are from the records of Gabel Inc. at December 31, its fiscal year-end.

	Balance	
	Unadjusted	*Adjusted*
a. Prepaid Insurance	$ 500	$ 300
b. Unused Supplies	850	400
c. Accumulated Depreciation—Truck	-0-	1,200
d. Salaries Payable	2,500	2,600
e. Unearned Fees Revenue	5,000	1,000
f. Income Taxes Payable	-0-	3,500
g. Other Revenue	50,000	45,000
h. Commissions Expense	4,000	5,500
i. Interest Expense	800	850

Required: For each of these accounts, prepare the adjusting entry that was most likely recorded. Include general ledger account numbers (see chart of accounts in chapter 2)and plausible descriptions.

AP 3–2

The unadjusted trial balance of Inaknot Insurance Corp. includes the following account balances at December 31, 2011, its fiscal year-end. Assume all accounts have normal debit or credit balances.

Prepaid Insurance	$ 1,800
Truck	18,000
Unearned Commissions Revenue	9,000
Rent Earned	-0-
Advertising Expense	5,000
Salaries Expense	25,000
Supplies Expense	900

The following information is available:

a. A physical count indicates that $200 of supplies have not been used at December 31.
b. The prepaid insurance consists of a one-year policy, effective October 1.
c. The truck was purchased on July 1; it is expected to have a useful life of 6 years. No depreciation has been recorded during the year.
d. The unearned commissions revenue at December 31 is $7,500.
e. Two days of salary amounting to $200 remain unpaid and unrecorded at December 31; the amounts will be included with the next Friday's payment, which will be in January.
f. Rental revenue of $300 has not yet been received for a sublet of part of a warehouse for 2 weeks during December.
g. A $300 bill for December advertising has not yet been recorded.

View Solution

Required: Prepare all necessary adjusting entries. Include general ledger account numbers (see chart of accounts in chapter 2). Descriptions are not needed.

AP 3–3

The unadjusted trial balance of Langford Limited includes the following account balances at December 31, 2011, its fiscal year-end. Assume all accounts have normal debit or credit balances.

Temporary Investments	$15,000
Prepaid Rent	1,200
Unused Supplies	-0-
Bank Loan	7,500
Unearned Subscriptions Revenue	9,000
Insurance Expense	2,400
Salaries Expense	75,000
Supplies Expense	600
Utilities Expense	-0-

The following information relates to the fiscal year-end:

a. Accrued interest on the temporary investment amounts to $40 at December 31.
b. The prepaid rent applies equally to the months of November and December 2011 and January 2012.
c. Accrued interest on the bank loan amounts to $50 at December 31.
d. One–third of the subscriptions revenue remains unearned at December 31.

e. Insurance expense includes the cost of a one-year insurance policy, effective January 1, 2011, and the cost of a one-year renewal, effective January 1, 2012. The cost for each year is $1,200.
f. Two days of salary have not yet been accrued at December 31; the usual salary for a five-day week is $2,500.
g. A physical count indicates that $100 of supplies is still on hand at December 31.
h. A $200 bill for electricity has not yet been recorded for December.

View Solution

Required: Prepare all necessary adjusting entries. Include general ledger account numbers (see chart of accounts in chapter 2). Descriptions are not needed.

AP 3–4

The following accounts are taken from the records of Trebell Ltd. at the end of its first twelve months of operations, December 31, 2011. In addition to the balances in each set of accounts, additional data are provided for adjustment purposes. Treat each set of accounts independently.

a.

Cash		Prepaid Rent		Rent Expense	
	5,200				5,200

Additional information: The monthly rent is $400

b.

Interest Expense		Interest Payable	
850			

Additional information: Unpaid interest on the bank loan amounts to $150.

c.

Unused Supplies		Supplies Expense	
		800	

Additional information: Supplies still on hand amount to $300.

d.

Cash		Salaries Expense		Salaries Payable	
	4,000	5,000			1,000

Additional information: Salaries owing at December 31 amount to $1,000 in total.

e.

Prepaid Advertising		Advertising Expense	
800		3,000	

Additional information: Prepaid Advertising at December 31 amounts to $1,200.

f.

Equipment		Depreciation Expense		Acc. Dep'n – Equipment	
6,000		500			500

Additional information: The equipment was purchased on July 1; it has an estimated useful life of 5 years.

g.

Unearned Rent Revenue		Rent Earned	
			10,000

Additional information: Rent Earned during the year should be $7,500.

h.

Cash		Prepaid Insurance		Insurance Expense	
	600	100		500	

Additional information: $600 was paid for a 1-year policy effective January 1, 2011.

i.

Utilities Expense		Utilities Payable	
875			

Additional information: The December utility bill has not yet been received; the amount owing has been estimated at $225.

View Solution

Required: Prepare all necessary adjusting entries at December 31, 2011. Include general ledger account numbers (see chart of accounts in chapter 2). Descriptions are not needed.

AP 3–5

The following unadjusted trial balance has been prepared for Sellit Realty Corporation at the end of its first year of operations, December 31, 2011:

	Balance	
	Debit	*Credit*
Cash	$ 1,500	
Accounts Receivable	7,000	
Prepaid Rent	1,200	
Unused Supplies	100	
Equipment	3,000	
Accounts Payable		$ 6,000
Unearned Commissions Revenue		3,000
Share Capital		500
Commissions Revenue		20,000
Advertising Expense	850	
Commissions Expense	3,600	
Interest Expense	550	
Rent Expense	4,400	
Supplies Expense	700	
Wages Expense	6,600	
	$29,500	$29,500

The following additional information is available:

a. Prepaid rent represents equal amounts of rent for the months of December 2011, and January and February 2012.

b. A physical count indicates that $200 of supplies is on hand at December 31.

c. The equipment was purchased on July 1; it has an estimated useful life of 3 years
.

d. Wages of $300 for December 30 and 31 are unpaid; they will be included in the first Friday's payment in January.

e. Revenue includes $2,500 received for commissions that will be earned in 2012.
f. Unrecorded interest expense amounts to $150.

View Solution

Required:

1. Prepare all necessary adjusting entries. Include general ledger account numbers (see chart of accounts in chapter 2) and calculations as needed.Descriptions are not necessary.
2. Prepare an adjusted trial balance.
3. (Appendix) Prepare all reversing entries.

AP 3–6

Scuttlebutt Publishers Corporation was incorporated on June 1, 2011. The company had the following transactions during its first month of operations:

Part A

a.	Jun. 1	Issued share capital for $10,000 cash
b.	1	Purchased equipment for $6,000 on credit
c.	2	Purchased $750 of supplies on credit. These are expected to last three months (recorded as Unused Supplies)
d.	3	Paid two months of newspaper advertising for $500 (recorded as Prepaid Advertising)
e.	5	Collected $12,000 of three-month subscriptions to its *ONLINE REVIEW* magasine, effective June 1 (recorded as Other Revenue)
f.	14	Paid the following expenses: telephone, $350; rent for June, $500; salaries, $3,000
g.	16	Collected $5,000 from advertisers for the June edition of *ONLINE REVIEW* magasine
h.	18	Paid half of the equipment purchased June 1
i.	20	Paid $2,000 for supplies purchased
j.	28	Paid the following expenses: telephone, $250; salaries, $3,000
k.	30	Received a $200 bill for electricity used during the month (recorded as Utilities Expense).

View Solution

Required:

1. Open general ledger T-accounts for the following: Cash, Prepaid Advertising, Unused Supplies, Equipment, Accounts Payable, Unearned Subscriptions Revenue, Share Capital, Other Revenue, Rent Expense, Salaries Expense, Supplies Expense, Telephone Expense, and Utilities Expense.
2. Prepare journal entries to record the June transactions. Include general ledger account numbers (see chart of accounts in chapter 2). Descriptions are not needed.
3. Post the entries to general ledger T-accounts and calculate balances at June 30, 2011.

Part B

At June 30, the following additional information is available.

l. The June portion of advertising paid on June 3 has expired.
m. One month of the subscriptions revenue collected June 5 has been earned.

n. A physical count indicates that $100 of supplies is still on hand.
o. A 5 per cent commission expense is owed on the June portion of the subscriptions collected June 5.
p. Two days of salary for June 29 and 30 are unpaid; the unpaid amount will be included in the first Friday salary payment in July. The salary for each day during the week amounts to $300. $600 is unpaid in total.
q. The equipment purchased on June 1 has an estimated useful life of 5 years.

View Solution

Required:

4. Open additional general ledger T-accounts for the following: Accumulated Depreciation - Equipment, Salaries Payable, Subscription Revenue, Advertising Expense, Commissions Expense, and Depreciation Expense - Equipment.
5. Prepare all necessary adjusting entries at June 30, 2011. Include general ledger account numbers (see chart of accounts in chapter 2). Descriptions are not needed.
6. Post the entries to the general ledger T-accounts and calculate balances.
7. Prepare an adjusted trial balance at June 30.

AP 3–7

Rigney Productions Corporation was incorporated and began operations on January 1, 2011 with $50,000 cash and $50,000 of share capital issued.

Part A

The following transactions occurred during January 2011.

a. Paid salaries of $15,000 during the month
b. Purchased $750 of supplies on credit (recorded Prepaid Supplies)
c. Paid 7,200 cash for equipment
d. Invested $10,000 temporarily-idle cash in a term deposit (recorded as Temporary Investments)
e. Paid $1,200 for a one-year insurance policy, effective January 1 (recorded as an asset)
f. Collected $6,000 of one-year subscriptions, beginning January 1 (recorded Unearned Subscriptions Revenue)
g. Paid $1,500 for January, February, and March rent (recorded as an asset)
h. Collected $600 for sublet of the company's warehouse for January and February (recorded as Unearned Rent)
i. Paid $6,000 for a used truck.

View Solution

Required:

1. Open general ledger T-accounts for the following: Cash, Temporary Investments, Prepaid Insurance, Prepaid Rent, Unused Supplies, Equipment, Truck, Accounts Payable, Share Capital, Unearned Rent Revenue, Unearned Subscriptions Revenue, and Salaries Expense.
2. Prepare journal entries to record the January transactions. Include general ledger account numbers (see chart of accounts in chapter 2). Descriptions are not needed.
3. Post the entries to the general ledger T-accounts.

Part B

At the end of the month, the following adjusting entries are needed.

j. Two days of salary amounting to $1,000 remain unpaid; the amount will be included in the first Friday salary payment in February.
k. A physical count indicates that $250 of supplies is still on hand.
l. The equipment has an estimated useful life of three years .
m. An amount of $100 interest is accrued on the term deposit.
n. One month of the insurance policy has expired.
o. The January portion of the subscriptions revenue has been earned.
p. The January portion of the rent payment has expired.
q. Half of the sublet revenue has been earned.
r. The truck has an estimated useful life of four years .

View Solution

Required:

4. Open additional general ledger T-accounts for the following: Interest Receivable, Accumulated Depreciation—Equipment, Accumulated Depreciation—Truck, Salaries Payable, Interest Earned, Rent Earned, Subscription Revenue, Depreciation Expense—Equipment, Depreciation Expense—Truck, Insurance Expense, Rent Expense, and Supplies Expense.
5. Prepare all necessary adjusting entries at January 31, 2011. Include general ledger account numbers (see chart of accounts in chapter 2) and calculations as applicable. Descriptions are not needed.
6. Post the entries to the general ledger T-accounts.
7. Prepare an adjusted trial balance at January 31.

Review Problem

RP 3–1

The unadjusted trial balance of Packer Corporation showed the following balances at the end of its first 12-month fiscal year ended August 31, 2011:

	Balance	
	Debits	*Credits*
Cash	$ 12,000	
Accounts Receivable	3,600	
Prepaid Insurance	-0-	
Unused Supplies	2,500	
Land	15,000	
Building	60,000	
Furniture	3,000	
Equipment	20,000	
Accumulated Depreciation—Building		$ -0-
Accumulated Depreciation—Equipment		-0-
Accumulated Depreciation—Furniture		-0-
Accounts Payable		4,400
Salaries Payable		-0-
Interest Payable		-0-
Unearned Commissions Revenue		1,200
Unearned Subscriptions Revenue		800
Bank Loan		47,600
Share Capital		52,100
Retained Earnings		-0-
Income Summary		-0-
Commissions Earned		37,900
Subscriptions Revenue		32,700
Advertising Expense	4,300	
Depreciation Expense—Building	-0-	
Depreciation Expense—Equipment	-0-	
Depreciation Expense—Furniture	-0-	
Insurance Expense	1,800	
Interest Expense	2,365	
Salaries Expense	33,475	
Supplies Expense	15,800	
Utilities Expense	2,860	.
Totals	$176,700	$176,700

At the end of August, the following additional information is available:

a. The company's insurance coverage is provided by a single comprehensive 12-month policy that began on March 1, 2011.
b. Supplies on hand total $2,850.
c. The building has an estimated useful life of 50 years .
d. The furniture has an estimated useful life of ten years .
e. The equipment has an estimated useful life of 20 years .
f. Interest of $208 on the bank loan for the month of August will be paid on September 1, when the regular $350 payment is made.
g. Unearned commissions revenue as of August 31 is $450.

h. Unearned subscriptions revenue as of August 31 is $2,800.
i. Salaries that have been earned by employees in August but are not due to be paid to them until the next payday (in September) amount to $325.

Required:

1. Set up necessary general ledger T-accounts and record their unadjusted balances.
2. Prepare the adjusting entries. Include general ledger account numbers (see chart of accounts in chapter 2) and applicable calculations. Descriptions are not needed.
3. Post the adjusting entries to the general ledger T-accounts and calculate balances.
4. Prepare an adjusted trial balance at August 31, 2011.
5. Prepare an income statement and balance sheet.
6. Prepare and post the closing entries.
7. Prepare a post-closing trial balance.
8. (Appendix) Prepare all necessary reversing entries at September 1, 2011.

Decision Problem

DP 3–1

Net income over a fiscal year is determined in accordance with the matching concept.

Required: For each of the following independent situations, indicate how you think the transaction should be recorded in the corporation. Provide reasons for your answers.

1. An advertising expenditure of $100,000 is made during the current fiscal year. The company's advertising agency estimates that three-fourths of the expected increase in sales will take place this fiscal year and one-fourth will occur next year.
2. The company sustained a fire loss this period of $180,000 in excess of insurance proceeds.
3. Research outlays amounted to $480,000 this year. These resulted in a new production technique that is in the process of being patented. It will be introduced into the company's manufacturing processes in the next fiscal year.
4. A machine was purchased for $10,000. It is expected to have a 10-year life. Each period was expected to benefit equally from the machine's output. In the first year, the machine operated according to expectations. However, the machine was idle in the second fiscal year because of a recession.
5. At the end of the fiscal year, salaries and wages for services performed were unpaid in the amount of $25,000.
6. The company is facing a lawsuit. The company's lawyers cannot predict the outcome of the case with certainty, but indicate the damages could be as high as $400,000.
7. At the end of the period, accounts receivable from sales to customers amounted to $190,000. Based on past experience, it is estimated that $6,000 of this amount will have to be written off as uncollectible.
8. Pensions will be paid to workers still employed by the company at the time of their retirement. Estimated pension expense for employees applicable to this fiscal year is $95,000.
9. A bill for property taxes will not be received until the beginning of fiscal year. It is expected that the property taxes will amount to $30,000, of which three-fourths applies to the current year.
10. A fire insurance premium of $3,000 was paid on the first day of the current fiscal year. The premium covers the current year plus the next two fiscal years.

CHAPTER FOUR

Accounting for the Sale of Goods

Examples of business operations to this point involved the provision of services. Businesses that buy and re-sell goods are called **merchandising** companies. The accounting for merchandising companies differs from that of service-based businesses. Chapter 4 covers accounting for transactions of sales of goods on credit and related cash collections by merchandising firms (the sales and collection cycle), and of purchases and payments for goods sold in the normal course of business activities (the purchase and payment cycle).

The answers to the following questions are discussed in chapter 4:

1. What is gross profit and how is it calculated?
2. What is the sequence of events in the purchase and payment cycle?
3. What types of transactions affect merchandise inventory?
4. What is the sequence of events in the sales and collection cycle?
5. What types of transactions affect sales revenue?
6. How are closing entries prepared for a company that sells goods?
7. What is the periodic inventory system?
8. How is cost of goods sold calculated under the periodic inventory system?
9. How is ending inventory recorded in the accounts under the periodic inventory system?

A. The Calculation of Gross Profit

The income statement for a merchandising company differs from that of companies that provide a service because merchandising involves the purchase and subsequent resale of goods in the normal course of business. For instance, "**Sales**" are recorded rather than "Revenues". The chief difference is that **cost of goods sold** is disclosed, as well as the difference between sales and costs of goods sold, called **gross profit** or *gross margin*. These income statement differences are illustrated in Figure 4-1 below:

Service Company	*Merchandising Company*
Revenues	Sales
	Less: Cost of Goods Sold
	Equals: Gross Profit
Less: Expenses	*Less*: Other Expenses
Equals: Net Income	*Equals*: Net Income

Figure 4-1 Differences between the income statements of service and merchandising companies

Assume that Excel Cars Corporation decides to go into the business of buying used vehicles from a supplier and re-selling these to customers. If Excel purchases a vehicle for $2,000 on May 2, 2011 and sells it for $3,000 on May 15, the gross profit shown on the income statement for the period would be $1,000, as follows:

Sales	(a)	$3,000
Cost of Goods Sold		2,000
Gross Profit	(b)	1,000

The word "gross" is used by accountants to indicate that other expenses incurred in running the business must still be deducted from this amount before net income for the accounting period is established. In other words, the gross profit of $1,000 represents the amount of sales revenue that remains to pay operating, interest, income taxes, and other expenses after the cost of the goods sold is deducted.

Note that a **gross profit percentage** can be calculated to express the relationship of gross profit to sales. The sale of the vehicle that cost $2,000 results in a 33 1/3 per cent gross profit percentage ($1,000/3,000). That is, for every $1 of sales, the company has $.33 left over after deducting cost of goods sold to cover other expenses. Readers of financial statements use this percentage as a means to evaluate the performance of one company against other companies in the same industry, or in the same company from year to year. Small fluctuations in the gross profit percentage can have significant effects on the financial performance of a company because the amount of sales and cost of goods sold are often very large in comparison to other income statement items.

B. The Purchase and Payment Cycle

As discussed in chapter 3, a company often purchases items *on account* – that is, cash will be paid at a date later than the receipt of the goods or services. This subsequent payment of cash completes the purchase and payment cycle. The sequences of events in the purchase and payment cycle are illustrated in Figure 4–2. The process within a merchandising company is much the same.

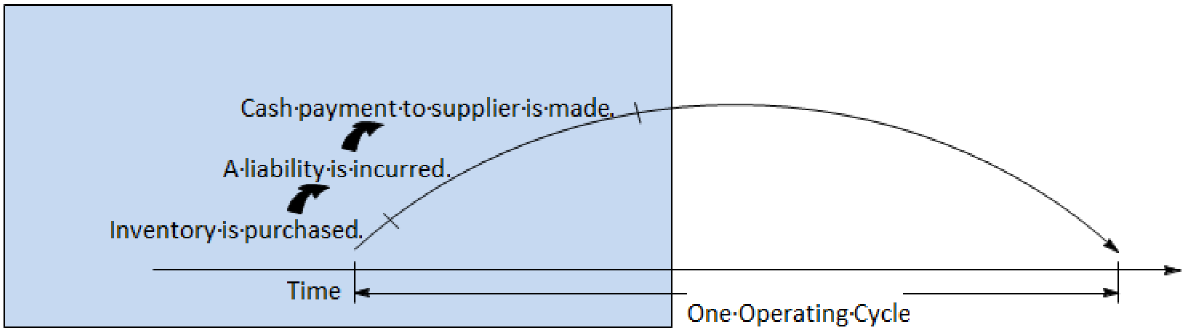


Figure 4–2 The purchase and payment cycle

Inventory Purchases

The cost of purchased merchandise from suppliers is recorded in a **Merchandise Inventory** general ledger account. This is a balance sheet account that accumulates the cost of merchandise acquired for re-sale. An account payable results when the goods are acquired but will not be paid in cash until a later date. For example, recall the vehicle purchased on account by Excel for $2,000 on May 2. The journal entry and general ledger T-account effects would be as follows. The effects on the general ledger T-accounts are also shown:

General Journal Entry

May 2	Merchandise Inventory	150	2,000	
	Accounts Payable	210		2,000
	To record purchase of vehicle.			

General Ledger Effect

Merch. Inventory

2,000	

Accounts Payable

	2,000

The Merchandise Inventory account normally has a debit balance. It is reported as an asset on the balance sheet, as goods on hand are capable of generating revenue from their sale in future periods. It is not unusual to have merchandise on hand at the end of an accounting time period.

The process whereby inventory records are updated after each merchandise transaction to show quantities and values of each item on hand at a point in time is called the **perpetual inventory system**.

Laid-down Costs

There may be other types of purchasing activities that affect the Merchandise Inventory account – for instance, merchandise may occasionally be returned to a supplier, or damaged in transit. Discounts may be earned for prompt cash payment. These transactions result in the reduction of amounts due to the supplier, and the costs of inventory. Purchase activities also involve the payment of transportation and handling costs associated with the merchandise purchases. These are all used to calculate the **laid-down costs** of merchandise inventory – those expenditures necessary to prepare inventory for sale at the ordinary place of business. Major components are discussed in the following sections.

Purchases Returns and Allowances

Assume that the vehicle purchased by Excel on May 2 turned out to be the wrong colour. The supplier was contacted on May 3 and agreed to reduce the price by $300 to $1,700. This is an example of a **Purchases Returns and Allowances** adjustment. The amount of the reduction is recorded as a credit to the Merchandise Inventory account, as follows:

May 3	Accounts Payable	210	300	
	Merchandise Inventory	150		300
	To record reduction in account payable: vehicle wrong colour.			

Accounts Payable	
	2,000
300	

Merch. Inventory	
2,000	
	300
1,700	

Note that the cost of the vehicle has been reduced to $1,700 ($2,000 – 300) in the Excel Inventory account, as has the amount owing to the supplier. Again, the perpetual inventory system records changes in the Merchandise Inventory account each time a relevant transaction occurs.

Purchases Discounts

Purchases discounts also affect the purchase price of merchandise if payment is made within a time period specified in the supplier's invoice. For example, if the terms on the $2,000 invoice for one vehicle received by Excel indicates "1/15, n45", this means that the $2,000 must be paid within 45 days ('n' = net); however, if cash payment is made by Excel within 15 days, the purchase price will be reduced by 1 per cent.

Consider the mis-coloured vehicle received by Excel. If the amount is paid within 15 days, the supplier's terms entitle Excel to deduct $17 [($2,000 - $300) = $1,700 x 1% = $17]. If this payment is made on say, May 9, a $1,683 cash payment would made to the supplier and is recorded as follows:

May 9	Accounts Payable	210	1,700	
	Merchandise Inventory	150		17
	Cash	101		1,683
	To record payment on account in full and purchases discount applied.			

Accounts Payable	
	1,700
1,700	

Merch. Inventory	
2,000	
	300
	17
1,683	

Cash	
	1,683

The cost of the vehicle in the Excel records is now $1,683 as well ($2,000 – 300 – 17). If payment is made after the discount period, $1,700 of cash is paid and the entry is simply:

Accounts Payable	1,700	
Cash		1,700
To record payment on account; no purchase discount applied.		

In this case, the Merchandise Inventory account is not affected. The cost of the vehicle in the records remains at $1,700.

Trade discounts are somewhat similar to purchase discounts. Trade discounts are given by suppliers to merchandisers that buy a large quantity of goods from them. The supplier advertises a **list price**, the normal selling price of its goods to merchandisers. A trade discount may be applied if a merchandiser buys more than a certain amount of goods at a time. For instance, if Beta Merchandiser Corp. buys 1,000 cups with a list price of $1 each from a supplier and is therefore entitled to a 10% trade discount, the entry in Beta's records would be:

Merchandise Inventory	900	
Accounts Payable		900
To record purchase of cups; 5% trade discount applied (1,000 x $1 x 95% = $900)		

Note that the merchandiser records the net amount (list price less trade discount) in inventory. A separate account normally is not maintained to track trade discounts.

Transportation

Any costs to transport goods to a location for re-sale are also recorded as part of the cost of merchandise inventory. The purchase invoice received from a supplier for merchandise usually indicates whether the merchandiser or the supplier will pay for the cost of transportation. The term *fob* (meaning "free on board") is commonly used: **fob shipping point** means the merchandiser pays the transportation costs, and **fob destination** means the supplier pays.

Assume that Excel's supplier sells on the basis of fob shipping point. This means that the transportation cost is the responsibility of Excel. Recall again the vehicle purchased on May 2. If the cost of shipping is $125 and this amount is paid in cash to the truck driver at time of delivery on May 9, payment would be recorded as follows:

May 9	Merchandise Inventory	150	125	
	Cash	101		125
	To record freight on vehicle purchased.			

Merch. Inventory

2,000	
	300
	17
125	
1,808	

Cash

	125

The cost of the vehicle in the Excel Merchandise Inventory account is now $1,808, as shown. Notice that only transportation expenditures necessary to locate inventory at the place of sale are recorded as part of inventory cost. Transportation costs to deliver goods to customers after sale do not affect the Merchandise Inventory account. Rather, these are recorded as *delivery expenses* and recorded on the income statement as other expenses.

The next section describes how revenue from sales of merchandise is recorded in the income statement, as well as the related costs of items sold.

C. The Sales and Collection Cycle

Like a service business, sales of merchandise on account produce an accounts receivable. The subsequent collection of cash completes the **revenue operating cycle,** which is sometimes called the *sales and collection cycle*. The sequence of events in the sales and collection cycle is illustrated in Figure 4–3.

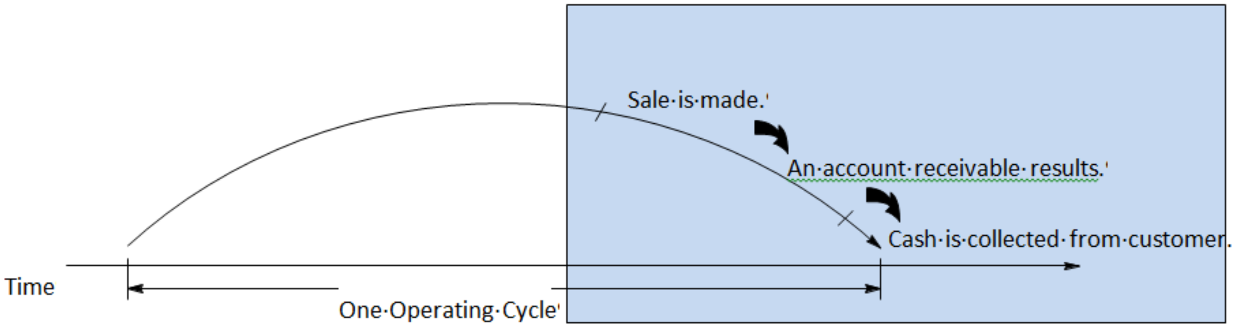


Figure 4–3 The revenue operating cycle

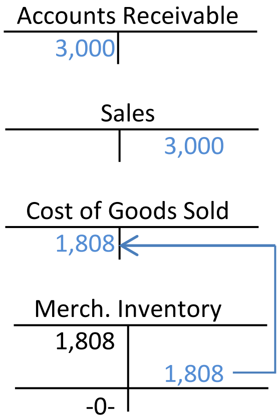
There are some slight recording differences when revenue is earned in a merchandising company. These are discussed below.

Sales

Revenue resulting from the sale of merchandise is recorded in a sales account, as noted at the start of the chapter. An account receivable is recorded when cash is not paid at the time of sale. In addition, under the perpetual inventory system, *the cost of goods sold is also recorded at the same time as the sale,* since this information is available from the accounting records. Assume the vehicle purchased on May 2 by Excel is sold on May 15 for $3,000. Recall that the cost of this vehicle in the Excel Merchandise Inventory account is $1,808, as shown above.

The journal and T-account general ledger entries to record the sale of the vehicle are as follows:

May 15	Accounts Receivable	110	3,000	
	Sales	500		3,000
	Cost of Goods Sold	570	1,808	
	Merchandise Inventory	550		1,808
	To record sale of vehicle.			



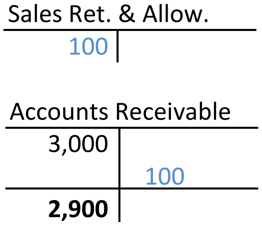
Costs are transferred to the income statement from the balance sheet at the same time the sale is recorded.

The effect is to (a) record the sale; (b) record the related cost of goods sold on the income statement; and (c) reduce the Merchandise Inventory account to zero. The gross profit on the sale is $1,292 ($3,000 – 1,808). *Note that this gross profit amount would only show up on the income statement.* It is not recorded in the general ledger as a separate amount.

Sales Returns and Allowances

However, there may be adjustments that need to be made to sales revenue. Goods may be returned to the merchandiser by the customer or damaged during shipment to the customer, for instance. These adjustments are accumulated in a **Sales Returns and Allowances** account. For example, assume some damage occurs to the vehicle sold by Excel while it is being delivered to the customer on May 17. The company gives the customer a *sales allowance* by agreeing to reduce the amount owing by $100. The journal and T-account entries in the records of Excel would be as follows:

May 17	Sales Returns and Allowances	508	100	
	Accounts Receivable	110		100
	To record customer allowance for damage to vehicle during delivery.			



As the original sale was made on account and has not been paid yet, accounts receivable is credited. The amount owing from the customer is reduced to $2,900. If the $2,900 has already been paid, a credit would be made to Cash and $100 refunded to the customer. The Sales Returns and Allowances account is deducted from the sales balance when preparing the income statement.

If goods are returned by a customer, a *sales return* occurs. The related sales and cost of goods sold recorded on the income statement are reversed and the goods are returned to inventory. If Max Corporation sells a plastic container for $3 that it purchased for $1, the original entry would be:

Accounts Receivable	3	
Sales		3
Cost of Goods Sold	1	
Merchandise Inventory		1
To record sale of plastic container.		

If the container is returned, the journal entry would reverse the original entry, except that *a separate contra account called Sales Returns and Allowances would be debited instead of the Sales account*:

Sales Returns and Allowances	**3**	
Accounts Receivable		3
Merchandise Inventory	1	
Cost of Goods Sold		1

Use of a Sales Returns and Allowances contra account allows management to track the amount of returned and damaged items for their information purposes.

Sales Discounts

Another sales contra account, **Sales Discounts**, accumulates reductions in sales amounts when a customer pays within a certain time period. For example, the sales terms may require payment within 30 days. However, a discount is often granted if payment is made earlier. The exact terms are stated on the sales invoice. Assume these terms for Excel Cars Corporation are stated as “2/10, n30.” This means that the amount owed must be paid by the customer within 30 days (‘n’ = net); however, if the customer chooses to pay within 10 days, a 2 per cent discount may be deducted from the amount owing.

Consider the sale of the vehicle for $2,900 ($3,000 less the $100 allowance for damage). Payment within 10 days entitles the customer to a $58 discount ($2,900 x 2% = $58). If payment is made on May 21 (within the discount period), Excel receives $2,842 cash ($2,900 - 58) and prepares the following entry:

May 21	Cash	101	2,842	
	Sales Discounts	509	58	
	Accounts Receivable	110		2,900
	To record payment on account and sales discount applied.			

Cash	
2,842	

Sales Discounts	
58	

Accounts Receivable	
2,900	
	2,900
-0-	

This reduces the accounts receivable amount to zero. If payment is not made within the discount period, the customer would pay the full amount owing. No Sales Discount would be recorded in this case. The following entry would be prepared when the payment is received.

Cash	2,900	
Accounts Receivable		2,900

The balance in the Sales Discounts account is also deducted from the sales balance when preparing an income statement. In effect, sales discounts are considered a reduction of the selling price.

The Sales Allowances and Sales Discounts contra accounts are deducted from sales on the income statement to arrive at net sales. Cost of goods sold is deducted from net sales. If Excel purchased and sold only this one vehicle, the partial income statement for the period from January 1 to May 31 would show:

Excel Cars Corporation
Partial Income Statement
For the Five Month Period Ended May 31

Sales		$3,000
Less: Sales Returns and Allowances	$100	
Sales Discounts	58	158
Net Sales		$2,842
Cost of Goods Sold		1,808
Gross Profit		1,034

Because they may be immaterial in amount, Sales Returns and Allowances and Sales Discounts contra accounts are often omitted on income statements of merchandisers. Only net sales are disclosed. However, separate general ledger accounts may still be used to accumulate the amount of Sales Discounts and Sales Returns and Allowances to signal management that there may be a potential problem that requires investigation.

Establishing Ending Inventory

In the simple example above, Excel did not have any merchandise inventory on hand at either the start of the year or at the end of May. It purchased and sold one vehicle during the month.

Now assume that Excel Cars Corporation purchased five vehicles from its supplier for $2,000 each on June 2. The company sold three of these for $3,000 each on June 16. On June 30, ending inventory would consist of two vehicles valued at $2,000 each, or $4,000 in total. (Note that inventory is valued at cost, not estimated selling price.) Assume there are no applicable transportation, purchase allowances or discounts expenditures. The journal entry to record the purchase of the vehicles on June 2 would be:

June 2	Merchandise Inventory	150	10,000	
	Accounts Payable	210		10,000
	To record purchase of five vehicles.			

Merch Inventory

-0-	
10,000	
10,000	

Accounts Payable

	-0-
	10,000
	10,000

The summary journal entry to record the sale of the vehicles on June 16 would be:

June 16	Accounts Receivable	110	9,000	
	Sales	500		9,000

Accounts Receivable

-0-	
9,000	
9,000	

Sales

	3,000
	9,000
	12,000

Cost of Goods Sold	570	6,000	
Merchandise Inventory	550		6,000
To record sale of three vehicles			

Cost of Goods Sold	
1,808	
6,000	
7,808	

Merch. Inventory	
10,000	
	6,000
4,000	

Assume the purchase and sale of vehicles in May and June was the only activity of the company during its fiscal year ended December 31, 2011, and the only opening general ledger account balances were Cash - $5,000 and Share Capital - $5,000. After the May and June transactions are recorded, the general ledger T-accounts would appear as follows:

Cash	
5,000	1,683[3]
[7]2,842	125[4]
6,034	

Accounts Payable	
[2]300	2,000[1]
[3]1,700	10,000[8]
	10,000

Share Capital	
	5,000

Sales	
	3,000[5]
	9,000[9]
	12,000

Accounts Rec.	
[5]3,000	100[6]
[9]9,000	2,900[7]
9,000	

Sales Ret. & Allow.	
[6]100	

Sales Discounts	
[7]58	

Merchandise Inv.	
[1]2,000	300[2]
[4]125	17[3]
1,808	
	1,808[5]
-0-	
[8]10,000	6,000[9]
4,000	

Cost of Goods Sold	
[5]1,808	
[9]6,000	
7,808	

Summary of transactions

[1] Purchased one vehicle on credit, May 2
[2] Adjustment by supplier for wrong colour
[3] Paid supplier May 9; purchase discount taken
[4] Paid transportation costs
[5] Sold one vehicle on May 15
[6] Customer credited for delivery damage May 17
[7] Payment received from customer on May 21; sales discount applied
[8] Purchased five vehicles on credit, June 2
[9] Sold three vehicles on June 16

An unadjusted trial balance would be prepared based on this information, as follows:

Excel Cars Corporation
Unadjusted Trial Balance
December 31, 2011

Account	*Account Balance*	
	Debit	*Credit*
Cash	$ 6,034	
Accounts Receivable	9,000	
Merchandise Inventory	4,000	
Accounts Payable		$ 10,000
Share Capital		5,000
Sales		12,000
Sales Returns and Allowances	100	
Sales Discounts	58	
Cost of Goods Sold	7,808	
	$27,000	$27,000

Shrinkage

There is one adjusting entry that may need to be made at year-end related to merchandise inventory. Usually, a physical count of inventory is conducted at the fiscal year-end. Costs are attached to these items and all are totalled. This total is then compared to the Merchandise Inventory account balance. These should agree, unless inventory has been lost for some reason. This discrepancy is called **shrinkage**. Theft and deterioration of goods held for re-sale are the most common examples of shrinkage.

Assume that one of the two vehicles remaining on Excel's vehicle lot is stolen prior to the year end and that this fact has (somehow) gone unnoticed by staff. A physical count at December 31 would reveal one vehicle on hand. This vehicle would be traced to the related purchase invoice and valued at $2,000. Comparing this amount to the balance in the Merchandise Inventory account would reveal a discrepancy of $2,000 ($4,000 – 2,000), and the theft would be revealed. This ability to compare accounting records with actual items on hand can be a valuable means for management to safeguard assets of the company, as it alerts managers to possible shrinkage problems.

At the year-end, this shrinkage must be reflected in the accounting records. The following adjusting entry would be made:

Dec. 31	Cost of Goods Sold	570	2,000	
	Merchandise Inventory	550		2,000
	To adjust merchandise inventory to physical count at year-end: vehicle stolen			

Cost of Goods Sold	
1,808	
6,000	
	2,000
9,808	

Merch. Inventory	
10,000	
	6,000
4,000	
	2,000
2,000	

Generally, shrinkage is recorded as part of cost of goods sold. If the amounts are abnormally large, however, a separate general ledger account can be maintained called, say, Inventory Shrinkage. The amount is still combined with cost of goods sold and not disclosed separately on the income statement, as it is considered information to be used only internally (to spur investment in the protection of physical inventory, for instance).

As there are no more adjustments at year-end in this example, an adjusted trial balance is prepared, as follows:

Excel Cars Corporation
Adjusted Trial Balance
December 31, 2011

Account	*Account Balance*	
	Debit	*Credit*
Cash	$ 6,034	
Accounts Receivable	9,000	
Merchandise Inventory	2,000	
Accounts Payable		$ 10,000
Share Capital		5,000
Sales		12,000
Sales Returns and Allowances	100	
Sales Discounts	58	
Cost of Goods Sold	9,808	
	$27,000	$27,000

The financial statements for the year ended December 31 would be prepared from this information, as follows:

Excel Cars Corporation
Income Statement
For the Year Ended December 31, 2011

Sales		$12,000
Less: Sales Returns and Allowances	$100	
Sales Discounts	58	158
Net Sales		11,842
Cost of Goods Sold		9,808
Gross Profit and Net Income		$ 2,034

In this case, sales consists of four vehicles sold for $3,000 each, or $12,000 in total. Cost of goods sold of $9,808 consists of four vehicles that were originally purchased for $2,000 each, or $8,000 in total, plus transportation costs of $125 and the loss of one vehicle, less a purchase allowance of $300, a purchase discount of $17 related to the May sale, ($8,000 + 125 +2,000 – 300 – 17 = $9,808). Gross profit therefore equals $2,034. Since there are no other expenses, net income is the same amount.

The statement of changes in equity would show:

Excel Cars Corporation
Statement of Changes in Equity
For the Year Ended December 31, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Balance at Beginning of Period	$5,000	$ -0-	$5,000
Shares Issued	-0-		-0-
Net Income		2,034	2,034
Balance at End of Period	$5,000	$2,034	$7,034

The balance sheet at year-end would show:

Excel Cars Corporation
Balance Sheet
At December 31, 2011

Assets		
Cash		$ 6,034
Accounts Receivable		9,000
Merchandise Inventory		**2,000**
		$17,034
Liabilities		
Accounts Payable		$10,000
Shareholders' Equity		
Share Capital	$5,000	
Retained Earnings	2,034	7,034
		$17,034

The one vehicle remaining in inventory at December 31 is valued at $2,000. This is the amount that remains in the Merchandise Inventory general ledger account, verified by physical count at year-end. It is appropriately shown as an asset on the balance sheet at December 31.

D. Closing Entries

The process of recording closing entries for service companies was illustrated in chapter 3. At the end of a fiscal year, the revenue and expense accounts are reduced to zero balances so that they can begin to accumulate amounts for the new fiscal year.

The closing procedure of merchandising companies is the same as for service companies. All accounts listed in the income statement columns are transferred to the income summary account, and then the income summary is closed to retained earnings. The same three-step process is used, as shown in chapter 3:

Entry 1

All income statement accounts with credit balances are debited to bring them to zero. Their balances are transferred to the income summary account.

		(a)		
Dec. 31	Sales	150	12,000	
	Income Summary	360		12,000
	To close all income statement accounts with credit balances to the income summary.			

Entry 2

All income statement accounts with debit balances are credited to bring them to zero. Their balances are transferred to the income summary account.

(b)

Dec. 31	Income Summary	360	9,966	
	Cost of Goods Sold	570		9,808
	Sales Returns and Allow.	508		100
	Sales Discounts	509		58
	To close all income statement accounts with credit balances to income summary.			

Entry 3

The Income Summary account is closed to the Retained Earnings account. The effect is to transfer temporary (income statement) account balances in the income summary totalling $4,034 to the permanent (balance sheet) account, Retained Earnings.

(c)

Dec. 31	Income Summary	360	2,034	
	Retained Earnings	340		2,034
	To close income summary account to retained earnings.			

After these closing entries are posted, the general ledger T-accounts would appear as follows:

Cash	
5,000	1,683^{3}
^{7}2,842	125^{4}
6,034	

Accounts Payable	
^{2}300	2,000^{1}
^{3}1,700	10,000^{8}
	10,000

Share Capital	
	5,000

Sales	
	3,000^{5}
	9,000^{9}
	12,000
^{a}12,000	
-0-	

Retained Earnings	
	2,034^{c}

Accounts Rec.	
^{5}3,000	100^{6}
^{9}9,000	2,900^{7}
9,000	

Income Summary	
^{b}9,966	12,000^{a}
^{c}2,034	
-0-	

Sales Ret. & Allow.	
^{6}100	
	100^{b}
-0-	

Sales Discounts	
^{7}58	
	58^{b}
-0-	

Merchandise Inv.	
^{1}2,000	300^{2}
^{4}125	17^{3}
1,808	
	1,808^{5}
-0-	
^{8}10,000	6,000^{9}
4,000	
	2,000
2,000	

Adjusting entry for inventory shrinkage

Cost of Goods Sold	
^{5}1,808	
^{9}6,000	
7,808	
2,000	
9,808	
	9,808^{b}
-0-	

All income statement accounts and the income summary account are reduced to zero and net income for the year of $2,034 is transferred to retained earnings.

Appendix: The Periodic Inventory System

The perpetual inventory system maintains a continuous balance in the Merchandise Inventory, a balance sheet account. This account reflects purchases, adjustments for items like purchase discounts, allowances, and transportation costs. The account balance is reduced by the amount of goods sold recorded at the time of sale. As a result, the Merchandise inventory general ledger account balance should always equal the value of physical inventory in hand at any point in time. It should perpetually agree; hence the name. An alternate system is considered below, called the *periodic* inventory system.

Description of the Periodic Inventory System

The periodic inventory system does not maintain a constantly-updated merchandise inventory balance. Instead, ending inventory is determined by a physical count and valued at the end of an accounting period. The change in inventory is recorded only periodically.

To illustrate the periodic inventory system, consider again the Excel transactions in May. When goods are purchased using the periodic inventory system, the cost of merchandise is recorded in a **Purchases** account in the general ledger, rather than in the Merchandise Inventory account as is done under the perpetual inventory system. The Purchases account is an income statement account that accumulates the cost of merchandise acquired for re-sale.

Recall that Excel purchased a vehicle on account from its supplier on May 2 for $2,000. The journal entry and T-account effects using the periodic inventory system would be as follows:

May 2	Purchases	550	2,000	
	Accounts Payable	210		2,000
	To record purchase of vehicle.			

Purchases	
2,000	

Accounts Payable	
	2,000

Other types of activities related to the purchase of merchandise, like allowances for damaged items, purchase discounts, and transportation and handling charges, are not recorded in the Merchandise Inventory account either. Rather, they are recorded in special income statement accounts. Accounting for each type of transaction is explained below.

Purchases Returns and Allowances

Recall that the price of the vehicle purchased on May 2 was reduced from $2,000 to $1,700 because it was the wrong colour. Under the periodic inventory system, the amount of the reduction is accumulated in a separate **Purchases Returns and Allowances**, an income statement account. Excel would record the transaction as follows:

May 3	Accounts Payable	210	300	
	Purchases Returns and Allowances	558		300
	To record reduction in account payable: vehicle damaged.			

Accounts Payable

	2,000
300	

Purch. Ret. & Allows.

	300

The Purchases Returns and Allowances amount of $300 is deducted from Purchases when calculating cost of goods sold on the income statement. It is a contra account.

Purchases Discounts

Another contra account, **Purchases Discounts**, accumulates reductions in the purchase price of merchandise if payment is made within a time period specified in the supplier's invoice. Recall that if amount owing on the vehicle is paid within 15 days, the supplier's terms entitle Excel to deduct $17 [($2,000 - 300) = $1,700 x 1% = $17]. Under the periodic inventory system, the $1,683 cash payment to the supplier on May 9 is recorded as follows:

May 9	Accounts Payable	210	1,700	
	Purchases Discounts	559		17
	Cash	101		1,683
	To record payment on account in full and purchases discount applied.			

Accounts Payable

	1,700
1,700	

Purchases Discounts

	17

Cash

	1,683

The discount of $17 is deducted when calculating cost of goods sold on the income statement.

Transportation-in

Under the perpetual inventory system, the cost of transporting the vehicle to Excel's premises was added to the Merchandise Inventory account on the balance sheet. Under the periodic inventory system, a **Transportation-in** account is used to accumulate freight charges on merchandise purchased for re-sale. Like the Purchases and Purchases Discounts accounts, this is also an income statement account which is used to calculate cost of goods sold directly on the income statement.

Recall the cost of shipping the vehicle is $125 and it is paid in cash to the truck driver. Payment would be recorded as follows:

May 9	Transportation-In	560	125	
	Cash	101		125

Transportation-In

125	

Cash

	125

The vehicle is then sold for $3,000 on May 15. A $100 allowance is granted for damage to the vehicle during delivery. A $58 sales discount is granted because the customer paid the balance owing to Excel within the discount period. The sales transactions are recorded in the same manner under both the perpetual and periodic inventory systems. The summary of these transactions is:

May 15	Accounts Receivable	110	3,000	
	Sales	500		3,000
May 17	Sales Returns and Allowances	508	100	
	Accounts Receivable	110		100
May 21	Cash	101	2,842	
	Sales Discounts	509	58	
	Accounts Receivable	110		2,900

Note, however, that there is no entry made to adjust Merchandise Inventory and cost of goods sold when recording the May 15 sales. This is different from the perpetual inventory system. There have been no entries made to the Merchandise Inventory account to date using the periodic inventory system.

The same transactions also occur in June as described earlier. Five vehicles are purchased for $2,000 each, or $10,000 in total. The entry to record the purchase of the vehicles is:

June 2	Purchases	550	10,000	
	Accounts Payable	210		10,000

Purchases

2,000	
10,000	
12,000	

Accounts Payable

	-0-
	10,000
	10,000

Three vehicles are sold during June for $3,000 each, or $9,000 in total. The entry to record the sale of the vehicles is:

June 16	Accounts Receivable	110	9,000	
	Sales	500		9,000

Accounts Receivable

-0-	
9,000	
9,000	

Sales

	3,000
	9,000
	12,000

Again, note that there are no adjustments to the Merchandise Inventory or Cost Of Goods Sold accounts at this point, unlike the perpetual inventory system. After the June transactions are recorded, the general ledger T-accounts would appear as follows:

Cash

5,000	1,683^{3}
^{7}2,842	125^{4}
6,034	

Accounts Payable

^{2}300	2,000^{1}
^{3}1,700	10,000^{8}
	10,000

Share Capital

	5,000

Sales

	3,000^{5}
	9,000^{9}
	12,000

Accounts Rec.

^{5}3,000	100^{6}
^{9}9,000	2,900^{7}
9,000	

Merchandise Inv.

-0-	

Using the periodic inventory system, no transactions are recorded during the year in the Merchandise Inventory account.

Sales Ret. & Allow.

^{6}100	

Sales Discounts

^{7}58	

Purchases

^{1}2,000	
^{9}10,000	
12,000	

Purch. Ret. & Allows.

	300^{2}

Purchase Discounts

	17^{3}

Transportation-In

^{4}125	

Summary of transactions

^{1} Purchased one vehicle on credit, May 2
^{2} Adjustment by supplier for wrong colour
^{3} Paid supplier May 9; purchase discount taken
^{4} Paid transportation costs
^{5} Sold one vehicle on May 15
^{6} Customer credited for delivery damage May 17
^{7} Payment received from customer on May 21; sales discount applied
^{8} Purchased five vehicles on credit, June 2
^{9} Sold three vehicles on June 16

Assume again that no other transactions occur during the year. When financial statements are prepared at December 31, a physical count of inventory is taken. Purchase invoices are referenced to determine the value of the items counted. The resulting amount is inserted into the income statement to determine the cost of goods sold for the year.

In the case of Excel, a physical count should show that there is one vehicle left on the lot. Referring to the purchase documents, this vehicle would be valued at its purchase price - $2,000. The value of ending inventory would thus be calculated as $2,000. This information is inserted directly into the income statement of Excel for the year ended December 31. Combined with the information in the general ledger T-accounts, the income statement would show:

Excel Cars Corporation
Income Statement
For the Year Ended December 31, 2011

Sales		$12,000
Less: Sales Returns and Allowances	$100	
Sales Discounts	58	158
Net Sales		11,842
Cost of Goods Sold:		
Opening Inventory	-0-	
Purchases	12,000	
Transportation-In	125	
Less: Purchase Returns and Allow.	(300)	
Purchase Discounts	(17)	
Cost of Goods Available for Sale	11,808	
Less: Ending Inventory	(2,000)	
Cost of Goods Sold		9,808
Gross Profit and Net Income		$ 2,034

Ending inventory is counted. Costs are attached to each category, and the list is totalled. The total is inserted into the income statement to determine cost of goods sold.

Net income remains the same under either the perpetual or periodic inventory system ($2,034). The periodic method is simpler to use than the perpetual inventory system, and is often used by small businesses because the costs of inventory recordkeeping are reduced. However, a perpetual inventory system enables management to compare inventory records to actual goods on hand at a period end to determine if any shrinkage has occurred, for instance. This security feature is not present with the periodic inventory system. The extra costs of recordkeeping using a perpetual inventory system are offset by the added control over a high-value asset like inventory, especially when there are thousands of items that a business may buy for re-sale each year and where shrinkage can be a significant issue.

Closing Entries – Periodic Inventory System

The process of closing the general ledger temporary accounts to retained earnings at the end of an accounting year is the same under the perpetual or periodic system, with one exception. Under the periodic system, an entry must be made in the Merchandise Inventory account to adjust this balance to the amount of inventory counted and valued at year-end. Otherwise, the steps are the same:

Entry 1

All income statement accounts with credit balances are debited to bring them to zero. Their balances are transferred to the income summary account. *At the same time, the ending inventory balance ($2,000 in this case) is debited to the Merchandise Inventory account.*

(a)

Dec. 31	Merchandise Inventory (ending)	150	2,000	
	Sales	500	12,000	
	Purchase Returns and Allow.	558	300	
	Purchase Discounts	559	17	
	Income Summary	360		14,317
	To close all income statement accounts with credit balances to income summary and record ending inventory balance in Merchandise Inventory account.			

Entry 2

All income statement accounts with debit balances are credited to bring them to zero. Their balances are transferred to the Income Summary account. *At the same time, the opening inventory balance (-0- in this case) is credited to the Merchandise Inventory account:*

(b)

Dec. 31	Income Summary	360	12,283	
	Merchandise Inv. (opening)	150		-0-
	Sales Return and Allows.	508		100
	Sales Discounts	509		58
	Purchases	550		12,000
	Transportation-In	560		125
	To close all income statement accounts with credit balances to income summary and remove opening inventory from the Merchandise Inventory account.			

The combined effect of entries 1 and 2 on the Merchandise Inventory account is to adjust it to the actual ending balance at December 31 of $2,000. At the end of this process, the account will show:

		Merchandise Inventory	
Jan. 1	Opening balance	-0-	
	Add: Ending inventory (closing entry posted)	2,000	
	Less: Opening inventory (closing entry posted)		-0-
Dec. 31	Ending balance	2,000	

Entry 3

The income summary account is closed to the Retained Earnings account. The effect is to transfer temporary account balances in the income summary totalling $2,034 to the permanent general ledger account, Retained Earnings.

(c)

Dec. 31	Income Summary	360	2,034	
	Retained Earnings	340		2,034
	To close the Income Summary account to the Retained Earnings account.			

After these closing entries are posted, the general ledger T-accounts would appear as follows:

Cash

5,000	1,683^{3}
^{7}2,842	125^{4}
6,034	

Accounts Rec.

^{5}3,000	100^{6}
^{9}9,000	2,900^{7}
9,000	

Merchandise Inv.

-0-	
^{a}2,000	
	-0-^{b}
2,000	

Accounts Payable

^{2}300	2,000^{1}
^{3}1,700	10,000^{8}
	10,000

Share Capital

	5,000

Retained Earnings

	2,034^{c}

Income Summary

^{b}12,283	14,317^{a}
^{c}2,034	
-0-	

Sales

	3,000^{5}
	9,000^{9}
	12,000
^{a}12,000	
-0-	

Sales Ret. & Allow.

^{6}100	
	100^{b}
-0-	

Sales Discounts

^{7}58	
	58^{b}
-0-	

Purchases

^{1}2,000	
^{9}10,000	
12,000	
	12,000^{b}
-0-	

Purch. Ret. & Allows.

	300^{2}
^{a}300	
-0-	

Purchase Discounts

	17^{3}
^{a}17	
-0-	

Transportation-In

^{4}125	
	125^{b}
-0-	

Opening Inventory

Under the periodic inventory system, the ending inventory of one accounting time period becomes the opening inventory of the next accounting time period. Opening inventory is added to purchases each period and ending inventory is deducted to calculate cost of goods sold.

Assume that Excel Cars Corporation had the following transactions in 2012, its next accounting year:

Opening inventory	1 vehicle at $2,000
Plus: Purchases	6 vehicles at $2,000 each
Less: Sales	(5) vehicles at $3,000 each
Equals Ending inventory	2 vehicles at $2,000 each (verified by physical count)

Journal entries are omitted in this example. The gross profit and net income calculations disclosed on the income statement for 2011 and 2012 are shown below. Note that the ending inventory at December 31, 2011 becomes the opening inventory at January 1, 2012.

Excel Cars Corporation
Income Statement
For the Year Ended December 31

	2011	*2012*
Sales	$12,000	$15,000
Less: Sales Returns and Allowances	(100)	-0-
Sales Discounts	(58)	-0-
Net Sales	11,842	15,000
Cost of Goods Sold:		
Opening Inventory	-0-	2,000
Purchases	12,000	12,000
Transportation-In	125	-0-
Less: Purchase Returns and Allow.	(300)	-0-
Purchase Discounts	(17)	-0-
Cost of Goods Available for Sale	11,808	14,000
Less: Ending Inventory	(2,000)	(4,000)
Cost of Goods Sold	9,808	10,000
Gross Profit and Net Income	$ 2,034	$ 5,000

Ending inventory for 2011 becomes the opening inventory for 2012.

In 2012, seven vehicles are available for sale – one remaining from 2011 and now included as opening inventory at January 1, 2012 plus six purchased in 2012. Cost of goods available for sale therefore equals $14,000 for the 2012 fiscal year (7 x $2,000). Two vehicles are not sold so are shown as ending inventory at the end of 2012. Their total cost of $4,000 is deducted from cost of goods available for sale to arrive at cost of goods sold for 2012 of $10,000. As was done on 2011, ending inventory amounts would be determined by counting the vehicles on the lot at December 31, 2012 and determining from purchase invoices how much was paid for these.

The interrelationship of inventory disclosed in the income statement and balance sheet using the periodic inventory system can be illustrated as follows:

Excel Car Corporation
Income Statement
For the Year Ended December 31, 2012

Sales		$15,000
Cost of Goods Sold:		
Opening Inventory (Jan. 1, 2012)	$2,000	
Cost of Goods Purchased	12,000	
Cost of Goods Available	14,000	
Less: Ending Inventory (Dec. 31)	(4,000)	
Cost of Goods Sold		10,000
Gross Profit and Net Income		$ 5,000

Excel Car Corporation
Balance Sheet
As at December 31

	2011	*2012*
Assets		
Cash	$A,000	$C,000
Accounts Receivable	B,000	D,000
Merchandise Inventory	2,000	4,000

Closing entries for 2012 would be prepared using the same process as previously described.

Entry 1

(a)

Dec. 31	Merchandise Inventory (ending)	150	4,000	
	Sales	500	15,000	
	Income Summary	360		19,000
	To close all income statement accounts with credit balances to the income summary and record ending inventory balance.			

Entry 2

(b)

Dec. 31	Income Summary	360	14,000	
	Merchandise Inv. (opening)	150		2,000
	Purchases	550		12,000
	To close all income statement accounts with credit balances to the income summary.			

The combined effect of entries 1 and 2 on the Merchandise Inventory account is to adjust it to the actual ending balance at December 31, 2012 of $4,000. At the end of this process, the Merchandise Inventory account in the general ledger will show:

		Merchandise Inventory	
Jan. 1	Opening balance	2,000	
	Add: Ending Inventory (closing entry posted)	4,000	
	Less: Opening Inventory (closing entry posted)		2,000
Dec. 31	Ending balance	4,000	

Entry 3

(c)

Dec. 31	Income Summary	360	5,000	
	Retained Earnings	340		5,000
	To close the Income Summary account to the Retained Earnings account.			

ASSIGNMENT MATERIALS

Discussion Questions

1. How does the income statement prepared for a company that sells goods differ from that prepared for a service business?
2. How is gross profit calculated? What relationships do the gross profit and gross profit percentage calculations express? Explain, using an example.
3. What are some common types of transactions that are recorded in the merchandise Inventory account?
4. Contrast and explain the sales and collection cycle and the purchase and payment cycle.
5. What contra accounts are used in conjunction with sales? What are their functions?
6. (Appendix) Compare the perpetual and periodic inventory systems. What are some advantages of each?
7. (Appendix) What contra accounts are used in conjunction with purchases using the periodic inventory system?
8. (Appendix) How is cost of goods available for sale calculated using the periodic inventory system?
9. (Appendix) How is cost of goods sold calculated using the periodic inventory system?
10. (Appendix) Explain how ending inventory is recorded in the accounts of a business that sells goods using a periodic inventory system.

Comprehension Problems

CP 4–1

Consider the following information of Jones Corporation over four years:

	2014	*2013*	*2012*	*2011*
Sales	$10,000	$9,000	$?	$7,000
Cost of Goods Sold	?	6,840	6,160	?
Gross Profit	2,500	?	1,840	?
Gross Profit Percentage	?	?	?	22%

View Solution

Required:

1. Calculate the missing amounts for each year.
2. What does this information indicate about the company?

CP 4–2

Reber Corp. uses the perpetual inventory system. Its transactions during July 2014 are as follows:

July 6 Purchased $600 of merchandise on account (for credit) from Hobson Corporation for terms 1/10, net 30
9 Returned $200 of defective merchandise
15 Paid the amount owing to Hobson.

View Solution

Required: Prepare journal entries to record the above transactions.

CP 4–3

Boucher Corporation uses the perpetual inventory system. Its transactions during June 2015 are as follows:

June 1 Boucher purchased $1,200 of merchandise inventory from a supplier for terms 1/10, n 60.
3 Boucher sold all of the inventory purchased on June 1 for $1,500 on credit to Wright Inc. for terms 2/10, net 30.
8 Wright returned $800 of defective merchandise purchased June 3 (cost to Boucher: $600).
13 Boucher received payment from Wright Inc. for the balance owed.

View Solution

Required: Prepare journal entries to record the above transactions.

CP 4–4

Horne Inc. and Sperling Renovations Ltd. both sell goods and use the perpetual inventory system. The company had $3,000 of merchandise inventory at the start of its fiscal year, January 1, 2011. During the year, the company had only the following transactions:

May 5 Horne sold $4,000 of merchandise on account to Sperling Renovations Ltd. for terms 2/10, net 30. Cost of merchandise to Horne from its supplier was $2,500.
7 Sperling returned $500 of merchandise; Horne issued a credit memo. (Cost of merchandise to Horne was $300)
15 Horne received the amount due from Sperling Renovations Ltd.

A physical count and valuation of Merchandise Inventory at May 31, the fiscal year-end, showed $700 of goods on hand.

View Solution

Required: Prepare journal entries to record the above transactions and adjustment.

1. In the records of Horne Inc.
2. In the records of Sperling Renovations Ltd.

CP 4–5

The following information is taken from the records of Smith Corp. at June 30, 2013:

Advertising Expense	$ 1,500
Commissions Expense	4,000
Cost of Goods Sold	50,000
Delivery Expense	500
Depreciation Expense—Equipment	500
Insurance Expense	1,000
Rent Expense	2,500
Salaries Expense	5,000
Sales (gross)	72,000
Sales Returns and Allowances	2,000

View Solution

Required:

1. Prepare an income statement.
2. Compute gross profit percentage.

CP 4–6

Refer to the information in CP 4-5.

View Solution

Required: Prepare all closing entries. Include general ledger account numbers as shown in the chart of accounts in chapter 2. For example, Cost of Goods Sold: 570. Include a brief description.

CP 4–7 (Appendix)

Consider the information for each of the following four companies.

	A	*B*	*C*	*D*
Opening Inventory	$?	$ 184	$ 112	$ 750
Purchases	1,415	?	840	5,860
Transportation-In	25	6	15	?
Cost of Goods Available	1,940	534	?	6,620
Ending Inventory	340	200	135	?
Cost of Goods Sold	?	?	?	5,740

View Solution

Required: Calculate the missing amounts.

CP 4–8 (Appendix)

The following data pertain to Pauling Inc.

Opening Inventory	$ 375
Purchases	2,930
Purchases Discounts	5
Purchases Returns and Allowances	20
Transportation-In	105

Ending inventory amounts to $440.

View Solution

Required: Calculate cost of goods sold.

CP 4–9 (Appendix)

The following information is taken from the records of four different companies in the same industry:

	A	*B*	*C*	*D*
Sales	$300	$150	$?	$ 90
Opening Inventory	?	40	40	12
Purchases	240	?	?	63
Cost of Goods Available	320	?	260	?
Less: Ending Inventory	?	(60)	(60)	(15)
Cost of Goods Sold	?	100	200	60
Gross Profit	$100	$?	$100	$?
Gross Profit percentage	?	?	?	?

View Solution

Required:

1. Calculate the missing amounts.
2. Which company seems to be performing best? Why?

CP 4–10 (Appendix)

The following balances are taken from the records of Mohan Corp. at December 31, 2012, its first year–end:

Transportation-In	$ 500
Delivery Expense	1,200
Sales	25,000
Purchases	20,000
Sales Returns and Allowances	2,000
Purchase Returns and Allowances	1,000
Sales Discounts	400
Purchase Discounts	300
Interest Expense	4,000

The inventory at December 31, 2012 amounted to $7,900.

View Solution

Required:

1. Calculate the gross profit.
2. What is the gross profit percentage?

CP 4–11 (Appendix)

The following information is taken from the records of O'Donnell Corp. at June 30, 2013:

Advertising Expense	$ 1,500
Commissions Expense	4,000
Delivery Expense	500
Depreciation Expense—Equipment	500
Insurance Expense	1,000
Opening Inventory	6,000
Purchases	35,000
Purchase Returns and Allowances	2,000
Rent Expense	2,500
Salaries Expense	5,000
Sales (gross)	72,000
Sales Returns and Allowances	2,000
Transportation-In	1,000

The merchandise inventory at June 30, 2012 amounted to $10,000.

View Solution

Required:

1. Prepare an income statement.
2. Compute gross profit percentage.

CP 4–12 (Appendix)

Refer to the information in CP 4-11.

View Solution

Required: Prepare all closing entries. Include general ledger account numbers as shown in the chart of accounts in chapter 2. For example, Purchases: 550. Include brief descriptions.

CP 4–13 (Appendix)

Sherman Stores Ltd. had the following transactions:

Oct. 8 Purchased $2,800 of merchandise on account from Morris Wholesalers Corp. for terms 1/10, net 30

12 Received a credit memo from Morris Wholesalers Corp. for $800 of defective merchandise included in the October 8 purchase and subsequently returned to Morris.

Additional Information: Morris Wholesalers Corp. uses the periodic inventory system.

View Solution

Required:

1. Prepare journal entries in the records of Sherman, assuming that it paid the amount due on
   a. October 8
   b. October 25.
2. Prepare journal entries in the records of Morris Wholesalers Corp., assuming that it received payment on
   a. October 18
   b. October 25.

Problems

P 4–1

Salem Corp. was incorporated on July 2, 2012 to operate a merchandising business. Salem uses the perpetual inventory system. All its sales on account are made according to the following terms: 2/10, n30. Its transactions during July 2012 are as follows:

July 2 Issued share capital for $5,000 cash to George Salem, the incorporator and sole shareholder of the corporation
2 Purchased $3,500 merchandise on account from Blic Pens Ltd. for terms 2/10, n30
2 Sold $2,000 of merchandise on account to Spellman Chair Rentals Inc. (Cost to Salem: $1,200)
3 Paid Sayer Holdings Corp. $500 for July rent
5 Paid Easton Furniture Ltd. $1,000 for equipment
8 Collected $200 for a cash sale made today to Ethan Matthews Furniture Ltd. (Cost: $120)
8 Purchased $2,000 merchandise on account from Shaw Distributors Inc. for terms 2/15, n30
9 Received the amount due from Spellman Chair Rentals Inc. for the July 2 sale (less discount)
10 Paid Blic Pens Ltd. for the July 2 purchase (less discount)
10 Purchased $200 of merchandise on account from Peel Products Inc. for terms n30
15 Sold $2,000 of merchandise on account to Eagle Products Corp. (Cost: $1,300)
15 Purchased $1,500 of merchandise on account from Bevan Door Inc. for terms 2/10, n30
15 Received a memo from Shaw Distributors Inc. to reduce its account payable by $100 for defective merchandise included in the July 8 purchase.
16 Eagle Products Corp. returned $200 of merchandise: reduced related Account Payable. (Cost to Salem: $150)
20 Sold $3,500 of merchandise on account to Aspen Promotions Ltd. (Cost: $2,700)
20 Paid Shaw Distributors Inc. for half the purchase made July 8 (less memo amount, less discount on payment)
24 Received half the amount due from Eagle Products Corp. in partial payment for the July 15 sale (less discount on payment)
24 Paid Bevan Doors Ltd. for the purchase made July 15 (less discount)
26 Sold $600 merchandise on account to Longbeach Sales Ltd. (Cost: $400)
26 Purchased $800 of merchandise on account from Silverman Co. for terms 2/10, n30
31 Paid Speedy Transport Co. $350 for transportation to Salem's warehouse during the month (all purchases are fob shipping point).

Required:

1. Prepare journal entries to record the July transactions. Include general ledger account numbers and a brief description.

2. Calculate the ending balance in merchandise inventory.
3. Assume the merchandise inventory is counted at July 31 and assigned a total cost of $2,400. Prepare the July 31 adjusting entry.

P 4–2

Randall Sales Corp. was incorporated on May 1, 2011 to operate a merchandising business. All its sales on account are made according to the following terms: 2/10, n30. Its transactions during May 2011 are as follows:

May 1 Issued share capital for $2,000 cash to Harry Randall, the incorporator and sole shareholder of the corporation
1 Received $10,000 from the First Chance Bank as a demand bank loan
1 Paid Viva Corp. $1,500 for 3 months' rent in advance—$500 for each of May, June, and July (recorded as an asset)
1 Paid Avanti Equipment Ltd. $5,000 for equipment
1 Purchased $5,000 of merchandise on account from Renaud Wholesalers Ltd. for terms 2/10, n30
1 Sold $2,500 of merchandise on account to North Vancouver Distributors. (Cost to Randall: $1,700)
2 Purchased $1,800 of merchandise on account from Lilydale Products Ltd. for terms n30
2 Sold $2,000 of merchandise on account to Tarrabain Sales Inc. (Cost: $1,400)
3 Collected $500 for a cash sale made today to Smith Weston Ltd.
5 Paid All West Insurance Inc. $1,200 for a 1-year insurance policy, effective May l (recorded as an asset)
5 Sold $1,000 of merchandise on account to Trent Stores Corporation. (Cost: $700)
6 Tarrabain Sales Inc. returned $500 of merchandise: reduced the related Account Payable. (Cost: $300)
8 Received a memo from Renaud Wholesalers Ltd. to reduce its account payable by $300 for defective merchandise included in the May 1 purchase and returned subsequently to Renaud
8 Purchased $2,800 of merchandise on account from Pinegrove Novelties Ltd. for terms 2/15, n30
9 Received the amount due from North Vancouver Distributors from the May 1 sale (less discount)
9 Paid Renaud Wholesalers Corp. for the May 1 purchase (less discount)
10 Sold $400 of merchandise on account to Eastern Warehouse. (Cost: $250)
11 Received the amount due from Tarrabain Sales Inc. (less the May 6 memo and discount)
13 Paid Fast Delivery Corporation $100 for Transportation-In
15 Purchased $1,500 of merchandise on account from James Bay Distributors Inc. for terms 2/10, n30
15 Sold $1,500 of merchandise on account to Ransom Outlets Inc. (Cost: $1,100)
15 Paid $500 in commissions to Yvonne Smith, *re:* sales invoices nos. 1, 2, and 3
19 Paid Lilydale Products Inc. for the May 2 purchase
19 Purchased $1,200 of merchandise on account from Midlife Stores Corp. for terms 1/10, n30
22 Purchased $600 of merchandise on account from Speedy Sales Co. for terms n30

22 Paid to Pinegrove Novelties Inc. for the May 8 purchase (less discount)
24 Paid to In Transit Corporation $150 for Transportation-In (fob shipping point)
25 Sold $900 of merchandise on account to Timmins Centres Ltd. (Cost: $650)
26 Received the amount due from Trent Stores Corporation
27 Paid $200 to Intown Deliveries Ltd. for deliveries made to customers
28 Collected $300 for a cash sale made today to Betty Regal. (Cost: $250)
28 Made a $200 cash purchase from Joe Balla Sales Inc.
28 Sold $900 of merchandise on account to Sault Rapids Corp. . (Cost: $700)
29 Purchased $100 of merchandise on account from Amigos Inc.
29 Paid Intown Deliveries Ltd. $300 for deliveries to customers (debited account 620)
29 Paid Main Force Advertising Agency $400 for advertising materials used during May
29 Paid State Hydro $100 for electricity
29 Paid Yvonne Smith $350 commission, *re:* sales invoices nos. 4, 5, 6, and 7
30 Collected $l,000 on account from Ransom Outlets Inc.
31 Paid Midlife Stores Corp. $700 on account

Inventory on hand at May 31 was counted and costed at $6,500.

Required: Prepare journal entries to record the May transactions and any month-end adjusting entries needed. Include general ledger account numbers and a brief description.

P 4–3

The following closing entries were prepared for Whirlybird Products Inc. at December 31, 2013, the end of its fiscal year.

Dec. 31	Sales	37,800	
	Income Summary		37,800
31	Income Summary	32,800	
	Cost of Goods Sold		26,800
	Sales Returns and Allowances		690
	Sales Discounts		310
	Salaries Expenses		5,000
31	Income Summary	5,000	
	Retained Earnings		5,000

Required:

1. Post the closing entries to general ledger T-accounts and calculate balances.
2. Calculate gross profit.

P 4–4

Southern Cross Corporation supplies you with the following information applicable to the current year, December 31, 2011. The company uses the perpetual inventory system.

Delivery Expense	$ 2,000
Sales	100,000
Merchandise Inventory (Dec. 31)	15,000
Cost of Goods Sold	70,000
Office Supplies Expense	7,000
Sales Returns and Allowances	10,000
Salaries Expense	4,000
Unused Supplies	5,000

Required:

4. Prepare an income statement.
5. Prepare all required closing entries. Include general ledger account numbers and a brief description.

P 4–5

The following trial balance has been extracted from the records of Acme Automotive Inc. at December 31, 2015, its fiscal year-end. The company uses the perpetual inventory system.

	Account Balances	
	Dr.	*Cr.*
Cash	750	
Accounts Receivable	12,000	
Merchandise Inventory	56,000	
Unused Supplies	-0-	
Equipment	4,400	
Accumulated Depreciation - Equipment		-0-
Bank Loan		5,000
Accounts Payable		12,540
Income Taxes Payable		2,400
Share Capital		2,000
Retained Earnings		600
Sales		100,000
Sales Returns and Allowances	1,500	
Sales Discounts	500	
Cost of Goods Sold	34,000	
Advertising Expense	1,700	
Commissions Expense	4,800	
Delivery Expense	650	
Depreciation Expense	-0-	
Income Taxes Expense	2,400	
Insurance Expense	450	
Interest Expense	600	
Office Supplies Expense	250	
Rent Expense	1,950	
Telephone Expense	300	
Utilities Expense	290	
Total Debits and Credits	$122,540	$122,540

Required:

1. Prepare adjusting entries for the following:
    a. $1,000 of sales on account has not been recorded. (Cost to Acme: $700)
    b. A physical count indicates that $100 of office supplies is still on hand at year-end.
    c. Depreciation of $400 has yet been recorded on the equipment.
    d. A telephone bill for $60 owing at December 31 has not yet been recorded.
    e. A physical count indicates that $53,000 of merchandise inventory is on hand at December 31, 2015.
2. Prepare an income statement and statement of changes in equity for the year ended December 31, 2015, and a balance sheet at December 31.
3. Prepare closing entries.

P 4–6 (Appendix)

Providence Corp. was incorporated on July 2, 2012 to operate a merchandising business. All its sales on account are made according to the following terms: 2/10, n30. Its transactions during July 2012 are as follows:

July 2 Issued share capital for $5,000 cash to Pam Providence, the incorporator and sole shareholder of the corporation
2 Purchased $3,500 merchandise on account from Blic Pens Ltd. for terms 2/10, n30
2 Sold $2,000 of merchandise on account to Spellman Chair Rentals Inc.
3 Paid Sayer Holdings Corp. $500 for July rent
5 Paid Easton Furniture Ltd. $1,000 for equipment
8 Collected $200 for a cash sale made today to Ethan Matthews Furniture Ltd.
8 Purchased $2,000 merchandise on account from Shaw Distributors Inc. for terms 2/15, n30
9 Received the amount due from Spellman Chair Rentals Inc. for the July 2 sale (less discount)
10 Paid Blic Pens Ltd. for the July 2 purchase (less discount)
10 Purchased $200 of merchandise on account from Peel Products Inc. for terms n30
15 Sold $2,000 of merchandise on account to Eagle Products Corp.
15 Purchased $1,500 of merchandise on account from Bevan Door Inc. for terms 2/10, n30
15 Received a memo from Shaw Distributors Inc. to reduce its account payable by $100 for defective merchandise included in the July 8 purchase.
16 Eagle Products Corp. returned $200 of merchandise: reduced related Account Payable.
20 Sold $3,500 of merchandise on account to Aspen Promotions Ltd.
20 Paid Shaw Distributors Inc. for half the purchase made July 8 (less memo amount, less discount on payment)
24 Received half the amount due from Eagle Products Corp. in partial payment for the July 15 sale (less discount on payment)
24 Paid Bevan Doors Ltd. for the purchase made July 15 (less discount)
26 Sold $600 merchandise on account to Longbeach Sales Ltd.
26 Purchased $800 of merchandise on account from Silverman Co. for terms 2/10, n30
31 Paid Speedy Transport Co. $350 for transportation to Salem’s warehouse during the month (all purchases are fob shipping point).

Assume Providence uses the periodic inventory system.

Required: Prepare journal entries to record the July transactions.

P 4–7 (Appendix)

Robert Sales Corp. was incorporated on May 1, 2011 to operate a merchandising business. All its sales on account are made according to the following terms: 2/10, n30. Its transactions during May 2011 are as follows:

May 1 Issued share capital for $2,000 cash to Rob Robert, the incorporator and sole shareholder of the corporation
1 Received $10,000 from the First Chance Bank as a demand bank loan
1 Paid Viva Corp. $1,500 for 3 months' rent in advance—$500 for each of May, June, and July (recorded as an asset)
1 Paid Avanti Equipment Ltd. $5,000 for equipment
1 Purchased $5,000 of merchandise on account from Renaud Wholesalers Ltd. for terms 2/10, n30
1 Sold $2,500 of merchandise on account to North Vancouver Distributors
2 Purchased $1,800 of merchandise on account from Lilydale Products Ltd. for terms n30
2 Sold $2,000 of merchandise on account to Tarrabain Sales Inc.
3 Collected $500 for a cash sale made today to Smith Weston Ltd.
5 Paid All West Insurance Inc. $1,200 for a 1-year insurance policy, effective May l (recorded as an asset)
5 Sold $1,000 of merchandise on account to Trent Stores Corporation
6 Tarrabain Sales Inc. returned $500 of merchandise: reduced the related Account Payable
8 Received a memo from Renaud Wholesalers Ltd. to reduce its account payable by $300 for defective merchandise included in the May 1 purchase and returned subsequently to Renaud
8 Purchased $2,800 of merchandise on account from Pinegrove Novelties Ltd. for terms 2/15, n30
9 Received the amount due from North Vancouver Distributors from the May 1 sale (less discount)
9 Paid Renaud Wholesalers Corp. for the May 1 purchase (less discount)
10 Sold $400 of merchandise on account to Eastern Warehouse
11 Received the amount due from Tarrabain Sales Inc. (less the May 6 memo and discount)
13 Paid Fast Delivery Corporation $100 for Transportation-In
15 Purchased $1,500 of merchandise on account from James Bay Distributors Inc. for terms 2/10, n30
15 Sold $1,500 of merchandise on account to Ransom Outlets Inc.
15 Paid $500 in commissions to Yvonne Smith, *re:* sales invoices nos. 1, 2, and 3
19 Paid Lilydale Products Inc. for the May 2 purchase
19 Purchased $1,200 of merchandise on account from Midlife Stores Corp. for terms 1/10, n30
22 Purchased $600 of merchandise on account from Speedy Sales Co. for terms n30
22 Paid to Pinegrove Novelties Inc. for the May 8 purchase (less discount)
24 Paid to In Transit Corporation $150 for Transportation-In (fob shipping point)

25 Sold $900 of merchandise on account to Timmins Centres Ltd.
26 Received the amount due from Trent Stores Corporation
27 Paid $200 to Intown Deliveries Ltd. for deliveries made to customers
28 Collected $300 for a cash sale made today to Betty Regal
28 Made a $200 cash purchase from Joe Balla Sales Inc. today; issued cheque #11 (debited purchases)
28 Sold $900 of merchandise on account to Sault Rapids Corp.
29 Purchased $100 of merchandise on account from Amigos Inc.
29 Paid Intown Deliveries Ltd. $300 for deliveries to customers (debited account 620)
29 Paid Main Force Advertising Agency $400 for advertising materials used during May
29 Paid State Hydro $100 for electricity
29 Paid Yvonne Smith $350 commission, *re:* sales invoices nos. 4, 5, 6, and 7
30 Collected $l,000 on account from Ransom Outlets Inc.
31 Paid Midlife Stores Corp. $700 on account

Assume Robert uses the periodic inventory system.

Required: Prepare journal entries to record the May transactions and any month-end adjusting entries needed.

P 4–8 (Appendix)

The following closing entries were prepared for Zenith Products Inc. at December 31, 2013, the end of its fiscal year.

Dec. 31	Merchandise Inventory	6,000	
	Sales	31,000	
	Purchases Returns and Allowances	575	
	Purchases Discounts	225	
	Income Summary		37,800
31	Income Summary	32,800	
	Merchandise Inventory		4,000
	Sales Returns and Allowances		690
	Sales Discounts		310
	Purchases		22,500
	Transportation-In		300
	Salaries Expenses		5,000
31	Income Summary	5,000	
	Retained Earnings		5,000

Required:

1. Post the closing entries to general ledger T-accounts and calculate balances.
2. Prepare a partial income statement, showing sales, cost of goods sold calculations, and gross profit.

P 4–9 (Appendix)

Northern Lights Corporation supplies you with the following information applicable to the current year, December 31, 2011.

Transportation-In	$ 3,000
Delivery Expense	2,000
Sales	100,000
Merchandise Inventory (Jan. 1)	12,000
Merchandise Inventory (Dec. 31)	15,000
Purchases	70,000
Office Supplies Expense	7,000
Purchases Discounts	4,000
Purchases Returns and Allowances	6,000
Sales Returns and Allowances	10,000
Unused Supplies	5,000

Required:

1. Prepare in proper form a partial income statement including sales, cost of goods sold, and gross profit.
2. Prepare closing entries.
3. What is net income for the year?

P 4–10 (Appendix)

The following trial balance has been extracted from the records of Tom's Trucks Inc. at December 31, 2015, its fiscal year-end.

	Account Balances	
	Dr.	*Cr.*
Cash	750	
Accounts Receivable	12,000	
Merchandise Inventory (Jan. 1, 2015)	56,000	
Prepaid Rent	-0-	
Unused Supplies	-0-	
Equipment	4,400	
Accumulated Depreciation - Equipment		-0-
Bank Loan		5,000
Accounts Payable		12,540
Income Taxes Payable		2,400
Share Capital		2,000
Retained Earnings		600
Sales		100,000
Sales Returns and Allowances	1,500	
Sales Discounts	500	
Purchases	35,000	
Purchases Returns and Allowances		1,700
Purchases Discounts		300
Transportation-In	1,000	
Advertising Expense	1,700	
Commissions Expense	4,800	
Delivery Expense	650	
Depreciation Expense - Equipment	-0-	
Income Taxes Expense	2,400	

Insurance Expense	450	
Interest Expense	600	
Office Supplies Expense	250	
Rent Expense	1,950	
Telephone Expense	300	
Utilities Expense	290	
Total Debits and Credits	$124,540	$124,540

Required:

1. Prepare adjusting entries for the following:
    a. Depreciation of $400 has yet been recorded on the equipment.
    b. A telephone bill for $60 owing at December 31 has not yet been recorded.
    c. A physical count indicates that $58,000 of merchandise inventory is on hand at December 31, 2015.
    d. $1,000 of sales on account has not been recorded.
    e. A physical count indicates that $100 of office supplies is still on hand at year-end.
2. Prepare an income statement and statement of changes in equity for the year ended December 31, 2015, and a balance sheet at December 31.
3. Prepare all required closing entries.

Alternate Problems

AP 4–1

The following information relates to the Pike Corporation for the fiscal year ended December 31, 2011:

a. Merchandise inventory on hand at January 1 is $100,000.
b. During the year, the company purchased merchandise on credit from a single supplier for $200,000; terms 2/10, n30. Half of the purchases were paid within the discount period. The other half has not yet been paid.
c. The company paid $8,000 in freight charges on merchandise purchased, fob shipping point.
d. Damaged merchandise with an invoice price of $4,000 was returned to the supplier. A cash refund for the returned amount less discount was received. This merchandise was part of the purchase in transaction *b* that had been paid within the discount period.
e. Sold merchandise on credit to a customer for $20,000. (Cost to Pike: $14,000.)
f. An allowance of $2,750 was granted because merchandise sold in *e* was not satisfactory. (Cost: $2,000.)
g. A cheque for $2,750 was issued to the customer referred to in *f*.
h. The ending inventory was counted and costed at $290,000.

Assume Pike uses the perpetual inventory system.

View Solution

Required:

1. Prepare journal entries for each of the transactions. (Omit explanation lines.)
2. Prepare a partial income statement including sales, cost of goods sold, and gross profit. Calculate gross profit percentage.
3. Prepare the necessary closing entries.

AP 4–2

Simple Products Inc. was incorporated on April 1, 2011 to operate a merchandising business. The company uses the perpetual inventory system. All its sales on account are made according to the following terms: 2/10, n30. Its transactions during April 2011 were:

Apr. 1 Issued share capital for $3,000 cash to Ross Sims, the incorporator and sole shareholder of the corporation
1 Purchased $4,000 of merchandise on account from Springfield Wholesalers Inc. for terms 2/10, n30
1 Sold $3,000 of merchandise on account to Authentic Products Corp. (Cost to Simple: $2,000)
2 Collected $500 for a cash sale made today to Georges Pierre Ltd. (Cost: $400)
2 Purchased $750 merchandise on account from White Whale Wholesalers Ltd. for terms n30
2 Sold $1,200 of merchandise on account to Champagne Stores Inc. (Cost: $800)
5 Received half the amount due from Authentic Products Corp. for the April 1 purchase (less discount on payment)
8 Received the amount due from Champagne Stores Inc. for the April 2 purchase (less discount)
9 Paid Springfield Wholesalers Inc. for the April 1 purchase (less discount on payment)
10 Purchased $2,000 of merchandise on account from Ritz Distributors Inc. for terms 2/15, n30
11 Sold $500 of merchandise on account to Premier Sales Inc. (Cost: $300)
12 Premier Sales Inc. returned $100 of merchandise; adjusted the records accordingly. (Cost: $80)
15 Received a notification from White Whale Wholesalers Ltd. that $150 of defective merchandise included in the April 2 purchase and subsequently returned will not need to be paid.
15 Purchased $1,500 of merchandise on account from Breakwater Distributors Inc. for terms 2/10, n30
19 Purchased $1,250 of merchandise on account from Brown Gull Sales Ltd. for terms n30
20 Sold $2,000 of merchandise on account to Salari Corp. (Cost: $1,700)
20 Received the amount due from Premier Sales Inc. for the April 11 purchase (less return and less discount)
22 Paid Ritz Distributors Inc. for the April 10 purchase (less discount on payment)
24 Paid Breakwater Distributors Inc. for the April 15 purchase (less discount on payment)
27 Sold $800 of merchandise on account to Rook Emporium Corp. (Cost: $500)
30 Paid Rapide Delivery Inc. $200 for deliveries made to customers during the

month

30 Paid Fast Forwarders Ltd. $500 for transportation to the warehouse during the month. (All purchases are fob shipping point.)

Assume ending inventory was counted on April 30 and costed at $4,000.

View Solution

Required: Prepare journal entries to record the April transactions and adjust the Merchandise Inventory account at month-end.

AP 4–3

Wheaton Wholesalers Inc. was incorporated on March 1, 2011 to operate a merchandising business. All its sales on account are made according to the following terms: 2/10, n30.

Mar. 1 Issued share capital for $410,000 cash to Michael Wheaton, the incorporator and sole shareholder of the corporation
1 Paid Scotia Fixtures Inc. $4,000 for equipment, with an estimated useful life of 10 years
1 Purchased $2,100 of merchandise on account from Midlife Stores Corp. for terms 2/10, n30
2 Sold $2,000 of merchandise on account to Timmins Centres Ltd. (Cost to Wheaton: $1,500)
2 Collected $300 for a cash sale made today to Clayton David Inc. (Cost: $20)
3 Purchased $500 of merchandise on account from Speedy Sales Co. for terms 1/10, n30
4 Sold $2,500 of merchandise on account to Northern Warehouse
4 Timmins Centres Ltd. returned $200 of merchandise. (Cost: $120)
5 Purchased $1,400 of merchandise on account from St Jean Wholesalers Corp. on account for terms n30
6 Received notification from Midlife Stores Corp. that $100 of defective merchandise included in the March 1 purchase and subsequently returned to Midlife did not need to be paid
6 Sold $1,500 of merchandise on account to Sault Rapids Corp. (Cost: $900)
7 Purchased $600 of merchandise on account from Trent Stores Corporation for terms 2/15, n30
8 Received the amount due from Timmins Centres Ltd. (less adjustment, less discount)
10 Paid Speedy Sales Co. for the March 3 purchase (less discount)
11 Received $7,500 from the Second National Bank as a demand bank loan
12 Paid Peace Realty Corp. $1,000 for 2 months’ rent, March and April (recorded as an asset)
12 Sold $700 of merchandise on account to James Bay Distributors Inc. (Cost: $400)
13 Received the amount due from Northern Warehouse (less discount)
15 Paid Mitch Michaels $350 for commissions earned to date (recorded as Commissions Expense
15 Paid Midlife Stores Corporation $1,000 on account
15 Purchased $1,000 of merchandise on account from Lilydale Products Ltd. for terms 2/15, n30
18 Paid Trent Stores Corporation for half of the March 7 purchase (less discount on payment)
19 Collected $100 for a cash sale made today to Margaret Smith(Cost: $70)

20 Purchased $1,200 of merchandise on account from Delta Centres Inc. for terms n30
20 Paid $400 for a cash purchase from Copeland Distributors Inc.
20 Sold $600 of merchandise on account to Amigo Inc. (Cost: $350)
21 Paid St Jean Wholesalers Corp. $700 on account
22 Received $500 on account from Sault Rapids Inc.
23 Paid Tri City Insurance Ltd. $2,400 for a 1-year insurance policy, effective March 1 (recorded as an asset)
24 Paid $300 for a cash purchase from Buster's Emporium (debited Purchases)
25 Sold $1,400 of merchandise on account to Pinehurst Novelties Inc. (Cost: $1,100)
26 Purchased $700 of merchandise on account from Tres Bon Markets Ltd. for terms 2/10, n30
30 Paid Shelby Corp. $500 for deliveries to customers
30 Paid Mitch Michaels $400 for commissions earned to date
30 Paid PhoneU $75 for the monthly telephone bill
30 Paid Vision Visuals Ltd. $250 for advertising materials used during the month

The company uses the perpetual inventory system, Assume ending inventory was counted on March 31 and costed at $1,500.

View Solution

Required: Prepare journal entries to record the March transactions, including adjusting entries for depreciation, insurance, and rent.

AP 4–4

The following journal closing entries were prepared for James Services Ltd. at December 31, 2017, its fiscal year–end.

Dec. 31	Sales	43,000	
	Income Summary		43,000
31	Income Summary	40,000	
	Sales Returns and Allowances		660
	Sales Discounts		340
	Cost of Goods Sold		31,000
	Salaries Expenses		8,000
31	Income Summary	3,000	
	Retained Earnings		3,000

View Solution

Required: Prepare a partial income statement including sales, cost of goods sold, and gross profit.

AP 4–5

The following unadjusted trial balance has been extracted from the records of Van Loo Merchants Inc. at December 31, 2012, its fiscal year-end. The balances for share capital and retained earnings have not changed during the year. The company uses the perpetual inventory system.

	Account Balances	
	Dr.	*Cr.*
Cash	$ 1,500	
Accounts Receivable	5,000	
Merchandise Inventory	11,000	
Prepaid Insurance	1,300	
Prepaid Rent	600	
Furniture	12,500	
Accumulated Depreciation - Furniture		$ -0-
Bank Loan		10,000
Accounts Payable		8,350
Income Taxes Payable		3,600
Share Capital		3,000
Retained Earnings		1,400
Sales		75,000
Sales Returns and Allowances	2,250	
Sales Discounts	750	
Cost of Goods Sold	46,000	
Advertising Expense	1,800	
Commissions Expense	7,200	
Delivery Expense	1,600	
Depreciation Expense	-0-	
Income Taxes Expense	3,600	
Insurance Expense	1,100	
Interest Expense	1,200	
Rent Expense	3,300	
Telephone Expense	550	
Utilities Expense	100	
Total Debits and Credits	$101,350	$101,350

View Solution

Required:

1. Prepare adjusting entries for the following:
    a. The balance in the Prepaid Rent account consists of equal amounts of rent for the months of December 2012 and January 2013.
    b. Interest on the bank loan applicable to the month of December amounts to $100 has not yet been recorded as interest payable.
    c. Depreciation of $500 has yet been recorded on the office furniture.
    d. A December telephone bill owing of $50 has not been recorded.
    e. The balance in the Prepaid Insurance account applies equally to each of the thirteen months ended December 31, 2013.
    f. A physical count indicates that $10,000 of merchandise inventory is on hand at December 31, 2012.
2. Prepare an adjusted trial balance at December 31, 2012.
3. Prepare an income statement and statement of changes in equity for the year ended December 31, 2012, and a balance sheet at December 31.
4. Prepare closing entries.

AP 4–6 (Appendix)

The following information relates to the Marlin Corporation for the fiscal year ended December 31, 2011:

a. Merchandise inventory on hand at January 1 is $100,000.
b. During the year, the company purchased merchandise on credit from a single supplier for $200,000; terms 2/10, n30. Half of the purchases were paid within the discount period. The other half has not yet been paid.
c. The company paid $8,000 in freight charges on merchandise purchased, fob shipping point.
d. Damaged merchandise with an invoice price of $4,000 was returned to the supplier. A cash refund for the returned amount less discount was received. This merchandise was part of the purchase in transaction *b* that had been paid within the discount period.
e. Sold merchandise on credit to a customer for $20,000.
f. An allowance of $2,750 was set up because merchandise sold in *e* was not satisfactory.
g. A cheque for $2,750 was issued to the customer referred to in *f*.
h. The ending inventory was $80,000.

View Solution

Required:

1. Prepare journal entries where necessary for each of the transactions. (Omit explanation lines and assume the company uses periodic inventory method.)
2. Calculate the cost of goods sold.
3. Prepare the necessary closing entries based on the above information. Descriptions are not necessary.

AP 4–7 (Appendix)

Ample Products Inc. was incorporated on April 1, 2011 to operate a merchandising business. All its sales on account are made according to the following terms: 2/10, n30. Its transactions during April 2011 were:

Apr.	1	Issued share capital for $3,000 cash to Ross Ample, the incorporator and sole shareholder of the corporation
	1	Purchased $4,000 of merchandise on account from Springfield Wholesalers Inc. for terms 2/10, n30
	1	Sold $3,000 of merchandise on account to Authentic Products Corp.
	2	Collected $500 for a cash sale made today to Georges Pierre Ltd.
	2	Purchased $750 merchandise on account from White Whale Wholesalers Ltd. for terms n30
	2	Sold $1,200 of merchandise on account to Champagne Stores Inc.
	5	Received half the amount due from Authentic Products Corp. for the April 1 purchase (less discount on payment)
	8	Received the amount due from Champagne Stores Inc. for the April 2 purchase (less discount)
	9	Paid Springfield Wholesalers Inc. for the April 1 purchase (less discount on payment)
	10	Purchased $2,000 of merchandise on account from Ritz Distributors Inc. for terms 2/15, n30
	11	Sold $500 of merchandise on account to Premier Sales Inc.
	12	Premier Sales Inc. returned $100 of merchandise; adjusted the records

accordingly.

15 Received a notification from White Whale Wholesalers Ltd. that $150 of defective merchandise included in the April 2 purchase and subsequently returned will not need to be paid.
15 Purchased $1,500 of merchandise on account from Breakwater Distributors Inc. for terms 2/10, n30
19 Purchased $1,250 of merchandise on account from Brown Gull Sales Ltd. for terms n30
20 Sold $2,000 of merchandise on account to Salari Corp.
20 Received the amount due from Premier Sales Inc. for the April 11 purchase (less return and less discount)
22 Paid Ritz Distributors Inc. for the April 10 purchase (less discount on payment)
24 Paid Breakwater Distributors Inc. for the April 15 purchase (less discount on payment)
27 Sold $800 of merchandise on account to Rook Emporium Corp.
30 Paid Rapide Delivery Inc. $200 for deliveries made to customers during the month
30 Paid Fast Forwarders Ltd. $500 for transportation to the warehouse during the month. (All purchases are fob shipping point.)

View Solution

Required: Prepare journal entries to record the April transactions.

AP 4–8 (Appendix)

City Retailers Inc. was incorporated on March 1, 2011 to operate a merchandising business. All its sales on account are made according to the following terms: 2/10, n30.

Mar. 1 Issued share capital for $410,000 cash to Michael Smith, the incorporator and sole shareholder of the corporation
1 Paid Scotia Fixtures Inc. $4,000 for equipment, with an estimated useful life of 10 years
1 Purchased $2,100 of merchandise on account from Midlife Stores Corp. for terms 2/10, n30
2 Sold $2,000 of merchandise on account to Timmins Centres Ltd.
2 Collected $300 for a cash sale made today to Clayton David Inc.
3 Purchased $500 of merchandise on account from Speedy Sales Co. for terms 1/10, n30
4 Sold $2,500 of merchandise on account to Northern Warehouse
4 Timmins Centres Ltd. returned $200 of merchandise
5 Purchased $1,400 of merchandise on account from St Jean Wholesalers Corp. on account for terms n30
6 Received notification from Midlife Stores Corp. that $100 of defective merchandise included in the March 1 purchase and subsequently returned to Midlife did not need to be paid
6 Sold $1,500 of merchandise on account to Sault Rapids Corp.
7 Purchased $600 of merchandise on account from Trent Stores Corporation for terms 2/15, n30
8 Received the amount due from Timmins Centres Ltd. (less adjustment, less discount)
10 Paid Speedy Sales Co. for the March 3 purchase (less discount)

11 Received $7,500 from the Second National Bank as a demand bank loan
12 Paid Peace Realty Corp. $1,000 for 2 months' rent, March and April (recorded as an asset)
12 Sold $700 of merchandise on account to James Bay Distributors Inc.
13 Received the amount due from Northern Warehouse (less discount)
15 Paid Mitch Michaels $350 for commissions earned to date (recorded as Commissions Expense
15 Paid Midlife Stores Corporation $1,000 on account
15 Purchased $1,000 of merchandise on account from Lilydale Products Ltd. for terms 2/15, n30
18 Paid Trent Stores Corporation for half of the March 7 purchase (less discount on payment)
19 Collected $100 for a cash sale made today to Margaret Smith
20 Purchased $1,200 of merchandise on account from Delta Centres Inc. for terms n30
20 Paid $400 for a cash purchase from Copeland Distributors Inc.
20 Sold $600 of merchandise on account to Amigo Inc.
21 Paid St Jean Wholesalers Corp. $700 on account
22 Received $500 on account from Sault Rapids Inc.
23 Paid Tri City Insurance Ltd. $2,400 for a 1-year insurance policy, effective March 1 (recorded as an asset)
24 Paid $300 for a cash purchase from Buster's Emporium (debited Purchases)
25 Sold $1,400 of merchandise on account to Pinehurst Novelties Inc.
26 Purchased $700 of merchandise on account from Tres Bon Markets Ltd. for terms 2/10, n30
30 Paid Shelby Corp. $500 for deliveries to customers
30 Paid Mitch Michaels $400 for commissions earned to date
30 Paid PhoneU $75 for the monthly telephone bill
30 Paid Vision Visuals Ltd. $250 for advertising materials used during the month

View Solution

Required: Prepare journal entries to record the March transactions and necessary adjusting entries. Show general ledger account numbers, descriptions, and calculations where applicable.

AP 4–9 (Appendix)

The following journal closing entries were prepared for George Services Ltd. at December 31, 2017, its fiscal year–end.

Dec. 31	Merchandise Inventory	7,000	
	Sales	34,000	
	Purchases Returns and Allowances	1,760	
	Purchases Discounts	240	
	Income Summary		43,000
31	Income Summary	40,000	
	Merchandise Inventory		6,000
	Sales Returns and Allowances		660
	Sales Discounts		340
	Purchases		24,000
	Transportation-In		1,000
	Salaries Expenses		8,000
31	Income Summary	3,000	
	Retained Earnings		3,000

View Solution

Required: Prepare a partial income statement including sales, cost of goods sold, and gross profit.

AP 4–10 (Appendix)

The following unadjusted trial balance has been extracted from the records of Niven Shops Inc. at December 31, 2012, its fiscal year-end. The balances for share capital and retained earnings have not changed during the year.

	Account Balances	
	Dr.	*Cr.*
Cash	$ 2,000	
Accounts Receivable	4,000	
Merchandise Inventory – Jan. 1, 2012	40,000	
Prepaid Insurance	2,600	
Prepaid Rent	1,800	
Unused Supplies	300	
Equipment	35,000	
Accumulated Depreciation - Equipment		$12,000
Bank Loan		15,000
Accounts Payable		4,000
Income Taxes Payable		3,600
Share Capital		5,000
Retained Earnings		10,000
Sales		140,000
Sales Returns and Allowances	3,250	
Sales Discounts	750	
Purchases	80,000	
Purchases Returns and Allowances		9,400
Purchases Discounts		600
Transportation-In	2,000	
Advertising Expense	3,800	
Commissions Expense	4,200	
Supplies Expense	5,600	
Depreciation Expense – Equipment	-0-	
Income Taxes Expense	3,600	
Insurance Expense	1,100	
Interest Expense	1,200	
Rent Expense	3,300	
Telephone Expense	3,100	
Utilities Expense	2,000	
Total Debits and Credits	$199,600	$199,600

View Solution

Required:

1. Prepare adjusting entries for the following:
   a. The balance in Prepaid Rent consists of equal amounts of rent for the months of December 2012, and January and February 2013.
   b. Interest on the bank loan applicable to the month of December amounts to $100 has not yet been recorded as Interest Payable.
   c. Depreciation of $1,000 has not been recorded on the office equipment
   d. A December commission expense owing of $500 has not been recorded.
   e. The balance in Prepaid Insurance applies equally to each of the thirteen months ended December 31, 2013.
   f. A physical count of unused supplies indicated that there was $2,000 on hand at year-end.

    g. A physical count indicates that $35,000 of merchandise inventory is on hand at December 31, 2012.
2. Prepare an adjusted trial balance at December 31, 2012.
3. Prepare an income statement and statement of changes in equity for the year ended December 31, 2012, and a balance sheet at December 31.
4. Prepare closing entries.

Decision Problem

DP 4–1

Bill Davis Music Inc. is a store that sells musical instruments. After operating the store for one year, the owner prepared the following income statement for the fiscal year ended December 31, 2011:

Bill Davis Music Inc.
Statement of Profit
For the Year Ended December 31, 2011

Cash deposited in the bank and recorded as sales	$35,000
Amounts paid by cheque and recorded as Merchandise Inventory	32,000
Profit, and cash in bank at December 31, 2011	$ 3,000

Mr. Davis, the owner, has hired you as an accountant and financial consultant. In one of your first conversations with him, he says, "This business is fantastic. I never expected to make a profit until the second or third year of operations, but not once during the past year did we ever overdraw our chequing account.''

The items listed below come to your attention during the first few weeks on the job:

a. On December 31, 2011, customers owed the company $12,500 from the sale of instruments on credit.
b. Mr. Davis has not paid rent for October, November, and December, 2011. Monthly rental for the retail space is $1,000.
c. Mr. Davis financed the business with a $10,000, 5–year loan from his father. Accrued interest payable on the loan at December 31, 2011 is $2,500.
d. The company issued share capital of $100 to Mr. Davis for cash on January 1, 2011.
e. Merchandise inventory on hand at December 31, 2011 totalled $500.

Required:

1. Based on Mr. Davis' statements and actions, how do you think he defines the term *profit*? Did Mr. Davis violate generally accepted accounting principles in preparing his statement of profit? Explain.
2. Prepare adjusting and closing entries needed at December 31, 2011 and post to general ledger T-accounts.
3. Prepare an income statement for the year ended December 31, 2011.

CHAPTER FIVE

Assigning Costs to Merchandise

Inventory is often a major amount on a corporation's balance sheet. Matching cost of goods sold with revenue and inventory valuation in the balance sheet is particularly important. This chapter addresses the following questions about accounting for inventory:

1. What is the effect on net income of an error in ending inventory values?
2. What are the most common inventory cost flow assumptions?
3. What impact does the use of different inventory cost flow assumptions have on financial statements?
4. What is the meaning of the term lower of cost and net realisable value, and how is it calculated?
5. (Appendix) What are the differences in how ending inventory and cost of goods sold are calculated using perpetual and periodic inventory systems?
6. (Appendix) What are two methods of estimating ending inventory and cost of goods sold using the periodic inventory system?

A. Continuation of the Purchase and Payment Cycle—Inventory

Transactions in the purchase and payment cycle were introduced and discussed in chapter 4, shown again in Figure 5-1. In this cycle, merchandise is purchased for subsequent resale to customers. This section continues the discussion of how merchandise inventory that remains on hand at the end of an accounting period is treated in financial statements.

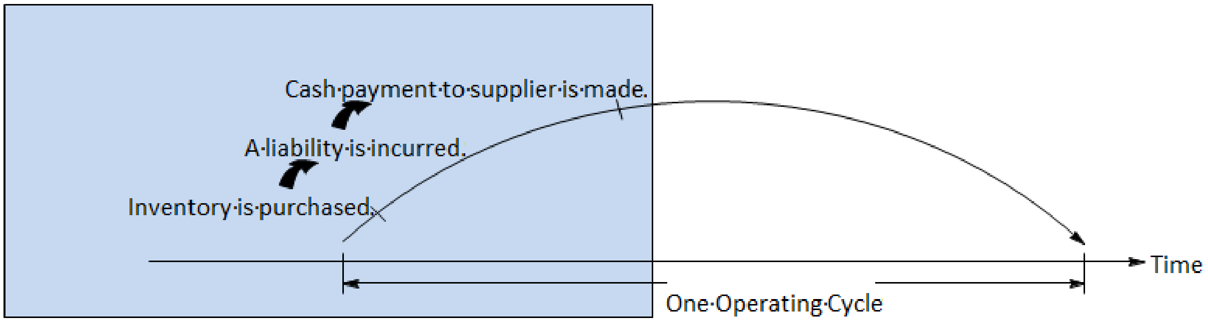


Figure 5-1 The purchase and payment cycle

Impact of Inventory Errors

There are two components necessary to determine the inventory value disclosed on a corporation's balance sheet. The first component, described in chapter 4, involves calculating the quantity of inventory on hand at the end of an accounting period. Usually, this is not a difficult requirement. A physical count can be performed. The second requirement involves assigning the most appropriate cost to this quantity of inventory. Choosing the most appropriate cost *can* be difficult.

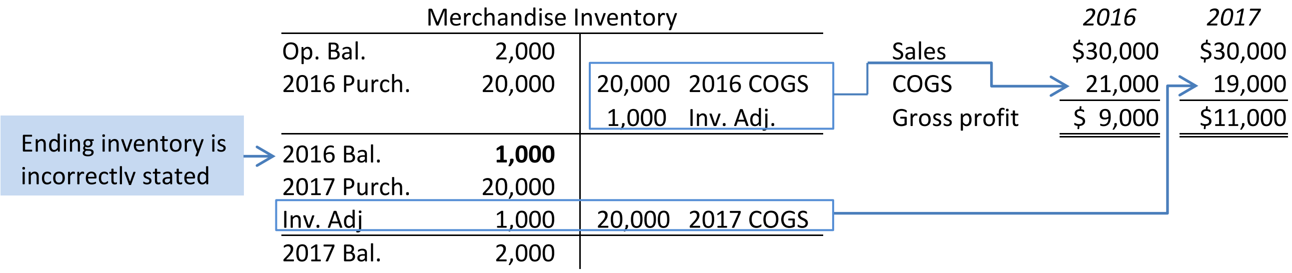
An error in calculating either the quantity or the cost of ending inventory will misstate reported income for two time periods. Assume that a company uses the perpetual inventory system. Merchandise inventory at December 31, 2015, 2016, and 2017 was $2,000. Merchandise purchases during each of the 2016 and 2017 years were $20,000. There were no other expenditures. Assume further that sales each year amounted to $30,000. Gross profit for 2016 and 2017 would be $10,000, calculated as follows:

Merchandise Inventory

Op. Bal.	2,000		
2016 Purch.	20,000	20,000	2016 COGS
2016 Bal.	2,000		
2017 Purch.	20,000	20,000	2017 COGS
2017 Bal.	2,000		

	2016	*2017*
Sales	$30,000	$30,000
COGS	20,000	20,000
Gross profit	$10,000	$10,000

Assume now that ending inventory is mis-stated at December 31, 2016. Instead of $2,000, it is stated at $1,000. The effect of this error is to overstate cost of goods sold on the income statement. In 2017, gross profit will be understated by $1,000, even though ending inventory at December 31, 2017 is correctly stated. This is illustrated below.



Ending inventory is incorrectly stated

Merchandise Inventory			
Op. Bal.	2,000		
2016 Purch.	20,000	20,000	2016 COGS
		1,000	Inv. Adj.
2016 Bal.	**1,000**		
2017 Purch.	20,000		
Inv. Adj	1,000	20,000	2017 COGS
2017 Bal.	2,000		

	2016	*2017*
Sales	$30,000	$30,000
COGS	21,000	19,000
Gross profit	$ 9,000	$11,000

As can be seen, income is misstated in both 2016 and 2017 because cost of goods sold in both years is affected by the adjustment to ending inventory needed at the end of 2016 and 2017. The opposite effects occur when inventory is overstated at a year-end.

An error in ending inventory is offset in the next year because one year's ending inventory becomes the next year's opening inventory. This process can be illustrated by comparing gross profits for 2016 and 2017 in the above example. The sum of both years' gross profits is the same.

	Correct Inventory	*Understated Inventory*
Gross profit for 2016	$10,000	$ 9,000
Gross profit for 2017	10,000	11,000
Total	$20,000	$20,000

However, even if inventory costs and quantities are accurately recorded, different inventory valuations can result depending on the assumed flow of inventory items through the operating cycle. This can affect both ending inventory and cost of goods sold calculations, and thus gross profit and net income. This is discussed in the next section.

B. Inventory Cost Flow Assumptions

Even if the correct quantity of items is recorded in ending inventory, determining the *cost* of each unit of inventory, and thus the total cost of ending inventory on the balance sheet can be challenging. There are several methods that can be used. Each method may result in a different cost, as illustrated below.

Assume a company uses the perpetual inventory system. It has no opening inventory at June 1, 2011. The company purchases five gadgets during June as follows:

	Purchase Transaction	
Date	*Number of units*	*Price per unit*
June 1	1	$ 1
5	1	2
7	1	3
21	1	4
28	1	5
	5	$15

There would be five units in inventory at June 28, with a total cost of $15 ($1 + 2 + 3 + 4 +5). Assume now that four gadgets are sold on June 30 for $10 each. There is no opening inventory, so one gadget remains in ending inventory at June 30. There are four possible methods that can be used to determine the cost of the four gadgets sold.

Specific Identification

Under the **specific identification costing** method, each inventory item is identified with its purchase cost. This method is most practical when inventory consists of relatively few, expensive items, particularly when individual units can be identified with serial numbers – for example, motor vehicles.

Using the example above, assume that the four gadgets sold on June 30 are those purchased on June 1, 5, 7, and 28. Therefore, the 4th gadget that was purchased on June 21 remains in ending inventory. Cost of goods sold would be equal to $11 ($1 + 2 + 3 + 5). Sales equal $40 (4 @ $10), so gross profit would equal $29 ($40 – 11). Ending inventory would be valued at $4, the cost of the gadget purchased on June 21.

The general ledger T-accounts for Merchandise Inventory and Cost Of Goods Sold as illustrated in Figure 5-2 would show:

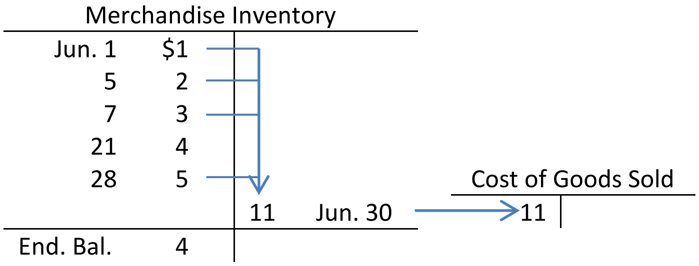


Figure 5-2 Cost of goods sold using specific identification

The entry to record the sale would be:

June 30	Accounts Receivable	110	40	
	Sales	550		40
	Cost of Goods Sold	570	11	
	Merchandise Inventory	150		11

Specific identification is relatively straight forward. However, it is not possible to use this method when inventory consists of a large number of similar, inexpensive items that cannot be easily differentiated. Consequently, a method of assigning costs to inventory items based on an assumed **flow of goods** is usually adopted. These methods are discussed below.

The First-in, First-out (FIFO) Cost Flow Assumption

The **first-in, first out (FIFO)** cost flow assumption determines that the first goods purchased are the first ones sold. Assume that a company purchases and re-sells eggs. Their perishable nature requires a flow of goods that ensures that the first batch of eggs purchased are sold first; the next batch of eggs acquired are sold next; and so on. This cost flow assumption can be thought of as a “conveyor belt” metaphor. As each batch of eggs is purchased, it is placed on the conveyor belt for sale. The first batch that arrives to be sold at the other end of the conveyor belt is the first batch sold, as shown in Figure 5-3 below:

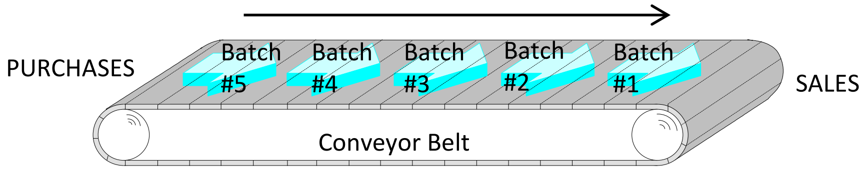


Figure 5-3 **The FIFO cost flow assumption**

A FIFO cost flow assumption makes sense when inventory consists of drugs, photo films, perishable groceries and other time-sensitive items.

In our example above, the first four gadgets purchased are the first four gadgets assumed to be sold under FIFO. The cost of the four gadgets sold is $10 ($1 + 2 + 3 + 4). Sales still equal $40, so gross profit would equal $30 ($40 – 10). The cost of the one remaining gadget in ending inventory would be the cost of the fifth gadget purchased ($5).

The general ledger T-accounts for Merchandise Inventory and Cost Of Goods Sold as illustrated in Figure 5-4 would show:

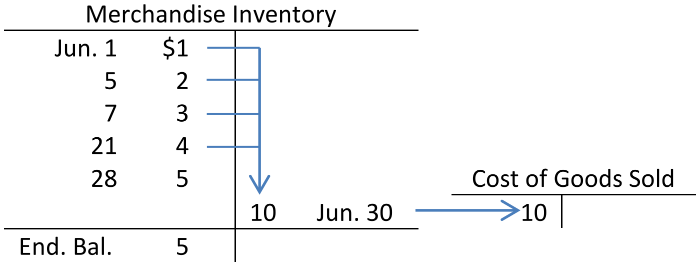


Figure 5-4 **Cost of goods sold using FIFO**

The entry to record the sale would be:

June 30	Accounts Receivable	110	40	
	Sales	550		40
	Cost of Goods Sold	570	10	
	Merchandise Inventory	150		10

The Last-in, First-out (LIFO) Cost Flow Assumption

The **last-in, first-out (LIFO)** cost flow assumption assumes that the most recently purchased goods are the first ones sold. A pile is a suitable metaphor to illustrate this assumption. Assume that a company purchases and sells coal. As each load of coal is purchased, it is dumped on top of the preceding purchases. A pyramid of coal is formed, as illustrated in Figure 5-5. As coal is sold, it is removed from the top of the pile.

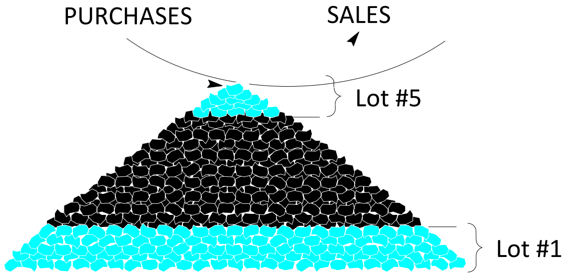


Figure 5-5 **The LIFO cost flow assumption**

LIFO assumes that the coal at the top of the pile is sold first because it is the most accessible. In our example above, the cost of goods sold using LIFO would be $14 ($2 + 3 + 4 + 5). Sales still equal $40, so gross profit would equal $26 ($40 – 14). Since the last four gadgets purchased are the first four gadgets assumed to be sold; the cost of the one remaining gadget in ending inventory is $1, the cost of the first gadget purchased.

The general ledger T-accounts for Merchandise Inventory and cost of goods sold as illustrated in Figure 5-6 would show:

Merchandise Inventory

Jun. 1	$1		
5	2		
7	3		
21	4		
28	5		
		14	Jun. 30
End. Bal.	1		

Cost of Goods Sold

14	

Figure 5-6 **Cost of goods sold using LIFO**

The entry to record the sale would be:

June 30	Accounts Receivable	110	40	
	Sales	550		40
	Cost of Goods Sold	570	14	
	Merchandise Inventory	150		14

The Weighted Average Cost Flow Assumption

Often, a **weighted average** cost flow is assumed when goods purchased on different dates are mixed with each other. The weighted average cost assumption is popular in practice because it is easy to calculate. It is also suitable when inventory is held in common storage facilities – for example, when several crude oil shipments are stored in one large holding tank. To calculate a weighted average, total cost of all purchases of a particular inventory type is divided by the number of units purchased.

To calculate the weighted average cost in our example, the purchase prices for all five gadgets are totalled ($1 + 2 + 3 + 4 + 5 = $15) and divided by the total number of gadgets purchased (5). The weighted average cost for each gadget is $3 ($15/5). The weighted average cost of goods sold would be $12 (4 @ $3)). Sales still equal $40, so gross profit would equal $28 ($40 – 12). The cost of the one remaining gadget in ending inventory is $3.

The general ledger T-accounts for Merchandise Inventory and cost of goods sold as illustrated in Figure 5-7 would show:

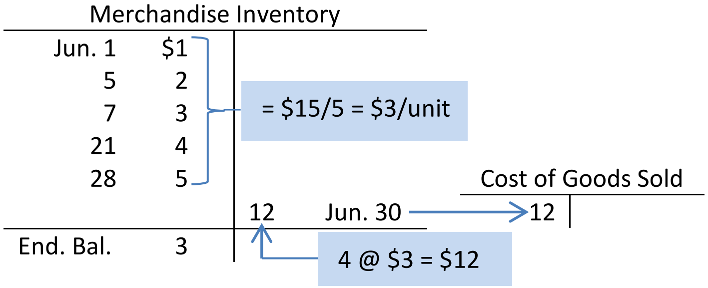


Figure 5-7 Cost of goods sold using weighted average

The entry to record the sale would be:

June 30	Accounts Receivable	110	40	
	Sales	550		40
	Cost of Goods Sold	570	12	
	Merchandise Inventory	150		12

Impact of Different Inventory Cost Assumptions

When purchase costs are increasing, as in a period of inflation (or decreasing, as in a rare period of deflation), each cost flow assumption results in a different amount of ending inventory, cost of goods sold, gross profit, and net income.

Using our example, the differing effects of each cost flow assumption on net income and ending inventory are as shown in Figure 5-8:

	Spec. Ident.	*FIFO*	*LIFO*	*Wtd. Avg.*
Sales	$40	$40	$40	$40
Cost of goods sold	11	10	14	12
Gross profit and net income	$29	$30	$26	$28
Ending inventory (balance sheet)	$ 4	$ 5	$ 1	$ 3

Figure 5-8 Effects of different cost flow assumptions: sales occur on June 30

FIFO *maximizes* net income and ending inventory amounts when costs are rising ($30; $5). LIFO *minimizes* net income and ending inventory amounts when purchase costs are rising ($26; $1). The specific identification and weighted average methods result in net income and ending inventory amounts between those for FIFO and LIFO. During a period of *falling* prices, FIFO results in the lowest net income and ending inventory values; LIFO would produce the opposite results; specific identification and weighted average would still fall somewhere in between these values.

Because different cost flow assumptions can affect the financial statements, GAAP requires that the assumption adopted by a company must be disclosed in its financial statements. However, *LIFO-based inventory valuation is prohibited* for reasons beyond the scope of this text. In general, any of the three remaining methods (specific identification, FIFO, weighted average) may be chosen *regardless of which method best represents the actual flow of goods.* There are some exceptions:

1. Inventories with a different nature or end-use can be valued using different methods. For instance, if a company produces both eggs and coal, eggs could be valued using a FIFO cost flow assumption and coal using LIFO.
2. Goods that are uniquely identifiable (for instance, vehicles sold at a car lot) and goods produced for a specific project (like a bridge under construction) are required to be valued using the specific identification method.

Once chosen, however, a method must be used consistently from year to year. This provides more meaningful year-to-year comparisons of cost of goods sold on the income statement and ending inventory on the balance sheet.

Costing Effects When Sales are Intermittent

Recall that under the perpetual inventory system, cost of goods sold is calculated and recorded in the accounting system at the time when sales are recorded. In our simplified example, all sales occurred on June 30 after all inventory had been purchased. In reality, the purchase and sale of merchandise is continous. The result is that the calculation of cost of goods sold and ending inventory can be affected.

Assume the same example as above, except that sales of gadgets occur as follows during June:

Date	*Number of Units Sold*
June 3	1
8	1
23	1
29	1

To help with the calculation of cost of goods sold, an *inventory record card* will be used to track gadget transactions. This records purchases information like date, number of units purchased, and cost per unit. It also records sales information: date, number of units sold, cost of units sold; and most importantly, the balance of gadgets on hand at the end of a period, the cost of each unit held, and the total cost of the gadgets on hand. A partially-completed inventory record card showing the quantity of gadgets bought and sold during June, and the flow of one unit purchased and sold (blue lines) is shown in Figure 5-9 below:

The card tracks the flow of *each type* of inventory.

		Purchased (Sold)			*Balance*		
Date	*Activity*	*Units*	*Unit Cost*	*COGS*	*Units*	*Unit Cost*	*Total Cost*
June 1	Purchase #1	1			1		
3	Sale #1	(1)			0		
5	Purchase #2	1			1		
7	Purchase #3	1			2		
8	Sale #2	(1)			1		
21	Purchase #4	1			2		
23	Sale #3	(1)			1		
28	Purchase #5	1			2		
29	Sale #4	(1)			**1**		

Cost of goods sold (COGS) is recorded in this column.

Ending Inventory is 1 unit.

Figure 5-9 Inventory record card for "Gadgets"

In Figure 5-9, the inventory at the end of the accounting period is one unit, which is as it should be in our example. This is the *book* inventory of units on hand, and agrees to our prior example. A *physical* inventory count is still made at regular intervals, generally at the end of the fiscal year, to verify that the same quantities are actually on hand.

As purchases and sales are made, costs are assigned to the goods using whatever cost flow assumption has been chosen. This information is used to calculate the cost of goods sold amount for each sales transaction at the time of sale. As illustrated above, these costs will vary depending on the inventory cost flow assumption used. As we will see, the cost of sales may also vary depending on *when* sales occur.

Illustrative Problem—Specific Identification

In Figure 5-10 below, the purchases and sales from Figure 5-9 are repeated, incorporating unit costs and assuming specific identification of items sold. Recall from our first example that all gadgets except purchase #4 ($4) made on June 21 have been sold, and that sales occur throughout June. Based on these sales dates, the inventory record card for gadgets would show:

		Purchased (Sold)			*Balance*		
Date	*Activity*	*Unit*	*Unit Cost*	*COGS*	*Unit*	*Unit Cost*	*Total Cost*
June 1	Purchase #1	1	$1		1	$1	$1
3	Sale #1	(1)	1	($1)	-0-	$0	$-0-
5	Purchase #2	1	2		1	$2	$2
7	Purchase #3	1	3		2	1x$2 1x$3	$5
8	Sale #2	(1)	2	(2)	1	$3	$3
21	Purchase #4	1	4		2	1x$3 1x$4	$7
23	Sale #3	(1)	3	(3)	1	$4	$4
28	Purchase #5	1	5		2	1x$4 1x$5	$4
29	Sale #4	(1)	5	(5)	1	$4	**$4**
	Total COGS			**$11**			

Figure 5-10 Inventory record card for “Gadgets” using specific identification

Using specific identification, changing the dates of sale from June 30 to four different dates makes no difference in cost of goods sold or ending inventory. The same gadget purchased on June 21 for $4 remains in ending inventory at June 30, and cost of goods sold still equals $11 ($1 + 2 + 3 + 5).

Illustrative Problem—FIFO Costing under the Perpetual System

The example in Figure 5-10 is repeated in Figure 5-11 below but this time the FIFO cost flow assumption is used:

		Purchased (Sold)			*Balance*		
Date	*Activity*	*Unit*	*Unit Cost*	*COGS*	*Unit*	*Unit Cost*	*Total Cost*
June 1	Purchase #1	1	$1		1	$1	$1
3	Sale #1	(1)	1	($1)	-0-	$-0-	$-0-
5	Purchase #2	1	2		1	$2	$2
7	Purchase #3	1	3		2	1x$2 1x$3	$5
8	Sale #2	(1)	2	(2)	1	$3	$3
21	Purchase #4	1	4		2	1x$3 1x$4	$7
23	Sale #3	(1)	3	(3)	1	$4	$4
28	Purchase #5	1	5		2	1x$4 1x$5	$4
29	Sale #4	(1)	4	(4)	1	$5	**$5**
	Total COGS			**$10**			

Figure 5-11 Inventory record card for “Gadgets” using FIFO costing

Recall that under FIFO, the earliest purchase costs are assigned to sales. Note that the cost of ending inventory using the four different sales dates is the same as if all sales are assumed to take place on June 30. This amount is $5. Cost of goods sold is also the same – $10 ($1 + 2 + 3 + 4).

Illustrative Problem— LIFO Costing

The example in Figure 5-11 is repeated in Figure 5-12 below, but this time the LIFO cost flow assumption is used:

		Purchased (Sold)			*Balance*		
Date	*Activity*	*Unit*	*Unit Cost*	*COGS*	*Unit*	*Unit Cost*	*Total Cost*
June 1	Purchase #1	1	$1		1	$1	$1
3	Sale #1	(1)	1	($1)	-0-	$-0-	$-0-
5	Purchase #2	1	2		1	$2	$2
7	Purchase #3	1	3		2	1x$2 1x$3	$5
8	Sale #2	(1)	3	(3)	1	$2	$2
21	Purchase #4	1	4		2	1x$2 1x$4	$6
23	Sale #3	(1)	4	(4)	1	$2	$2
28	Purchase #5	1	5		2	1x$2 1x$5	$7
29	Sale #4	(1)	5	(5)	1	$2	**$2**
	Total COGS			**$13**			

Figure 5-12 Inventory record card for "Gadgets" using LIFO costing

This time, results are different when four sales dates. When all sales are considered to occur on June 30, purchases 2, 3, 4, and 5 are considered to be sold. When sales are spread throughout June, purchases 1, 3, 4, and 5 are considered to be sold. The difference is sale #1. On June 3, only one unit (purchase #1) was on hand at the time of the sale. Therefore, this item is removed from inventory. This affects cost of goods sold, which is now $13 ($1 + 3 + 4 + 5) instead of $14. The first unit purchased and still on hand is purchase #2 for $2. This is the value of ending inventory assuming LIFO costing.

Illustrative Problem— Weighted Average Costing

The inventory record card transactions using weighted average costing is illustrated in Figure 5-13:

		Purchased (Sold)			*Balance*		
Date	*Activity*	*Unit*	*Unit Cost*	*COGS*	*Unit*	*Unit Cost*	*Total Cost*
June 1	Purchase #1	1	$1.00		1	$1.00	$1.00
3	Sale #1	(1)	1.00	($ 1.00)	-0-	$-0-	$-0-
5	Purchase #2	1	2.00		1	$2.00	$2.00
7	Purchase #3	1	3.00		2	2x$2.50[a]	$5.00
8	Sale #2	(1)	2.50	(2.50)	1	$2.50	$2.50
21	Purchase #4	1	4.00		2	2x$3.25[b]	$6.50
23	Sale #3	(1)	3.25	(3.25)	1	$3.25	$3.25
28	Purchase #5	1	5.00		2	$4.125[c]	$8.25
29	Sale #4	(1)	4.13*	(4.13)	1	$4.12	**$4.12**
	Total COGS			**$10.88**			

*rounded

Figure 5-13 Inventory record card for “Gadgets” using weighted average costing

The weighted average is calculated as follows:
1 x $2.00 = $2.00
1 x $3.00 = $3.00
2 $5.00
Average = $2.50[a]

1 x $2.50 = $2.50
1 x $4.00 = $4.00
2 $6.50
Average = $3.25[b]

1 x $3.25 = $3.25
1 x $5.00 = $5.00
2 $8.25
Average = $4.125[c]

When a perpetual inventory system is used, the weighted average is calculated each time a purchase is made – in this case, after purchases #3, #4, and #5. As a result, and assuming that sales occur throughout June, Cost of goods sold using the weighted average costing method now totals $10.88 ($1.00 + 2.50 + 3.25 + 4.13). The one gadget remaining in ending inventory is now valued at $4.12.

Journal Entries

The entries shown in Figure 5-14 below would be made in the general journal to record the June purchases and sales under each of the four cost flow assumptions, assuming the four different sales dates:

			Using Spec. Identif.		*Using FIFO*		*Using LIFO*		*Using Wtd. Average*	
Date 2011	Description	F	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
June 1	Merchandise Inventory	150	1.00		1.00		1.00		1.00	
	Accounts Payable	210		1.00		1.00		1.00		1.00
3	Accounts Receivable	110	10.00		10.00		10.00		10.00	
	Sales	500		10.00		10.00		10.00		10.00
	Cost of Goods Sold	570	1.00		1.00		1.00		1.00	
	Merchandise Inventory	150		1.00		1.00		1.00		1.00
5	Merchandise Inventory	150	2.00		2.00		2.00		2.00	
	Accounts Payable	210		2.00		2.00		2.00		2.00
7	Merchandise Inventory	150	3.00		3.00		3.00		3.00	
	Accounts Payable	210		3.00		3.00		3.00		3.00
8	Accounts Receivable	110	10.00		10.00		10.00		10.00	
	Sales	500		10.00		10.00		10.00		10.00
	Cost of Goods Sold	270	2.00		2.00		3.00		2.50	
	Merchandise Inventory	150		2.00		2.00		3.00		2.50
21	Merchandise Inventory	150	4.00		4.00		4.00		4.00	
	Accounts Payable	210		4.00		4.00		4.00		4.00
23	Accounts Receivable	110	10.00		10.00		10.00		10.00	
	Sales	500		10.00		10.00		10.00		10.00
	Cost of Goods Sold	270	3.00		3.00		4.00		3.25	
	Merchandise Inventory	150		3.00		3.00		4.00		3.25
28	Merchandise Inventory	150	5.00		5.00		5.00		5.00	
	Accounts Payable	210		5.00		5.00		5.00		5.00
29	Accounts Receivable	110	10.00		10.00		10.00		10.00	
	Sales	500		10.00		10.00		10.00		10.00
	Cost of Goods Sold	270	5.00		4.00		5.00		4.13	
	Merchandise Inventory	150		5.00		4.00		5.00		4.13

Figure 5-14 General journal entries for four methods of inventory costing

The Merchandise Inventory general ledger T-account would appear as shown in Figure 5-15 under each inventory costing method:

Specific Identification

Merchandise Inventory *No. 150*

Debit		Credit	
Jn 1	$1	Jn 3	$1
5	2	8	2
7	3	23	3
21	4	29	5
28	5		
Bal.	4		

FIFO

Merchandise Inventory *No. 150*

Debit		Credit	
Jn 1	$1	Jn 3	$1
5	2	8	2
7	3	23	3
21	4	29	4
28	5		
Bal.	5		

LIFO

Merchandise Inventory *No. 150*

Debit		Credit	
Jn 1	$1	Jn 3	$1
5	2	8	3
7	3	23	4
21	4	29	5
28	5		
Bal.	2		

Weighted Average

Merchandise Inventory *No. 150*

Debit		Credit	
Jn 1	$1	Jn 3	$1.00
5	2	8	2.50
7	3	23	3.25
21	4	29	4.13
28	5		
Bal.	4.12		

Figure 5-15 Comparative general ledger T-accounts for Merchandise Inventory using the perpetual inventory system.

Notice that the ending balances of $4, $5, $2 and $4.12 agree to the ending balances of the gadget inventory record cards for specific identification, FIFO, LIFO, and weighted average methods respectively (see Figs. 5-8, 5-9, 5-10, and 5-11). Much of the same information is recorded in the Merchandise Inventory general ledger T-account and the inventory record card. This is because our example is very simplified and assumes that only one type of product is sold. In a real company, inventory may consist of thousands of different products. The general ledger account will contain only summarised transactions of a number of purchases and sales of many products that are detailed in the underlying inventory record cards. Inventory record cards are an example of *subsidiary ledgers,* or *sub-ledgers*. They provide a detailed listing of type, amount, and total cost of all types of inventory held at a particular point in time The sum of each items total cost always equals the ending amount recorded in the Mechandise Inventory general ledger account.

If more detailed information such as number of units on hand at period-end and their total costs, the inventory record cards can be consulted. In this way, the general ledger information can be streamlined.

After posting the general journal entries to the general ledger, the comparative income statements for the one-month period and the ending inventory would show:

	Sales Throughout June				*Sales at June 30*			
	Spec. Ident.	*FIFO*	*LIFO*	*Wtd. Avg.*	*Spec. Ident.*	*FIFO*	*LIFO*	*Wtd. Avg.*
Sales	$40	$40	$40	$40	$40	$40	$40	$40
Cost of goods sold	11	10	13	11	11	10	14	12
Gross profit and net income	29	30	27	$29	$29	$30	$26	$28
Ending inventory	$ 4	$ 5	$ 2	$ 4	$ 4	$ 5	$ 1	$ 3

Only LIFO and weighted average methods produce different results when all sales do not occur on the last day of the month.

The perpetual inventory incorporates an internal control feature that is lost under the periodic inventory method. Losses resulting from theft and error can easily be determined when the actual quantity of goods on hand is counted and compared with the quantities shown in the inventory records as being on hand. This advantage is offset, however, by the time and expense required to update the inventory records continuously, particularly where there are thousands of different items of various sizes in stock. Computerisation makes this record-keeping easier and less expensive because the inventory accounting system can be tied in to the sales system in such a way that inventory is updated whenever a sale is recorded.

Lower of Cost and Net Realisable Value (LCNRV)

There is one final consideration when calculating cost of goods sold and ending inventory. It is prudent (and required by generally accepted accounting principles) to value inventory at the lesser amount of its laid-down cost[1] and the amount for which it can likely be sold – its **net realisable value (NRV) .** This concept is known as the **lower of cost and net realisable value,** or **LCNRV**

As an example: a change in consumer demand may mean that inventories become obsolete and need to be reduced in value below the cost to produce or purchase the items for resale. This often occurs in the electronics industry as new and more popular products are introduced.

The lower of cost and net realisable value can be applied to individual inventory items or groups of similar items, as shown in Figure 5-16 below:

			LCNRV	
	Total Cost	*Total NRV*	*Unit Basis*	*Group Basis*
White paper	$1,250	$1,200	$1,200	
Coloured paper	1,400	1,500	1,400	
Total	$2,650	$2,700	$2,600	$2,650
Ending inventory (LCNRV)			$2,600	$2,650

Figure 5-16 LCNRV calculations

Depending on the calculation used, the valuation of ending inventory will be either $2,600 or $2,650. Under the unit basis, the lower of cost and net realisable value is selected for each item: $1,200 for white paper and $1,400 for coloured paper, for a total LCNRV of $2,600. If white paper and coloured paper are considered a similar group, they have a combined cost of $2,650 and a combined net realisable value of $2700. LCNRV would therefore be $2,650.

Appendix A: Inventory Cost Flow Assumptions Under the Periodic System

Recall from the previous chapter that the periodic inventory system does not maintain detailed records to calculate cost of goods sold each time a sale is made. Rather, when a sale is made, the following entry is made:

Date	Accounts Receivable	110	XX	
	Sales	550		XX

No entry is made to record cost of goods sold and to reduce Merchandise Inventory, as is done under the perpetual inventory system. Instead, all purchases are expenses and recorded in the general ledger account “Purchases”. A physical inventory count is conducted at year-end. An amount for ending inventory is calculated based on this count and the valuation of the items in inventory, and cost of goods sold is calculated in the income statement based on this total amount. The income statement format is:

---

[1] As noted in the prior chapter, laid-down costs include the invoice price of the goods (less any purchase discounts) plus transportation in, insurance while in transit, and any other expenditure made by the purchaser to get the merchandise to the place of business and ready for sale.

Sales		$10,000
Cost of Goods Sold:		
Opening Inventory	$ 1,000	
Purchases	5,000	
Goods Available for Sale	6,000	
Less: Ending Inventory	(2,000)	
Cost of Goods Sold		4,000
Gross Profit		$6,000

Even under the periodic inventory system, however, inventory cost flow assumptions need to be made (specific identification, FIFO, LIFO, weighted average) when purchase prices change over time, as in a period of inflation. Further, different inventory cost flow assumptions produce different cost of goods sold and ending inventory values, just as they did under the perpetual inventory system. However, these effects have been explained already in this chapter. *Under the periodic inventory system, cost of goods sold and ending inventory values are determined as if the sales for the period all take place at the end of the period.* These calculations were demonstrated in our earliest example in this chapter.

Our original example using gadgets assumed that there was no opening inventory at June 1, 2011 and that purchases were made as follows:

	Purchase Transaction	
Date	*Number of units*	*Price per unit*
June 1	1	$ 1
5	1	2
7	1	3
21	1	4
28	1	5

When recorded in the general ledger T-account “Purchases”, (an income statement account), these transactions would be recorded as follows:

Purchases		No. 570
Jun. 1	$1	
5	2	
7	3	
21	4	
28	5	

Sales of four gadgets are all assumed to take place on June 30. Ending inventory would then be counted at the end of the day on June 30. One gadget should be on hand. It would be valued as follows under the various inventory cost flow assumptions, as discussed in the first part of the chapter:

Specific identification	$4
FIFO	5
LIFO	1
Weighted average	3

These values would be used to calculate cost of goods sold and gross profit on the income statement, as shown in Figure 5-17 below:

	Spec. Ident.	*FIFO*	*LIFO*	*Wtd. Avg.*
Sales	$40	$40	$40	$40
Cost of Goods Sold:				
Opening Inventory	-0-	-0-	-0-	-0-
Purchases	15	15	15	15
Goods Available for Sale	15	15	15	15
Less: Ending Inventory	(4)	(5)	(1)	(3)
Cost of Goods Sold	11	10	14	12
Gross Profit and Net Income	$29	$30	$26	$28
Ending Inventory (Balance Sheet)	$ 4	$ 5	$ 1	$ 3

Figure 5-17 Effects of different cost flow assumptions: periodic inventory system

Note that these results are the same as those calculated using the perpetual inventory method and assuming all sales take place on June 30 using specific identification (Figure 5-2), FIFO (Figure 5-4), LIFO (Figure 5-6), and weighted average (Figure 5-7) cost flow assumptions, respectively.

As discussed in the appendix to chapter 4, the ending inventory amount will be recorded in the accounting records when the income statement accounts are closed to the Income Summary at the end of the year. The amount of the closing entry for ending inventory is obtained from the income statement. Using the example above and assuming no other revenue or expense items, the closing entries to adjust ending inventory to actual under the each inventory cost flow assumption would be:

Entry 1

(a)

			Spec. Ident		*FIFO*		*LIFO*		*Wtd. Avg*	
Dec. 31	Merchandise Inventory (ending)	150	4		5		1		3	
	Sales	500	40		40		40		40	
	Income Summary	360		44		45		41		43
	To close all income statement accounts with credit balances to the Income Summary and record ending inventory balance.									

Appendix B: Estimating Inventory Cost Using the Periodic Inventory System

If a periodic inventory method is used to determine cost of goods sold and ending inventory, these amounts may be *estimated* instead. There are two reasons for this:

Reason 1: Preparation of interim financial statements

Estimating the ending inventory amount offers a means of determining a company's inventory at frequent intervals, thereby avoiding the cost and inconvenience of taking a physical count each time statements are being prepared at other than year-end.

Reason 2: Inventory control
A physical inventory count determines the quantity of items on hand. When costs are assigned to these items and these individual costs are added, a total inventory amount is calculated. Is this dollar amount correct? Should it be larger? How can one tell if the physical count is accurate if a perpetual inventory system is not used? Being able to estimate this amount provides a check on the reasonableness of the physical count and valuation.

The two methods used to estimate the inventory dollar amount are the *gross profit method* and the *retail inventory method*. Both methods are based on a calculation of the gross profit percentage in the income statement. Assume the following information:

Sales		$15,000	100%
Cost of Goods Sold:			
Opening Inventory	$ 4,000		
Purchases	12,000		
Cost of Goods Available for Sale	16,000		
Less: Ending Inventory	(6,000)		
Cost of Goods Sold		10,000	67%
Gross Profit		5,000	33%

The gross profit percentage is 33 per cent ($5,000/15,000). This means that for every dollar of sales, an average of $.33 is left over after deducting cost of goods sold to cover other expenses.

Ending inventory estimation also requires an understanding of the relationship of ending inventory with cost of goods sold. Review the following cost of goods sold calculations:

Cost of Goods Sold:	
Opening Inventory	$ 4,000
Purchases	12,000
Cost of Goods Available for Sale	16,000
Less: Estimated Ending Inventory	?
Cost of Goods Sold	$10,000

How much of the $16,000 of goods that the company had available to sell is still not sold at December 31 (that is, how much is ending inventory)? You can calculate this as follows:

It had available	$16,000
It sold	10,000
It must still have on hand	$ 6,000

Cost of Goods Sold:	
Opening Inventory	$ 4,000
Purchases	12,000
Cost of Goods Available for Sale	16,000
Less: Estimated Ending Inventory	6,000
Cost of Goods Sold	?

How much of the $15,000 of goods that were available to be sold have been sold? You use the dollar amount of ending inventory to calculate this, as follows:

It had available	$16,000
It still has on hand	6,000
It must have sold	$10,000

The sum of cost of goods sold and ending inventory is always equal to cost of goods available for sale. Knowing any two of these amounts enables the third amount to be calculated. Understanding this relationship is the key to estimating inventory using either the gross profit or retail inventory methods, discussed below.

Gross Profit Method

The **gross profit method** assumes that the percentage of gross profit on sales remains approximately the same from year to year. Therefore, if this percentage is known, the dollar amount of ending inventory can be estimated. First, gross profit is estimated by applying the gross profit percentage to sales. From this, cost of goods sold can be derived. It is the difference between sales and gross profit. Cost of goods available for sale can be determined from the accounting records (opening inventory + purchases). The difference between cost of goods available for sale and cost of goods sold is the estimated value of ending inventory.

These steps are illustrated below. Assume that during the previous two years Pete's Products Ltd. has an average gross profit percentage of 40 per cent. The company wants to prepare financial statements for the six-month period ended June 30, 2015 without the time and expense needed to count inventory at June 30. If opening inventory at January 1, 2015 is $200, and the general ledger accounts show sales of $2,000 and Purchases of $1,100 for the six-month period ended June 30, cost of goods sold and ending inventory can be estimated using the average gross profit percentage, as follows.

	Six Months ended June 30, 2015	
Sales (given)		$2,000
Cost of Goods Sold:		
Opening Inventory (from records)	$ 200	
Purchases (from records)	1,100	
Cost of Goods Available for Sale	1,300	
Less: Estimated Ending Inventory	(100)	
Cost of Goods Sold		1,200
Gross Profit		$ 800

Step 3: Ending inventory can be estimated ($1,300 – 1,200 = 100)

Step 2: Cost of goods sold can be derived ($2,000 – 800 = $1,200)

Step 1: Gross profit is estimated at $800 ($2,000 x 40%).

The ending inventory at June 30 must be $100, the difference between Cost of goods available for sale and cost of goods sold.

The gross profit method of estimating inventory is particularly useful in situations when goods have been stolen or destroyed by fire or when it is not cost-effective to make a physical inventory count.

Retail Inventory method

The **retail inventory method** is another means to estimate cost of goods sold and ending inventory using the periodic inventory system. It can be used when items are consistently valued at a known percentage of cost. This is common in a clothing store, for instance.

First, goods available for sale is priced at retail (the selling price), rather than cost. To do this, the **mark-up** (ratio of retail to cost) must be known. Assume the same information as above for Pete's Produce Ltd., except that now every item in the store is marked up to 160% of its purchase price. That is, if an item is purchased for $100, it is sold for $160. Based on this, opening inventory, purchases, and cost of goods available can be re-stated at retail. Cost of goods sold can then be valued at retail, meaning that it will equal sales for the period. From this, ending inventory (at retail) can be determined, then converted back to cost using the mark-up. These steps are illustrated below:

	Six Months ended June 30, 2015			
	At Retail		*At Cost*	
Sales (given)		$2,000		$2,000
Cost of Goods Sold:				
Opening Inventory (from records))	$ 320		$ 200	
Purchases (from records)	1,760		1,100	
Cost of Goods Available for Sale	2,080		1,300	
Less: Estimated Ending Inventory	(80)		(50)	
Cost of Goods Sold		2,000		1,250
Gross Profit		$ -0-		$ 750

Step 1: Opening inventory and purchases (and therefore cost of goods available for sale) are restated at retail (cost x 160%)

Step 2: Cost of goods sold is restated at retail (equal to sales).

Step 3: Ending inventory can be derived ($2,080 – 2,000 = $80).

Step 4: Ending inventory is restated at cost (that is, divided by 160%). Cost of goods sold and gross profit can then be determined.

The retail inventory method of estimating ending inventory is easy to calculate and produces a relatively accurate cost of ending inventory, provided that no change in the average mark-up has occurred during the period.

ASSIGNMENT MATERIALS

Discussion Questions

1. Explain the importance of maintaining appropriate inventory levels for (a) management and (b) investors and creditors.
2. What aspects of accounting for inventory on financial statements would be of interest to accountants?
3. What is meant by the laid-down cost of inventory?
4. How does a flow of goods differ from a flow of costs? Do generally accepted accounting principles require that the flow of costs be similar to the movement of goods? Explain.
5. What two factors are considered when costing merchandise for financial statement purposes? Which of these factors is most difficult to determine? Why?
6. Under the LIFO cost flow assumption, do ending inventories consist of the earliest or most recent costs? Does the cost of goods sold include the earliest or most recent costs?
7. During a period of inflation, how do rising costs affect ending inventory and cost of goods sold values using FIFO, LIFO, and weighted average cost flow assumptions?
8. Assume that you are the president of your company and paid a year-end bonus according to the amount of net income earned during the year. When prices are rising, which inventory cost flow assumption would you choose? Explain, using an example to support your answer. Would your choice be the same if prices were falling?
9. Why is consistency in inventory valuation necessary? Does the application of the consistency principle preclude a change from weighted average to FIFO? Explain.
10. The ending inventory of CBCA Inc. is overstated by $5,000 at December 31, 2014. What is the effect on 2014 net income? What is the effect on 2015 net income assuming that no other inventory errors have occurred during 2015?
11. When should inventory be valued at less than cost?
12. What is the primary reason for the use of the LCNRV method of inventory valuation? What does the term *net realisable value* mean?
13. When inventory is valued at LCNRV, what does *cost* refer to?
14. What inventory cost flow assumptions are permissible under GAAP?
15. (Appendix) What internal control feature of the perpetual inventory method is lost under the periodic inventory method? Would you recommend that a hardware store use the perpetual inventory method? Why or why not?
16. (Appendix A) What procedures do the periodic and perpetual inventory systems both have in common?
17. (Appendix A) Why might differences occur between a perpetual and periodic inventory system when determining the cost of merchandise sold or on hand?
18. (Appendix A) Contrast the journal entries required under the periodic and perpetual inventory systems.

19. (Appendix B) Why is estimating inventory useful?
20. (Appendix B) How does the estimation of ending inventory differ between the gross profit method and the retail inventory method? Use examples to illustrate.
21. (Appendix B) When is the use of the gross profit method particularly useful?
22. (Appendix B) Does the retail inventory method assume any particular inventory cost flow assumption?

Comprehension Problems

CP 5-1

Listed below are four common accounting errors. Using the format shown, indicate the effect, if any, of each of the errors on the company's financial statements for the items shown. Assume the company uses the perpetual inventory method and that the ending inventory balance will be adjusted to the physical count at year-end.

	2012 Statements				*2013 Statements*			
Errors	*Opening Invent.*	*Ending Invent.*	*2012 Total Assets*	*2012 Net Income*	*Opening Invent.*	*Ending Invent.*	*2013 Total Assets*	*2013 Net Income*
1. Goods purchased in 2012 were included in December 31 inventory, but the transaction was not recorded until early 2013.	-0-							
2. Goods purchased in 2013 were included in December 31, 2012 inventory, and the transaction was recorded in 2012.	-0-							
3. Goods were purchased in 2012 and the transaction recorded in that year; however, the goods were not included in the December 31 inventory as they should have been.	-0-							
4. Goods purchased in 2012 were excluded from December 31 inventory, and the transaction was recorded early in 2013.	-0-							

View Solution

Required: Use a + (plus sign) to denote that an item is too high as a result of the error, a – (minus sign) to denote that it is too low, and a -0- (zero) to indicate no effect. The answer for the 2012 opening inventory is shown.

CP 5-2

Partial income statements of Lilydale Products Inc. are reproduced below:

	2017	*2018*	*2019*
Sales	$30,000	$40,000	$50,000
Cost of Goods Sold	20,000	23,000	25,000
Gross Profit	$10,000	$17,000	$25,000

View Solution

Required:

1. Calculate the impact of the two errors listed below on the gross profit calculated for the three years:
    a. The 2017 ending inventory was understated by $2,000.
    b. The 2019 ending inventory was overstated by $5,000.
2. What is the impact of these errors on Total Assets?

CP 5-3

Laplante Inc. uses the perpetual inventory system. The following transactions took place during January 2017

			Unit
Date		*Units*	*Cost*
Jan. 1	Opening Inventory	100	$1
7	Purchase #1	10	2
9	Sale #1	80	
21	Purchase #2	20	3
24	Sale #2	40	

View Solution

Required: Using the table below, calculate cost of goods sold for the January 9 and 24 sales, and ending inventory under the following inventory cost flow assumptions:

1. FIFO
2. LIFO.

		Purchased (Sold)			*Balance*				
			Unit				*Unit*		*Total*
Date		*Units*	*Cost*	*COGS*	*Units*		*Cost*		*Cost*
Jan. 1	Opening Inventory				100	x	$1	=	$100
7	Purchase #1								
9	Sale #1								
21	Purchase #2								
24	Sale #2								

CP 5-4

ABBA uses the perpetual inventory system. The following transactions took place in January 2014.

Date		*Units*	*Unit Selling Price/ Cost*
Jan. 1	Opening Inventory	2,000	$0.50
5	Sale #1	1,200	5.00
6	Purchase #1	1,000	2.00
10	Purchase #2	500	1.00
16	Sale #2	2,000	6.00
21	Purchase #3	1,000	2.50

Assume all sales are made on account.

View Solution

Required:

1. Assume ABBA uses the FIFO inventory cost flow assumption
   a. Record the journal entry for the January 5 sale. Show calculations for cost of goods sold.
   b. Record the journal entry for the January 16 sale. Show calculations for cost of goods sold.
   c. Calculate ending inventory in units, cost per unit, and total cost.
2. Assume ABBA uses the weighted average inventory cost flow assumption
   a. Record the journal entry for the January 5 sale. Show calculations for cost of goods sold.
   b. Record the journal entry for the January 16 sale. Show calculations for cost of goods sold.
   c. Calculate ending inventory in units, cost per unit, and total cost.

CP 5-5

The following information is taken from the records of East Oak Distributors Inc. The company uses the perpetual inventory system.

Date		*Units*	*Unit Cost*
May 1	Opening Inventory	100	$1
5	Sale #1	80	
6	Purchase #1	200	2
12	Purchase #2	125	3
13	Sale #2	300	
19	Purchase #3	350	2
29	Purchase #4	150	1
30	Sale #3	400	

View Solution

Required:

1. Calculate cost of goods sold and the cost of ending inventory under each of the following inventory cost flow assumptions:
   a. FIFO
   b. LIFO
   c. Weighted average.

2. Assume each unit was sold for $5. Complete the following partial income statements :

	FIFO	*LIFO*	*Wtd. Avg.*
Sales	$	$	$
Cost of Goods Sold			
Gross Profit			

3. Which costing method would you choose if you wished to maximise net income? Maximise ending inventory value?

CP 5-6

View Solution

Required: Choose the method of inventory valuation that corresponds to each of the statements that follow:

1. FIFO
2. LIFO
3. Weighted average.
4. Specific identification

____ Matches actual flow of goods with actual flow of costs in most cases
____ Matches new costs with new sales prices
____ Matches old costs with new sales prices
____ Results in the lowest net income in periods of falling prices
____ Best matches current costs with current revenues
____ Does not assume any particular flow of goods
____ Best suited for situations in which inventory consists of perishable goods
____ Not accepted under International Financial Accounting Standards
____ Values ending inventory at approximate replacement cost

CP 5-7

Erndale Products Ltd. has the following items in inventory at year-end:

Item	*Units*	*Cost (FIFO)*	*NRV*
X	2	$ 50	$60
Y	3	150	75
Z	4	25	20

View Solution

Required: Calculate the cost of ending inventory using LCNRV on

1. A unit-by-unit basis
2. A group inventory basis.

CP 5-8 (Appendix A)

View Solution

On March 15, 2013, Sudden Sales Co. purchased $5,000 of merchandise for cash.

Required: Assuming that Sudden Sales uses the periodic inventory system, calculate the cost of goods sold in each of the following circumstances:

1. Opening inventory, -0-; ending inventory, $2,000
2. Opening inventory, $3,000; ending inventory, $4,000
3. Opening inventory, $1,000; ending inventory, $1,500
4. Opening inventory, $2,000; ending inventory, -0-.

CP 5-9 (Appendix A)

View Solution

The following transactions took place during January 2017 in Bouchard Inc.; the company sold 200 units during this month.

	Units	*Unit Cost*
Opening Inventory	100	$1
Purchase #1	10	1
Purchase #2	20	2
Purchase #3	30	3
Purchase #4	40	4
Purchase #5	50	5

Required: Using the table below, calculate goods available for sale, cost of goods sold, and ending inventory for each of:

1. FIFO/periodic
2. LIFO/periodic.

	Goods Available for Sale					-	*Goods Sold*			=	*Ending Inventory*		
	Units		*Unit Cost*		*Total Cost*		*Units*	*Unit Cost*	*Total Cost*		*Units*	*Unit Cost*	*Total Cost*
Inventory (Jan. 1)	100	x	$1	=	$100								
Purchase #1													
Purchase #2													
Purchase #3													
Purchase #4													
Purchase #5													

CP 5-10 (Appendix A)

The following transactions took place in ABBA Limited in 2014.

Opening Inventory	2,000 units @ $0.50
Purchase #1	1,000 units @ $2.00
Purchase #2	500 units @ $1.00
Purchase #3	1,000 units @ $2.50
Sales	2,000 units

Assume a periodic inventory system is used.

View Solution

Required: Calculate

1. Ending inventory under LIFO.
2. Ending inventory under FIFO.
3. Ending inventory under weighted average.
4. Cost of goods sold under LIFO.
5. Cost of goods sold under FIFO.
6. Cost of goods sold under weighted average.

CP 5-11 (Appendix A)

The following information is taken from the records of West End Distributors Inc. The company uses the periodic inventory system.

			Units	*Unit Cost*
May	1	Opening Inventory	100	$1
	6	Purchase #1	200	1
	12	Purchase #2	125	2
	19	Purchase #3	350	2
	29	Purchase #4	150	3

At May 31, 200 units remain unsold.

View Solution

Required:

1. Calculate the cost of ending inventory under each of the following costing methods:
   a. FIFO
   b. LIFO
   c. Weighted average.
2. Complete the following partial income statements:

	FIFO		*LIFO*		Wtd. Average	
Sales		$1,500		$1,500		$1,500
Cost of Goods Sold:						
Opening Inventory						
Purchases						
Cost of Goods Available						
Less: Ending Inventory						
Cost of Goods Sold						
Gross Profit						

CP 5-12 (Appendix B)

Windy City Insurance Ltd. has received a fire-loss claim of $45,000 from Balton Corp. A fire destroyed Balton's inventory on May 25, 2011. Balton has an average gross profit of $33^{1/3}$ per cent. You have obtained the following information:

Inventory, May 1, 2011	$ 80,000
Purchases, May 1 - May 25	150,000
Sales, May 1 - May 25	300,000

View Solution

Required:

1. Calculate the estimated amount of inventory lost in the fire.
2. How reasonable is Balton's claim?

CP 5-13 (Appendix B)

The records of Renault Corporation showed that sales during the period were $276,000, Opening inventory amounted to $26,000 at cost, Purchases were $90,000 at cost. The company paid $4,000 for transportation-in. Mark-up on all items sold is 300%.

View Solution

Required:

1. Calculate:
    a. Cost of goods available for sale at retail
    b. Cost of goods sold at retail
    c. Ending inventory at retail
    d. Ending inventory at cost
    e. Cost of goods sold at cost
    f. Gross profit at cost.
2. Demonstrate that your results maintain a 300% mark-up.

CP 5-14 (Appendix B)

Midlife Corp. is in the process of preparing its financial statements as at May 31, 2013. It has a consistent mark-up of 200% on goods it sells. The following information is available for the five months ended May 31:

Opening Inventory	$ 10,000
Net Purchases	140,000
Sales	250,000

View Solution

Required: Estimate the cost of ending inventory at May 31.

Problems

P 5-1

Partial income statements of Schneider Products Inc. are reproduced below:

	2012	*2013*
Sales	$50,000	$50,000
Cost of Goods Sold	20,000	23,000
Gross Profit	$30,000	$27,000

The 2012 ending inventory was overstated by $2,000 during the physical count and the accounting records were adjusted accordingly. The 2013 physical inventory count was done properly and the accounting records also adjusted to the appropriate balance.

Required:

1. Calculate the impact of this error on the gross profit calculated for 2012 and 2013.
2. What is the impact of this error on total assets at the end of 2012 and 2013? Net assets?

P 5-2

The following sales and purchases of the same product were made during 2018 at Yang Corporation. The opening inventory consisted of 50 units at $1 each.

Purchases				*Sales*		
Apr. 15	Purch. #1	200	$2	Apr. 25	Sale #1	250
Oct. 15	Purch. #2	600	5	Oct. 25	Sale #2	500

Required:

1. Calculate cost of goods sold and the cost of ending inventory under each of FIFO, LIFO, and weighted average inventory cost flow assumptions. Set up a table as follows:

		Purchased (Sold)			*Balance*					
Date		*Units*	*Unit Cost*	*COGS*	*Units*		*Unit Cost*		*Total Cost*
Jan. 1	Opening Inventory				50	x	$1	=	$50

2. Prepare calculations comparing the effect on gross profit of the three inventory cost flow assumptions.
3. The president wants to maximise the company's net income this year. What would you suggest that is in accordance with GAAP?

P 5-3

Palermo Inc. uses the perpetual inventory system. All sales are made on account. The following data are taken from the company's for the year ended December 31, 2018:

Purchases				*Sales*			
		Units	*Unit Cost*			*Units*	*Unit Sell. Price*
Jan. 1	Op. Inv.	25	$1				
Feb. 15	Purchase #1	15	2	Feb. 28	Sale #1	30	$2
Mar. 14	Purchase #2	10	3	Apr. 9	Sale #2	20	4
Oct. 28	Purchase #3	35	4	Dec. 21	Sale #3	50	6
Dec. 4	Purchase #4	40	5				

Required:

1. Show the journal entries to record the December 31 sale under a) FIFO and b) LIFO inventory cost flow assumptions.
2. Calculate the amount of gross profit under FIFO and LIFO inventory cost flow assumptions. Which method matches cost of goods sold more closely with revenues? Why?
3. Assume that the LIFO costing method is permitted and that income taxes expense is calculated at 50 per cent of income before income taxes. Would more income taxes be payable under the FIFO or LIFO method? Explain why.
4. Given your answer to (3), why might LIFO be prohibited under GAAP?

P 5-4

Southern Cross Company Limited made the following purchases and sales of Products A and B during the year ended December 31, 2016:

Product A			
		Units	*Unit Cost/ Selling Price*
Jan. 07	Purchase #1	8,000	$12.00
Mar. 30	Sale #1	9,000	16.00
May 10	Purchase #2	12,000	12.10
Jul. 04	Sale #2	14,000	17.00

Product B			
		Units	*Unit Cost/ Selling Price*
Jan. 13	Purchase #1	5,000	$13.81
Jul. 15	Sale #1	1,000	20.00
Oct. 23	Purchase #2	7,000	14.21
Dec. 14	Sale #2	8,000	21.00

Opening inventory at January 1 amounted to 4,000 units at $11.90 per unit for Product A and 2,000 units at $13.26 per unit for Product B.

Required:

1. Prepare inventory record cards for Products A and B for the year using the weighted average inventory cost flow assumption.
2. Calculate total cost of ending inventory at December 31, 2016.

3. Assume now that Southern Cross keeps over 1,000 types of inventory on hand. Why might staff prefer to use computerised accounting software if a perpetual inventory system is used?
4. (Appendix A) What recommendations might you make to the president of Southern Cross regarding the use of the perpetual inventory system if only Products A and B are sold?

P 5-5

Northgate Products Corp. sells gadgets and uses the perpetual inventory system. During the month of January 2013, the number of gadgets purchased and sold was as follows:

			Purchased (Sold)			*Balance*		
				Unit			*Unit*	*Total*
Date		*Activity*	*Units*	*Cost*	*COGS*	*Units*	*Cost*	*Cost*
Jan.	1	Opening Inv.				100	$1	
	3	Purchase #1	100	$1				
	8	Purchase #2	200	2				
	10	Sale #1	(200)					
	15	Purchase #3	300	3				
	20	Sale #2	(400)					
	27	Purchase #4	400	1				

Assume the January 10 units were sold on account for $3 each, and the January 20 units were sold on account for $5 each.

Required:

1. Calculate cost of goods sold and the cost of ending inventory under each of the following inventory cost flow assumptions:
   a. FIFO
   b. LIFO
   c. Weighted average.
2. Prepare the journal entries required to record purchases and sales using the LIFO inventory cost flow assumption.
3. Calculate the sum of cost of goods sold and ending inventory balances under each of the three assumptions. Explain the results.

P 5-6

The year-end inventory of Goodall Inc. consisted of the following similar groups of items, priced at cost and at net realisable value:

Item	*Cost*	*NRV*
A	$60	$63
B	40	40
C	80	78
D	50	42

Required: Calculate ending inventory based on:

1. Cost
2. LCNRV (unit basis)
3. LCNRV (group basis).

P 5-7

Reflex Corporation sells three products. The inventory valuation of these products is shown below for years 2013 and 2014.

	2013			*2014*		
	Cost	*Market*	*Unit Basis (LCNRV)*	*Cost*	*Market*	*Unit Basis (LCNRV)*
Product X	$14,000	$15,000	?	$15,000	$16,000	?
Product Y	12,500	12,000	?	12,000	11,500	?
Product Z	11,000	11,500	?	10,500	10,000	?
Total	?	?	?	?	?	?

The partial comparative income statements for the two years follow:

	2013	*2014*
Sales	$1,500	$1,500
Cost of Goods Sold:		
Opening Inventory		
Purchases		
Cost of Goods Available		
Ending Inventory		
Cost of Goods Sold		
Gross Profit		

Required:

1. If Reflex values its inventory using LCNRV/unit basis, complete the 2013 and 2014 cost, net realisable value, and LCNRV calculations.
2. Complete the partial income statements for 2013 using cost, LCNRV/unit basis, and LCNRV/group basis to calculate ending inventory and cost of goods sold.
3. Complete the partial income statements for 2014 using cost, LCNRV/unit basis, and LCNRV/group basis to calculate ending inventory and cost of goods sold.
4. Which inventory valuation would yield the same gross profits for 2013 and 2014?
   a. Cost and LCNRV/unit basis
   b. Cost and LCNRV/group basis
   c. Cost basis.
5. Which methods yield the maximum combined profits for both years?

P 5-8 (Appendix A)

Zebra Corporation uses LIFO to cost inventory. During the first three years of operation ended December 31, 2016, the year-end inventory, computed by different methods for comparative purposes, was as follows:

	Ending Inventory		
	2014	*2015*	*2016*
LIFO	$360	$400	$320
FIFO	300	320	280
Weighted average	340	420	300

Opening inventory on January 1, 2014 was zero. Sales and purchases for the three years were as follows:

	2014	*2015*	*2016*
Sales	$1,000	$1,200	$1,150
Purchases	1,280	1,100	1,010

There were no other expenses or revenues.

Required: Using the format of the table below, determine net income under each method. Show calculations. Partial results using LIFO are shown:

	2014	*2015*	*2016*
Sales	$1,000	$1,200	$1,150
Cost of Goods Sold:			
Opening Inventory	-0-	?	?
Purchases	1,280	?	?
Ending Inventory	(360)	?	?
Cost of Goods Sold	920	?	?
Gross Profit/Net Income	$ 80	$ 140	$ 60

P 5-9 (Appendix A)

The following purchases were made during 2018 at Tan Corporation. The company uses the periodic inventory system. The opening inventory consisted of 50 units at $1 each.

	Units	*Unit Cost*
Apr. 15	200	$2
May 25	200	$3
June 7	200	$4
Oct. 15	200	$5

Required:

1. Calculate the number of units available for sale. Then calculate the dollar amount of cost of goods available for Sale at December 31, 2018. Set up a column for each of FIFO, LIFO, and weighted average inventory cost flow assumptions as follows:

	Units	*FIFO*	*LIFO*	*Weighted Average*
Opening Inventory				
Purchases				
Cost of Goods Available for Sale				

2. If there are 200 units on hand at December 31, 2018, calculate the cost of ending inventory under each of FIFO, LIFO, and weighted average inventory cost flow assumptions.

3. Calculate the cost of goods sold under each of FIFO, LIFO, and weighted average inventory cost flow assumptions. Set up a table as follows:

	Units	*FIFO*	*LIFO*	*Weighted Average*
Cost of Goods Available for Sale				
Ending Inventory				
Cost of Goods Sold				

4. Based on the calculations in (3), the president of Tan Corporation has asked you to prepare some calculations comparing the effect on income of
   a. Using a weighted average cost flow method when there is LIFO flow of goods
   b. Using a FIFO cost flow method when there is a LIFO flow of goods
   c. Using a LIFO cost flow method when there is a LIFO flow of goods.
5. What method of cost flow would you recommend in this case? Why?

P 5-10 (Appendix A)

Western Produce Inc. uses the periodic inventory system. The following data are taken from the records of the company for the month of January 2018.

Goods Available for Sale			*Sales*		
	Units	*Unit Cost*		*Units*	*Unit Price*
Opening Inventory	25	$5			
Purchase #1	15	4	Sale #1	30	$6
Purchase #2	10	3	Sale #2	20	4
Purchase #3	35	2	Sale #3	50	2
Purchase #4	40	1			

Required:

1. Calculate the amount of inventory at the end of January assuming that inventory is cost is calculated using FIFO inventory cost flow assumption.
2. How would the ending inventory differ if it was cost is calculated using LIFO?
3. Calculate the amount of gross profit under each of the above costing methods. Which method matches inventory costs more closely with revenues? Why?
4. Assume that the LIFO costing method is permitted and that the income tax expense is calculated at 50 per cent of income before income taxes. Would more income tax be payable under the FIFO or LIFO method? Explain why.

P 5-11 (Appendix A)

Southern Cross Company Limited made the following purchases during the year:

Jan. 07 8,000 units @ $12.00 = $ 96,000
Mar. 30 9,000 units @ $12.40 = $111,600
May 10 12,000 units @ $12.00 = $144,000
Jul. 04 16,000 units @ $12.60 = $201,600
Sept. 02 6,000 units @ $12.80 = $ 76,800
Dec. 14 7,000 units @ $12.70 = $ 88,900

Closing inventory at December 31 amounted to 15,000 units. Selling price during the year was stable at $16 per unit. Opening inventory at January 1 amounted to 4,000 units at $11.90 per unit.

Required:

1. Prepare a schedule of inventory as at December 31 based on FIFO, LIFO, and weighted average inventory cost flow assumptions. Assume a periodic inventory system is used.
2. Prepare an income statement showing sales, cost of goods sold, and gross profit based on each of these three assumptions.
3. Which method of inventory valuation matches revenues more closely with costs in this company under current conditions? Why?

P 5-12 (Appendix A)

The comptroller of Exeter Services Ltd. has asked you to forecast the effect of rising and falling prices on income when FIFO and LIFO costing are used. The following inventory data are made available:

Opening Inventory	100 units at $10 = $1,000
Purchases	500 units at $12 = $6,000
Ending Inventory	250 units

Partially completed income statements are presented:

	Rising Prices				*Falling Prices*			
	FIFO		*LIFO*		*FIFO*		*LIFO*	
Sales		$5,000		$5,000		$5,000		$5,000
Cost of Goods Sold:								
Opening Inventory	$1,000							
Purchases	6,000							
Cost of Goods Available	7,000		?		?		?	
Ending Inventory*	3,000							
Cost of Goods Sold		4,000		?		?		?
Gross Profit		$1,000		$?		$?		$?

* 250 units at $12 = $3,000.

Required:

1. Complete the statement for LIFO rising prices using the data provided. (*Hint:* you need to recalculate the ending inventory cost.)
2. Complete the statement for FIFO falling prices. Assume that purchases were made at $8 per unit.

3. Complete the statement for LIFO falling prices by assuming that purchases were made at $8 per unit. (Note that this changes cost of purchases and ending inventory cost.)
4. Assume that LIFO costing is permitted and that income tax expense is calculated at 50 per cent of income before income taxes. Which costing method would be most tax-advantageous from the company's point of view when prices are rising? when prices are falling?

P 5-13 (Appendix B)

The gross profit of Bellevue Widget Company Ltd. has consistently averaged 39%. The company's records were recently destroyed by fire. The following data are available:

Sales	$305
Purchases	175
Opening Inventory	25
Sales Returns and Allowances	5
Purchases Returns and Allowances	5
Delivery Expenses	8
Transportation In	3
Truck Operation Expenses	3
Selling Commissions Expense	6
Administrative Expenses	3

Required: Calculate the estimated ending inventory.

P 5-14 (Appendix B)

The president of Luna Sea Corporation is concerned that the year-end inventory amounting to $5,000 at cost is less than expected. Although a physical count was made and the costing was accurately calculated using FIFO, the president asks you to estimate the year-end inventory using the following information for the year:

	At Retail	*At Cost*
Sales	$160,000	
Sales Returns and Allowances	10,000	
Purchases	164,000	$80,000
Purchases Returns and Allowances	4,000	2,000
Transportation In		1,000
Opening Inventory	20,000	11,000

Required:

1. Calculate the estimated ending inventory at cost using the retail inventory method. Assume mark-up is 200%.
2. Calculate the amount of inventory discrepancy at cost.
3. Why might this discrepancy occur?
4. What changes to the inventory system might you suggest to the president?

Alternate Problems

AP 5-1

Partial information from the Merchandise Inventory general ledger account for Belton Ltd. is as follows:

Merchandise Inventory

Op. Bal.	12,000	
2016 Purch.		2016 COGS
2016 Bal.		
2017 Purch.		
		2017 COGS
2017 Bal.		

The 2016 ending inventory was counted and valued incorrectly at $13,000. This was overstated by $3,000. The 2017 ending inventory was also valued incorrectly at $9,000. This was overstated by $4,000. Purchases for each year amounted to $30,000. Sales totalled $50,000 for each year.

View Solution

Required:

1. Fill in the missing general ledger account information assuming
   a. the ending inventory was correctly counted and valued each year; and
   b. the ending inventory was incorrectly counted and valued each year. Show necessary inventory adjustments.
2. Prepare partial income statements based on the assumptions in (a). Calculate the cumulative effect of the 2016 and 2017 ending inventory errors on 2017 gross profit.

AP 5-2

The following sales and purchases of the same product were made during 2018 at Zang Corporation. The opening inventory consisted of 200 units at $1 each.

Purchases				*Sales*		
Apr. 15	Purch. #1	200	$2	Jan. 25	Sale #1	150
Oct. 15	Purch. #2	300	5	May 25	Sale #2	200
				Oct. 25	Sale #3	300

View Solution

Required:

1. Calculate cost of goods sold and the cost of ending inventory under each of FIFO, LIFO, and weighted average inventory cost flow assumptions. Set up a table as follows:

		Purchased (Sold)			*Balance*				
			Unit				*Unit*		*Total*
Date		*Units*	*Cost*	*COGS*	*Units*		*Cost*		*Cost*
Jan. 1	Opening Inventory				200	x	$1	=	$200

2. Prepare calculations comparing the effect on cost of goods sold of the three inventory cost flow assumptions.
3. The president wants to maximise the company's ending inventory this year. What would you suggest that is in accordance with GAAP?

AP 5-3

Permion Inc. uses the perpetual inventory system. All sales are made on account. The following data are taken from the company's for the year ended December 31, 2018:

	Purchases				*Sales*		
							Unit
		Units	*Unit Cost*			*Units*	*Sell. Price*
Jan. 1	Op. Inv.	25	$5				
Feb. 15	Purchase #1	15	4	Feb. 28	Sale #1	30	$6
Mar. 14	Purchase #2	10	3	Apr. 9	Sale #2	20	4
Oct. 28	Purchase #3	35	3	Dec. 21	Sale #3	50	2
Dec. 4	Purchase #4	40	2				

View Solution

Required:

1. Show the journal entries to record the December 31 sale under a) FIFO and b) weighted average inventory cost flow assumptions.
2. Which method maximises ending inventory value? Why?
3. Assume that income taxes expense is calculated at 50 per cent of income before income taxes. Would more income taxes be payable under the FIFO or weighted average assumption? Explain why.

AP 5-4

American Depress Limited made the following purchases and sales of Products A, B and C during the year ended December 31, 2016:

Product A			
		Units	*Unit Cost/ Selling Price*
Jan. 07	Purchase #1	8,000	$12.61
Mar. 15	Sale #1	9,000	16.00
Aug. 17	Purchase #2	12,000	12.84
Oct. 29	Sale #2	14,000	17.00

Product B			
		Units	*Unit Cost/ Selling Price*
Jan. 12	Purchase #1	5,000	$9.68
May 5	Sale #1	1,000	20.00
Oct. 23	Purchase #2	7,000	10.06
Dec. 27	Sale #2	8,000	21.00

Product C			
		Units	*Unit Cost/ Selling Price*
Jan. 4	Purchase #1	11,000	$14.65
July 7	Purchase #2	15,000	13.26
Aug. 4	Sale #1	20,000	25.00
Oct. 5	Sale #2	5,000	26.00

Opening inventory at January 1 amounted to 4,000 units at $11.90 per unit for Product A, 5,000 units at $9.54 per unit for Product B, and 6,000 units at $14.71 per unit for Product C.

View Solution

Required:

1. Prepare inventory record cards for Products A, B, and C for the year using the FIFO inventory cost flow assumption.
2. Calculate total cost of ending inventory at December 31, 2016.
3. Assume now that American Depress keeps over 1,000 types of inventory on hand. Why might staff prefer to use computerised accounting software if a perpetual inventory system is used?

AP 5-5

Plamondon Products Corp. sells widgets and uses the perpetual inventory system. During the month of March 2016, the number of widgets purchased and sold was as follows:

			Purchased (Sold)			*Balance*		
Date		*Activity*	*Units*	*Unit Cost*	*COGS*	*Units*	*Unit Cost*	*Total Cost*
Mar.	1	Opening Inv.				1,000	$11	
	3	Purchase #1	1,000	$10				
	8	Sale #1	(1,500)					
	10	Purchase #2	2,000	9				
	15	Purchase #3	3,000	8				
	20	Sale #2	(5,000)					
	27	Purchase #4	2,000	10				
	29	Sale #3	(2,000)					

Assume the January 8 units were sold on account for $15 each, the January 20 units were sold on account for $20 each, and the January 29 units were sold on account for $18 each.

View Solution

Required:

1. Calculate cost of goods sold and the cost of ending inventory under each of the following inventory cost flow assumptions:
   a. FIFO
   b. LIFO
   c. Weighted average.
2. Prepare the journal entries required to record purchases and sales using the FIFO inventory cost flow assumption.
3. Calculate the sum of cost of goods sold and ending inventory balances under each of the three assumptions. Explain the results.

AP 5-6

Hook Products Inc. sells television sets. The following perpetual inventory record card relates to January 2017 purchases and sales of Brand X [152 cm] high-definition television sets:

			Purchased (Sold)			*Balance*		
Date		*Activity*	*Unit*	*Unit Cost*	*COGS*	*Unit*	*Unit Cost*	*Total Cost*
Jan.	1	Opening Inv.				6	$400	
	2	Sale #1	(1)					
	3	Purchase #1	2	$450				
	7	Sale #2	(2)					
	10	Sale #3	(1)					
	15	Purchase #2	3	$500				
	20	Sale #4	(4)					
	25	Purchase #3	1	$550				
	29	Sale #5	(2)					

View Solution

Required:

1. Calculate the cost of the month-end inventory under each of
   a. FIFO
   b. LIFO
   c. Weighted average.
2. Record the journal entries for the January 29 sale under each of FIFO, LIFO, and weighted average cost flow assumptions. Assume each unit was sold on account for $900.

AP 5-7

The inventory of the Bateman Upholstering Corp. on December 31 consisted of the following items:

	Quantity	Unit Cost	Unit Market
Frames			
Type F-1	110	$14.25	$15.50
Type F-12	75	26.00	22.50
Type F-15	60	21.50	21.00
Springs (sets)			
Type S-1	760	7.28	8.50
Type S-12	625	10.50	11.50
Type S-15	340	8.60	6.00

View Solution

Required:

1. Calculate the ending inventory at the lower of cost and net realisable value, applied
   a. to each item
   b. to each category
   c. to the entire inventory.
2. What is the effect of each application of LCNRV on the gross profit in the current year? in the following year?

AP 5-8 (Appendix A)

The following transactions took place during January 2016 at Dunes Corp. The opening inventory consisted of 100 units at a total cost of $100.

		Units	Total Cost
Jan. 5	Purchase #1	100	$ 100
9	Purchase #2	200	400
16	Purchase #3	300	900
26	Purchase #4	400	1,600

Units sold during the month were as follows:

		Units	Amount
Jan. 10	Sale #1	200	$ 600
17	Sale #2	500	1,500

Assume a periodic inventory system is used.

View Solution

Required:

1. Calculate the cost of ending inventory and the cost of goods sold under each of the following inventory cost flow assumptions:
   a. FIFO
   b. LIFO
   c. Weighted average
   d. Specific identification (assume that the 700 units sold were identified as being made from the 100 units in opening inventory, the 200 units purchased on January 9, and the 400 units purchased January 26).

2. State your observations about the relative effects on ending inventory and net income using LIFO, FIFO, and weighted average cost flow assumptions in a period of rising prices.

AP 5-9 (Appendix A)

The Nanaimo Company Ltd. is considering the use of different methods of calculating its ending inventory. The following data are applicable to its December operations:

Purchases		*Sales*	
Dec. 4	1000 units @ $2.50	Dec. 5	600 units
11	800 units @ $2.60	12	500 units
23	1600 units @ $2.30	17	500 units
29	900 units @ $2.40	27	400 units
		31	600 units

Assume a periodic inventory system is used.

View Solution

Required: Calculate the amount of ending inventory under each of

1. FIFO
2. LIFO
3. Weighted average.

AP 5-10 (Appendix A)

Part A

Cochrane Corporation began operating on January 2, 2011. The following table shows the valuation of its inventory, using four different inventory valuation methods:

	LIFO	*Wtd. Avg.*	*FIFO*
Dec. 31, 2011	$ 9,200	$ 9,400	$ 9,600
Dec. 31, 2012	9,100	9,000	8,800
Dec. 31, 2013	10,300	11,000	12,000

Assume sales were $100,000 each year, inventory purchases were $80,000 each year, and there were no other expenses. The company uses the periodic inventory system.

View Solution

Required:

1. Which inventory method shows the highest net income for 2011?
2. Are average costs for each unit of inventory rising or falling in 2011?
3. Which inventory method shows the highest net income for 2012?
4. Are average costs for each unit of inventory rising or falling in 2012?
5. What conclusions can be drawn from the answers to questions 1 to 4?

Part B

In 2014, the company sold its entire inventory. As in the three prior years, 2014 sales were $100,000 inventory purchases were $80,000 and there were no other expenses.

View Solution

Required:

6. Calculate net income for 2014 for the three cost flow assumptions.
7. Calculate total net incomes for each method over the four years. Which cost flow assumption produces the highest net income total for the four years? Why?

AP 5-11 (Appendix A)

The MegaPixel Company Ltd. had the following inventory transactions for the month of December:

Dec.	1	Opening Inventory	20 units @ $4.60
	8	Purchased	80 units @ $5.00
	15	Purchased	40 units @ $5.30
	22	Purchased	60 units @ $5.60
	31	Purchased	40 units @ $5.50

By December 31, 190 of the units had been sold by MegaPixel. Assume the company uses the periodic inventory system.

View Solution

Required: Calculate the cost of the ending inventory using each of

1. FIFO
2. LIFO
3. Weighted average.

AP 5-12 (Appendix A)

The following transactions took place in the month of May at Regal Corporation. The opening inventory consisted of 50 units at $10. On May 2, the company purchased 60 units at $12. On May 10, it sold 10 units. On May 22, it purchased an additional 100 units at $15. On May 24, 150 units were sold.

View Solution

Required:

1. Assume Regal uses the perpetual inventory system. Calculate the cost of goods sold and ending inventory for each of LIFO, FIFO, and weighted average inventory methods.
2. Assume Regal uses the periodic inventory system. Calculate the cost of goods sold and ending inventory for each of LIFO, FIFO, and weighted average inventory methods.
3. Comment on the results.

AP 5-13 (Appendix A)

The beginning inventory, purchases, and sales of an item by Patterson Corporation for the month of July were as follows:

July 1 Inventory on hand consisted of 100 units at $3.15 each
12 Sold 50 units
15 Purchased 40 units at $3. 00 each
17 Purchased 60 units at $2.70 each
19 Sold 30 units
26 Purchased 50 units at $3.45 each
29 Sold 40 units.

View Solution

Required: What was the value of the units on hand on July 31 under the following methods?

1. Perpetual inventory, weighted average
2. Periodic inventory, weighted average.

AP 5-14 (Appendix B)

The White Mall housed the premises of Dawn's Drapery Company Ltd. On the morning of November 1, fire gutted the shop. Dawn's Drapery had been a popular location for homeowners and had, as a result, consistently earned a gross profit of 40 per cent over the year. Appropriate information to date is as follows:

Sales	$1,220
Purchases	700
Purchases Returns and Allowances	20
Sales Returns and Allowances	16
Delivery Expense	30
Transportation In	12
Administrative Expense	8
Opening Inventory (Jan. 1)	100
Advertising Expense	20
Salaries	85
Sales Discounts	4

View Solution

Required: Calculate the estimated ending inventory.

AP 5-15 (Appendix B)

Meyer's Men's Shop Corp. takes a year-end physical inventory at marked selling prices and reduces the total to a cost basis for year-end statement purposes. Meyer's also uses the retail method to estimate the amount of inventory that should be on hand at year-end. By comparing the two totals, it is able to determine inventory shortages. The information at the end of December is as follows:

	At Retail	*At Cost*
Sales	$234,680	
Sales Returns and Allowances	3,740	
Opening Inventory	36,200	$ 24,420
Purchases	239,800	166,770
Purchases Returns and Allowances	3,900	2,830
Ending Inventory	40,900	

View Solution

Required:

1. Calculate the estimated ending inventory at cost using the retail inventory method.
2. Calculate the amount of inventory discrepancy at cost.
3. Why might this discrepancy occur?

Supplementary Problems

SP 5-1

The records of the Newman Trading Corporation show the following data about item A. The selling price was $15 per unit throughout the year.

			Purchased (Sold)			*Balance*		
Date		*Activity*	*Unit*	*Unit Cost*	*COGS*	*Unit*	*Unit Cost*	*Total Cost*
Jan.	1	Opening Inv.				200	$10	
Jan.	12	Purchase #1	100	$11				
Feb.	1	Sale #1	(200)					
Apr.	16	Purchase #2	200	$12				
May	1	Sale #2	(100)					
Jul.	15	Purchase #3	100	$14				
Nov.	10	Sale #3	(100)					
Dec.	5	Purchase #4	200	$17				

Required:

1. Calculate the cost of the ending inventory under the FIFO method when a perpetual inventory system is followed.
2. Calculate the cost of the ending inventory under the LIFO method when perpetual inventory records are maintained.
3. The company has experienced a period of rapidly rising prices for its purchases during the year. If selling price has remained fairly constant during this period because of heavy competition in the marketplace, what effect will result from the use of FIFO, as compared to LIFO, on
   a. the income statement
   b. the balance sheet.
4. Assume that the February 1 sale was on credit to customer B, perpetual inventory records were maintained, and the LIFO method was used. Prepare the required journal entries to record sales and cost of goods sold on February 1.

SP 5-2 (Appendix A)

The following transactions took place during January 2017 at Alabaster Corp.

			Purchased (Sold)		*Balance*		
				Unit		*Unit*	*Total*
Date		*Activity*	*Unit*	*Cost*	*Unit*	*Cost*	*Cost*
Jan.	1	Opening Inv.			200	$1	
	10	Purchase #1	200	$2			
	15	Sale #1	(200)				
	20	Purchase #2	300	$3			
	25	Sale #2	(400)				
	30	Purchase #3	300	$3			

Assume the units were sold on account for $3 each on January 15 and $4 each on January 25.

Required:

1. Calculate ending inventory and cost of goods sold under each of
   a. FIFO/perpetual
   b. LIFO/perpetual
   c. Weighted average/perpetual.
2. Prepare the journal entries required under the FIFO/perpetual costing method.
3. Prepare the journal entries required under the FIFO/periodic costing method, including the January 31 adjustment to record ending inventory.

SP 5-3 (Appendix A)

The following partial income statements have been prepared for Darwin's Video Inc.:

	2012		*2013*		*2014*	
Sales		$3,000		$7,000		$10,000
Cost of Goods Sold:						
Opening Inventory	$1,000		$ 4,000		$ 8,000	
Purchases	5,000		9,000		11,000	
Goods Available for Sale	6,000		13,000		19,000	
Ending Inventory	4,000		8,000		12,000	
Cost of Goods Sold		2,000		5,000		7,000
Gross Profit		$1,000		$2,000		$ 3,000

Subsequent to the preparation of these income statements, two inventory errors were found: (a) the 2012 ending inventory was overstated by $1,000 and (b) the 2013 ending inventory was understated by $1,000.

Required:

1. Prepare corrected income statements for the three years, using the comparative format above.
2. What is your explanation for the difference in the 2013 gross profit?
3. Is the balance of Retained Earnings at the end of 2014 affected by the errors?

SP 5-4 (Appendix A)

The following transactions took place during January 2019 at Ford Inc. The opening inventory consisted of 100 units of Brand X at $10 per unit. The following purchases were made during the month:

	Units	*Unit Cost*
Jan. 3	200	$10
11	400	9
19	500	8
24	600	7
30	200	6

During the month, 1700 units were sold for $12 each.

Required:

1. Calculate the cost of ending inventory and cost of goods sold under each of FIFO/periodic, LIFO/periodic, and weighted average/periodic.
2. Calculate the gross profit under each of the above methods.
3. Under what circumstances will the cost of inventory under the LIFO assumption result in a lower net income than the FIFO assumption? in a higher net income than the FIFO assumption?

SP 5-5 (Appendix B)

Donna Wood Corporation prepares monthly financial statements; it made a physical inventory count in January and February but intends to use the gross profit method to estimate inventory in March and April. Partial income statements appear below:

	January		*February*		*March*		*April*	
Sales		$50,000		$60,000		$70,000		$75,000
Cost of Goods Sold:								
Opening Inventory	$?		$?		$?		$?	
Purchases	50,000		30,000		20,000		40,000	
Goods Available for Sale	?		?		50,000		60,000	
Ending Inventory	?		(30,000)		?		?	
Cost of Goods Sold		20,000		36,000		?		?
Gross Profit		$?		$?		$?		$?

Required:

1. Complete the partial income statements for January and February.
2. Calculate the gross profit percentage to be used in estimating March and April Ending Inventories based on January and February percentages.
3. Using the percentage calculated in question 2, complete the partial income statements for March and April.
4. A physical count was made at April 30 and the inventory cost was accurately established at $10,000. Calculate the difference between the actual and estimated amounts.
5. The president attributes the difference calculated in question 4 to the use of an incorrect gross profit percentage used to estimate ending inventory. Do you agree?

SP 5-6 (Appendix B)

Part A

The accountant of Upton Inc. is concerned about the inventory in its bookstore. A physical count at May 31, 2018 showed that $10,000 inventory (at cost) was on hand. The following information for the year then ended is available

	At Retail	*At Cost*
Sales	$62,500	
Sales Returns and Allowances	2,500	
Opening Inventory	14,000	$10,000
Purchases	55,000	39,000
Purchases Returns and Allowances	3,000	2,000
Transportation In		1,000

Required:

1. Calculate the estimated ending inventory at retail.
2. Calculate the cost percentage.
3. Calculate the May 31, 2018 estimated ending inventory at cost, and gross profit.
4. Why is the inventory calculated in question 3 different from the physical count at May 31?

Part B

The comptroller of Clooney Corp. is calculating the amount of inventory lost during the year ended May 31, 2018. A physical count was not made at May 31 due to circumstances beyond his control. The following information for the year then ended is available from the general ledger.

Sales	$50,000
Sales Returns and Allowances	5,000
Opening Inventory	6,000
Purchases for the Year	35,000
Purchases Returns and Allowances	3,000
Purchases Discounts	2,000
Transportation In	1,500
Delivery Expense	1,000
Depreciation Expense—Truck	400
Insurance Expense	100

The following are partial income statements of Clooney Corp. for years 2015 to 2017 (amounts are in thousands of dollars):

	2015	*2016*	*2017*	*Totals*
Sales	$20	$30	$40	$
Cost of Goods Sold	10	20	30	
Gross Profit	$10	$10	$10	$

Required: Using the gross profit method, calculate the May 31, 2018 estimated ending inventory at cost.

SP 5-7 (Appendix B)

The following data are taken from the records of the Harper Promotions Ltd.:

Opening		Transportation In	$ 500
Inventory		Purchases Returns	
At retail	$ 7,000	At retail	2,000
At cost	5,000	At cost	1,500
Purchases		Sales	22,000
At retail	25,000	Sales Returns	1,000
At cost	16,000		

Required:

1. Calculate the estimated ending inventory at cost, using the retail inventory method.
   a. Calculate the ending inventory at retail.
   b. Calculate the cost percentage.
   c. Calculate the ending inventory at cost.
2. Calculate the ending inventory at cost, using the gross profit method. A gross profit rate of 35 per cent is considered reasonable in the circumstances.
3. Explain why the ending inventory would be different under the two methods.

CHAPTER SIX

Cash and Receivables

This chapter completes the sales and collection cycle introduced in chapter 4. In this cycle, the company makes sales and records accounts receivable if the sale is made on account (for credit); the collection of cash completes the cycle. Cash is society's most basic medium of exchange. A company must maintain enough cash to meet its short-term obligations. It is necessary for the efficient operation of most businesses. Because it is also most liquid of all assets, however, cash is the most likely to be misappropriated. Management is responsible for the design of an effective system of internal control to safeguard all company assets, including cash.

Sales on account are an extension of credit to customers. To complete the sales and collection cycle, accounts receivable need to be satisfied with cash payments by customers to allow for the possibility that cash will not be collected from some customers, an allowance system needs to be established to match these bad debt expenses with revenues.

The following questions related to these issues are discussed in chapter 6:

1. What constitutes a good system of control over cash?
2. How does the preparation of a bank reconciliation facilitate control over cash?
3. What is the imprest petty cash system and how is it used to control cash?
4. How is the estimation of uncollectible accounts receivable part of the matching concept?
5. How are uncollectible accounts disclosed on financial statements?
6. What are the different methods used for calculating estimates for uncollectible accounts receivable?
7. How is an ageing of accounts receivable used in estimating uncollectible accounts?

A. The Importance of Internal Control

Assets are the lifeblood of a company. As such, they must be protected. This duty falls to managers of a company. The policies and procedures implemented by management to protect assets are collectively referred to as **internal controls.** An effective internal control program not only protects assets, but also aids in accurate recordkeeping, produces financial statement information in a timely manner, ensures compliance with laws and regulations, and promotes efficient operations. Effective internal control procedures ensure that adequate records are maintained, transactions are authorised, duties among employees are divided between recordkeeping functions and control of assets, and employees' work is checked by others. Increased use of electronic recordkeeping systems does not decrease the need for good internal controls.

The effectiveness of internal controls is limited by human error and fraud. Human error can occur because of negligence or mistakes. Fraud is the intentional decision to circumvent internal control systems for personal gain. Sometimes, employees can cooperate in order to avoid internal controls. This *collusion* is often difficult to detect, but fortunately, it is not commonplace if adequate controls are in place.

Internal controls take many forms. Some are broadly based, like mandatory employee drug testing, video surveillance, and scrutiny of company email systems. Others are specific to a particular type of asset or process. For instance, one part of a good system of internal controls involves the accounting system. Internal controls need to be applied to a company's accounting system to ensure that transactions are processed efficiently and correctly to produce reliable records in a timely manner. Procedures should be documented to promote good recordkeeping, and employees need to be trained in the application of internal control procedures.

Financial statements prepared according to generally accepted accounting principles are useful not only to external users in evaluating the progress of the company, but also for internal decision-making. There are various internal control mechanisms that aid in the production of timely and useful financial information. For instance, the chart of accounts described in chapter 2 describes what type of transaction should be recorded in each account. For example, expenses are classified and recorded in appropriate expense accounts, then summarised and compared to those of a prior year for comparison purposes.

The design of accounting records and documents is another important means to provide financial information. Financial data is entered and summarised in records and transmitted by documents. A good system of internal control requires that these records and documents be prepared at the time a transaction takes place or as soon as possible afterward, since they become less credible and the possibility of error increases with the passage of time. The documents should also be consecutively pre-numbered, to indicate whether there may be missing documents.

Internal control also promotes the protection of assets. Cash is particularly vulnerable to misuse. A good system of internal control for cash should provide adequate procedures for protecting cash receipts and cash disbursements. Procedures to achieve control over cash vary from company to company and depend upon such variables as company size, number of employees, and cash sources. However, effective cash control generally requires the following:

1. Separation of duties: People responsible for handling cash should not be responsible for maintaining cash records. By separating the custodial and record-keeping duties, embezzlement of cash is less likely: collusion should be required to conceal the theft of cash.

2. Same-day deposits: All cash receipts should be deposited intact daily in the company's bank account. This prevents personal use of the money before deposit.
3. Payments made by cheque: Cheques provide a separate external record to verify cash disbursements.

B. Cash Collections and Payments

The widespread use of banks for the deposit of cash, collection of negotiable instruments (such as a **note receivable**[1]), and the payment of cheques not only facilitates cash transactions between entities, but also provides a safeguard for each company's cash assets. This involvement of banks as intermediaries between entities has accounting implications. Usually the cash balance in the accounting records of a particular company differs from the bank cash balance of that company at any time period. The differences are usually attributable to the fact that, at the given time period, some cash transactions recorded in the accounting records have not yet been recorded by the bank and, conversely, some cash transactions recorded by the bank have not yet been recorded in the company's accounting records.

The use of a **bank reconciliation** is one method of controlling cash. The process of reconciliation brings into agreement information usually found in two independent, though related, sources: the company's accounting records for cash and the **bank statement** issued usually monthly by the company's financial institution. It explains the differences between the balances reported by the company and by the bank on a given date.

A bank reconciliation is an objective verification of cash transactions that occur during an accounting period. The reconciliation procedure proves the accuracy of both the company's and the bank's records, and reveals any errors made by either party. More important, the bank reconciliation can detect attempts of theft and manipulation of records. The preparation of a bank reconciliation is discussed in the following section.

The Bank Reconciliation

The cash balances reported in the accounting records and on the company's bank statement are established at a particular time, usually month-end. The balance of cash according to the company's books appears in the general ledger Cash account; the cash according to the bank is reported in a bank statement. The bank reconciliation process identifies discrepancies between the cash balances reported in the Cash account in the general ledger and on the bank statement. These adjusted amounts must agree.

The following are reconciling items usually appearing in the bank reconciliation; they can cause legitimate differences between the bank balance recorded in a company's Cash account in the general ledger at a point in time and the bank balance

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[1] A note receivable is an account receivable that has been formally acknowledged by the customer in a legally-binding document. Repayment terms are stated. Since it usually will be paid in installments and over a longer period of time than a normal account receivable, interest is often charged at a specified rate on the unpaid balance. The regular payment plus interest is often deposited directly into the company's bank account by the customer.

recorded on the company’s bank statement at the same point in time. These items are discussed in detail in later sections of this chapter.

Book reconciling items

1. Collection of negotiable instruments
2. NSF cheques
3. Bank charges
4. Book errors

Bank reconciling items

1. Outstanding deposits
2. Outstanding cheques
3. Bank errors

Book Reconciling Items

Collections of negotiable instruments like notes receivable may be made by a bank on behalf of the company; these collections are often unknown to the company until revealed on the bank statement. As a result, they are recorded in the company’s books only after receipt of the bank statement.

Cheques returned to the bank because there were not sufficient funds (NSF) to cover them cannot be credited to the customer. These NSF cheques appear on the bank statement as a reduction of cash. (The company must then request that the customer pay the amount again.) In addition, cheques received by a company and deposited into its bank account may be returned by the customer’s bank because the cheques were issued too long ago (the limit is generally six months), unsigned, illegible, or show the wrong account number. These *dishonoured* cheques show up on the bank statement, and must be deducted from the balance of cash appearing in the company’s books.

Bank service charges for cheques paid and other services provided are deducted from the customer’s bank account; these reductions of cash are also customarily recorded in the company’s books following receipt of the bank statement, when the amount is known.

Book recording errors can occur. For instance, a deposit or cheque amount may be recorded for the wrong amount in the company records. These discrepancies are often detected when cheque and deposit amounts as recorded by the company are compared to the bank statement.

Bank Reconciling Items

Cash receipts are often recorded as an increase of cash in the company’s accounting records when they are received; however, the bank records an increase in cash only when these amounts are actually deposited with the bank. Since a period-end may intervene between these two events, outstanding deposits may need to be identified to reconcile amounts on the bank statement with the company’s Cash account in the general ledger.

Cheques are usually recorded as a reduction of cash in a company’s accounting records at the date of their preparation. However, the bank statement will not record a cash reduction until a cheque is presented and accepted for payment (or *clears* the bank). Cheques that are recorded in the company’s books as cash disbursements but are not yet paid out of its bank account at a period-end are referred to as *outstanding cheques*.

Bank errors sometimes occur as well, and will not be revealed until the bank statement transactions are compared to the company’s accounting records. If these occur, the company notifies the bank. If the error is legitimate, the bank will correct its mistake.

Illustrative Problem—Bank Reconciliation

Assume that a bank reconciliation is prepared by Big Dog Carworks Ltd. (BDCL) at April 30. At this date, the Cash account in the general ledger shows a balance of $21,929 and includes the cash receipts and disbursements shown in Figure 6-1.

Cash Acct. No. 101

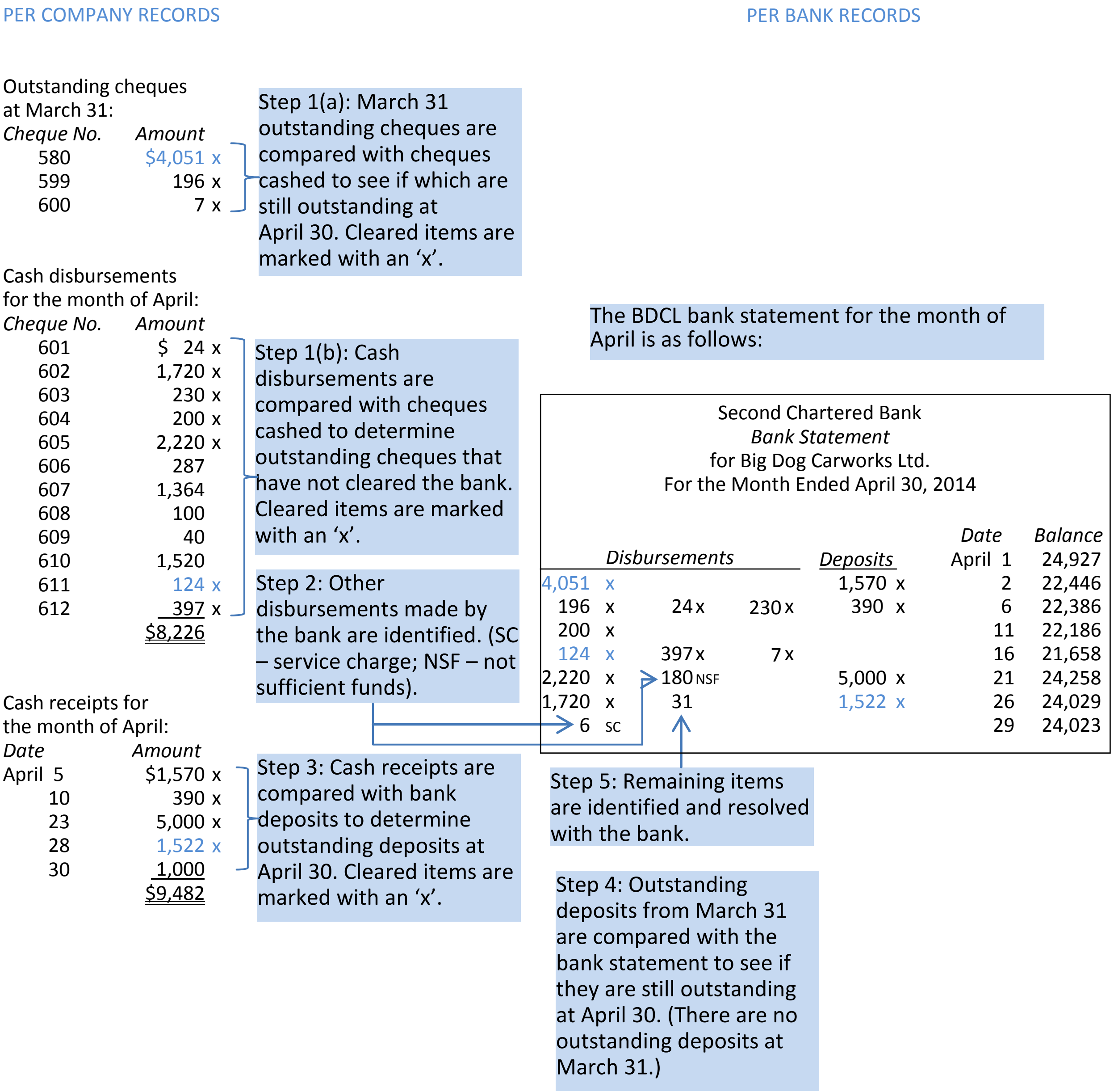
Date 2011	Description	F	Debit	Credit	DR CR	Balance
Mar.31	Balance				DR	20673-
Apr.30	April cash receipts	CRJ*	9482-		DR	30155-
30	April cash payments	CDJ		8226-	DR	21929-

***CRJ = Cash receipts journal;**
CDJ = Cash disbursements journal

Remember, 'DR' (debit) denotes a positive cash balance in the far right-hand column of the general ledger.

Figure 6-1 Big Dog's general ledger 'Cash' account at April 30

Extracts from BDCL's accounting records are reproduced with the bank statement for April in Figure 6-2. Note the outstanding cheques from the preceding month.



PER COMPANY RECORDS

Outstanding cheques
at March 31:

Cheque No.	*Amount*
580	$4,051 x
599	196 x
600	7 x

Step 1(a): March 31 outstanding cheques are compared with cheques cashed to see if which are still outstanding at April 30. Cleared items are marked with an ‘x’.

Cash disbursements
for the month of April:

Cheque No.	*Amount*
601	$ 24 x
602	1,720 x
603	230 x
604	200 x
605	2,220 x
606	287
607	1,364
608	100
609	40
610	1,520
611	124 x
612	397 x
	$8,226

Step 1(b): Cash disbursements are compared with cheques cashed to determine outstanding cheques that have not cleared the bank. Cleared items are marked with an ‘x’.

Step 2: Other disbursements made by the bank are identified. (SC – service charge; NSF – not sufficient funds).

Cash receipts for
the month of April:

Date	*Amount*
April 5	$1,570 x
10	390 x
23	5,000 x
28	1,522 x
30	1,000
	$9,482

Step 3: Cash receipts are compared with bank deposits to determine outstanding deposits at April 30. Cleared items are marked with an ‘x’.

PER BANK RECORDS

The BDCL bank statement for the month of April is as follows:

Second Chartered Bank
Bank Statement
for Big Dog Carworks Ltd.
For the Month Ended April 30, 2014

Disbursements			*Deposits*	*Date*	*Balance*
				April 1	24,927
4,051 x			1,570 x	2	22,446
196 x	24 x	230 x	390 x	6	22,386
200 x				11	22,186
124 x	397 x	7 x		16	21,658
2,220 x	180 NSF		5,000 x	21	24,258
1,720 x	31		1,522 x	26	24,029
6 SC				29	24,023

Step 5: Remaining items are identified and resolved with the bank.

Step 4: Outstanding deposits from March 31 are compared with the bank statement to see if they are still outstanding at April 30. (There are no outstanding deposits at March 31.)

Figure 6-2 The bank reconciliation process

The bank reconciliation process underscores the reciprocal relationship between the bank’s records and the company’s. For each entry in the company’s Cash account in the general ledger, there should be a counterpart on the bank statement.

The five steps in reconciling the company's general ledger account 'Cash' with the company's bank statement are as follows:

Step 1

Any cancelled cheques returned with the bank statement are compared with cheques recorded as cash disbursements in the company's records.

a. The bank reconciliation from the preceding month is inspected for the existence of any outstanding cheques at March 31.

In the company records:

These cheques were recorded in march; therefore, the cash balance per the general ledger is correctly stated.

In the bank statement:

These outstanding March cheques may not have been paid by the bank in April. If some of the cheques have not yet been paid, the bank's balance is overstated at April 30 by the amount of these cheques.

In fact, all the March outstanding cheques (nos. 580, 599, and 600) were paid by the bank in April; no adjustment is therefore required in the April 30 bank reconciliation—the cash balance per the company's books and the bank statement are correctly stated in relation to these March outstanding cheques.

b. The returned cancelled cheques are compared with the cheques recorded in the April cash disbursements journal. This comparison indicates that the following cheques are outstanding.

Cheque No.	*Amount*
606	$ 287
607	1,364
608	100
609	40
610	1,520

In the company records:

These cheques were recorded in April; therefore, the cash balance per the general ledger is correctly stated.

In the bank statement:

These outstanding cheques were not paid by the bank in April. Therefore, the bank's balance is overstated at April 30 by the amount of these cheques.

In reconciling the cash balance between the company records and the bank statement, the outstanding cheques must be deducted from the bank statement's ending cash balance of $24,023.

Step 2

Other disbursements made by the bank are identified.

In the company records:
If these disbursements have not yet been recorded in April and are legitimate, then the cash balance in the general ledger is overstated at April 30 and needs to be corrected.

In the bank statement:
The bank has already made deductions from the cash balance shown on the bank statement.

a. An examination of the April bank statement shows that the bank had deducted the NSF cheque of John Donne for $180.

In the company records:
The cheque of John Donne had originally been recorded as a cash receipt (a payment on account). During April, no entry was made regarding this returned cheque; therefore, the cash balance in the general ledger is overstated at April 30.

In the bank statement:
The bank has already made a deduction from the cash balance shown on the bank statement for this NSF cheque.

In reconciling the cash balances shown in the general ledger and on the bank statement, this returned cheque must be deducted from the cash balance of $21,929 showing in the general ledger account. It should be set up as an account receivable and a notice should be sent to Donne requesting payment again.

b. An examination of the April 30 bank statement also shows that the bank had deducted a service charge of $6 during April.

In the company records:
This service charge was not deducted from the cash balance in the general ledger during April. Therefore, the cash balance is overstated at April 30.

In the bank statement:
The service charges have already been deducted from the cash balance shown on the bank statement.

To reconcile the cash balance in the company records with the bank statement, this service charge must be deducted from the cash balance of $21,929 showing in the general ledger account.

Step 3

The deposits shown on the bank statement are compared with the amounts recorded in the company records. This comparison indicates that the April 30 cash receipt amounting to $1,000 is not included as a deposit in the bank statement.

In the company records:
The April cash receipts have been recorded correctly.

In the bank statement:
The April cash receipts have been deposited and recorded on the bank statement, except for the April 30 deposit. Therefore, the cash balance shown on the bank statement is understated at April 30 by this amount.

To reconcile the cash balance in the company records with the bank statement, the outstanding deposit must be added to the bank statement ending cash balance of $24,023.

Step 4

The March bank reconciliation is reviewed for outstanding deposits at March 31.

In the company records:
The cash receipts for March have all been recorded in the general ledger.

In the bank statement:
Any outstanding deposits at March 31 should have been recorded by the bank in April. If any March deposits are outstanding at April 30, this should be investigated.

There were no outstanding deposits at March 31 according to the prior month's bank reconciliation, so no adjustments are needed. If a March deposit is still outstanding at April 30, the bank should be notified and the outstanding deposit added to the bank statement ending cash balance of $24,023.

Step 5

Any errors in the company records or in the bank statement that become apparent during the reconciliation process must be rectified.

In the company records:
Any error recorded in the company accounting records requires an adjusting entry to be made to the ending cash balance shown in the general ledger.

In the bank statement:
Any error recorded on the bank statement should be brought to the bank's attention and rectified.

An examination of the April bank statement shows that the bank deducted a cheque issued by another company for $31 from the BDCL bank account in error. (Assume that when notified, the bank indicated it would make a correction in May's bank statement.)

In the company records:
This cheque does not belong to Big Dog and does not require any change in its accounting records.

In the bank statement:
The cheque should not have been deducted from Big Dog's bank account. Therefore, the cash balance shown on the bank statement at April 30 is understated.

To reconcile the cash balance in the company records with the bank statement, the cheques deducted in error must be added to the bank statement ending cash balance of $24,023.

A bank reconciliation is prepared after the above five steps have been completed. This is shown below. It accounts for the difference between the cash balance recorded in the cash account in the company's general ledger ($21,929) and the bank statement cash balance at April 30 ($24,023).

Big Dog Carworks Ltd.
Bank Reconciliation
At April 30, 2014

Cash per general ledger at Apr. 30		$21,929	Bal. per bank statement at Apr. 30		$24,023
			Add: Outstanding deposit		1,000
			Cheque deducted in error		31
					25,054
Less: Bank charges	$ 6		Less: Outstanding cheques		
NSF Cheque – J. Donne	180	186	*Cheque No.*	*Amount*	
			606	$ 287	
			607	1,364	
			608	100	
			609	40	
			610	1,520	3,311
Adjusted cash balance at Apr. 30		$21,743	Adjusted bank balance at Apr. 30		$21,743

These balances must agree.

Errors and adjustments in this section require journal entries to be made in the general journal to correct the balance for Cash account in the general ledger. The corrected balance should be $21,743.

Outstanding deposits and cheques should pass through the bank in May, thereby adjusting the cash balance in the bank. Other errors and adjustments like the $31 cheque deducted in error must be reported to the bank so that it can make necessary corrections to Big Dog's account in the next month.

Updating the Accounting Records

The accounting records must be updated after the preparation of the bank reconciliation. Every reconciling item used in the calculation of an adjusted cash balance in the company records requires the preparation of an adjusting journal entry to update the accounting records. The following journal adjusting entries are prepared at April 30 in the general journal and posted to the general ledger.

Apr. 30	Interest and Bank Charges Expense	6	
	Cash		6
	To record bank service charges for April.		
30	Accounts Receivable—NSF cheque	180	
	Cash		180
	To record NSF cheque – J. Donne.		

The Cash general ledger account is then brought up to date, as illustrated in Figure 6-3.

Cash Acct. No. 101

Date 2011		Description	F	Debit	Credit		Balance
Mar	31	Balance				DR	20673
Apr	30	April cash receipts	CRJ	9482-		DR	30155-
	30	April cash payments	CDJ		8226-	DR	21929-
	30	Bank charge expense	GJ		6-	DR	21923-
	30	NSF cheque	GJ		180-	DR	21743-

This adjusted cash balance now agrees to the bank reconciliation.

Figure 6-3 **Updated Cash account in the general ledger**

Note that the balance in the general ledger Cash account is the same as the adjusted cash balance on the bank reconciliation ($21,743). Big Dog doesn't make any adjusting entries for bank reconciling items – for example, outstanding deposits and cheques. These should be recorded on the May bank statement. Reversals of bank errors will be made by the bank.

Petty Cash Transactions

The payment of small bills by cheque may be both inconvenient and costly. The payment of postage due on some incoming mail, for example, might be less than the bank charge to process payment of a cheque for this expense. It is therefore useful to have a relatively small amount of cash on hand to pay for these types of disbursements; this cash is usually referred to as a **petty cash fund**. There are different ways of handling such petty cash transactions. An **imprest petty cash system** is discussed below.

Establishing and Reimbursing the Petty Cash Fund

Under the imprest system, a regular cheque is prepared initially for the amount of the petty cash fund, generally to the custodian of the fund. After this, the Petty Cash account in the general ledger does not change. Assume a $200 petty cash fund is to be established. A cheque for this amount is paid to the custodian.

Cash payments are made out of the fund as required; payments should be supported by appropriate documents, such as a receipt for taxi fare. When the amount of cash has been reduced to a pre-determined level, say $10, the petty cash fund is reimbursed for the total amount of cash paid out. Vouchers and receipts in the petty cash fund should amount to $190. Assume these consist of the following: delivery charges totalling $100, light bulbs and other repair supplies totalling $15,

$30 for postage, and office supplies amounting to $45. A cheque is prepared for $190, made payable to the fund's custodian. The petty cash fund is replenished. Actual cash should again total $200.

The cheque is recorded in the Petty Cash general ledger account with the appropriate expense accounts debited. The following compound journal entry would record the payments in this example:

These are the general ledger account numbers. Refer to the chart of accounts in chapter 2.

Delivery Expense	620	100	
Repair Supplies Expense	655	15	
Miscellaneous General Expense*	652	30	
Office Supplies Expense	650	45	
Cash	101		190
To replenish the petty cash fund.			

*Because there is no specific postage account in BDCL's ledger, the $30 postage payment is recorded as miscellaneous general expense.

The petty cash vouchers and supporting documents should be cancelled at the time of reimbursement in order to prevent their reuse for duplicate reimbursements. The vouchers and any shortage (or excess, as sometimes occurs) should be approved by a responsible employee. Responsibility for the fund should be delegated to only one person, who should be held accountable for its contents. At any given time, the petty cash amount should consist of cash and supporting vouchers, all totalling the petty cash fund amount ($200 in this case).

C. Completion of the Revenue Operating Cycle—Accounts Receivable

Unfortunately, not all receivables are collected; uncollected receivables result in the cycle being completed not with cash but with a *bad debt*. This section discusses issues related to accounts receivable and their collection. This completes the revenue operating cycle introduced in chapter 4 and reviewed in Figure 6-4 below.

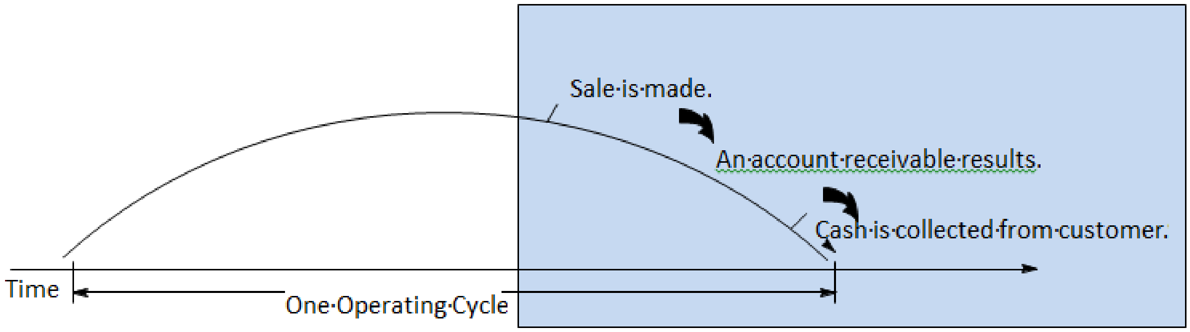


Figure 6-4 Revenue operating cycle

Uncollected Accounts Receivable

Extending credit to customers results in increased sales and therefore profits. However, there is an inherent risk that some accounts receivable will not be collected. The existence of a good internal control system is designed to minimise bad debt losses. One such control is to permit sales on account only to credit-worthy customers; however, this is difficult to determine in advance. Each company realises that a certain percentage of all credit sales will never be collected or some may be collected long after the sale was made.

Classification of Allowance for Doubtful Accounts

To match bad debt expenses to credit sales of the same period, a means of estimating and recording the amount of sales that will not be collected in cash is needed. This is done by establishing an account called **Allowance for Doubtful Accounts** in the general ledger to record estimated uncollectible amounts; this account is a contra account to accounts receivable and is disclosed on the balance sheet as follows:

Partial Balance Sheet
At December 31, 2014

Assets		
Cash		$ 5,000
Temporary Investments		10,000
Accounts Receivable	$25,000	
Less: Allowance For Doubtful Accounts	1,400	23,600
Inventory		50,000
Prepaid Expenses		3,450
Total Assets		$92,050

The Allowance for Doubtful Accounts contra account reduces accounts receivable to the amount that is expected to be collected – in this case, $23,600.

Estimating Uncollectible Accounts Receivable

An allowance account is used to match bad debt expense with revenue recognised from credit sales. Once the estimate of uncollectible accounts is made, a journal entry is prepared debiting Bad Debt Expense in the general ledger and crediting Allowance for Doubtful Accounts. The bad debt expense is shown on the income statement. The allowance for doubtful accounts reduces the amount of accounts receivable shown on the balance sheet to their estimated net realisable value.

Two different methods can be used to calculate the estimated uncollectible amount. One method focuses on the income statement, while the other focuses on the balance sheet.

The Income Statement Method

The objective of the **income statement method** is to estimate bad debt expense based on credit sales on the income statement. Bad debt expense is calculated by applying an estimated loss percentage to credit sales for the period. The percentage may be calculated based on actual losses experienced in prior years. For instance, a company may have the following history of uncollected sales on account:

Year	*Credit Sales*	*Amounts Not Collected*
2011	$150,000	$1,000
2012	200,000	1,200
2013	250,000	800
	$600,000	$3,000

The average loss over these years is $3,000/$600,000, or ½ of 1%. If management anticipates that similar losses can be expected in 2014 and credit sales amount to $300,000, the uncollectible amount would be estimated as $1,500 ($300,000 x 0.5%). Under the income statement method, the $1,500 is recorded as the estimated uncollectible accounts receivable by the following entry:

Dec. 31	Bad Debt Expense	613	1,500	
	Allowance for Doubtful Accounts	111		1,500

This estimated bad debt expense is calculated without regard to any current balance in the allowance for doubtful accounts.

The balance remaining in the account from the previous period is $250.

Allowance for Doubtful Accounts

	Bal. 250

The estimated balance of $1,500 is added to the existing balance. The new balance is $1,750.

Allowance for Doubtful Accounts

	Bal. 250
	1,500
	1,750

Note that this journal entry determines the bad debt expense for the current year ($1,500).

The Balance Sheet Method

The estimated bad debt expense can also be calculated by using the **balance sheet method**. Under this method, a process called **ageing of accounts receivable** is employed. Accounts receivable are analysed at a period end according to how long the amounts have been outstanding. An estimate of the uncollectible amount is determined based on the length of time outstanding. This assumes that the longer an amount is outstanding, the less chance there is of collecting it. This process is illustrated in the following schedule.

Ageing of Accounts Receivable
December 31, 20x4

		Number Of Days Past Due				
Customer	*Total*	*1-30*	*31-60*	*61-90*	*91-120*	*Over 120*
Bendix Inc.	$1,000					$1,000
Devco Marketing	6,000	$1,000	$3,000	$2,000		
Horngren Corp.	4,000	2,000	1,000		$1,000	
Perry Co. Ltd.	5,000	3,000	1,000		1,000	
Others	9,000	4,000			5,000	
Totals	$25,000	$10,000	$5,000	$2,000	$7,000	$1,000

In this example, total accounts receivable at the period end amount to $25,000. These amounts owing are classified into five time periods: 1-30 days; 31-60 days; 61-90 days; 91-120 days; over 120 days.

Based on past experience, management estimates a loss percentage for each time period's total. Assume that from prior experience, management estimates the uncollectible amount in each time period as follows:

Number of Days Outstanding				
1-30	*31-60*	*61-90*	*91-120*	*Over 120*
1%	3%	5%	10%	40%

The calculation of expected uncollectible accounts receivable at December 31, 2014 would be as follows:

Calculation of Uncollectible Amounts
December 31, 2014

Age (days)	*Accounts Receivable*	*Estimated Loss Percentage*	*Uncollectible Amount*
1-30	$10,000	1%	$100
31-60	5,000	3%	150
61-90	2,000	5%	100
91-120	7,000	10%	700
Over 120	1,000	40%	400
Totals	$25,000		$1,450

A total of $1,450 of accounts receivable at December 31, 2014 would be estimated as uncollectible.

Under the balance sheet method, estimated bad debt expense consists of the *difference* between the opening Allowance for Doubtful Accounts balance in the general ledger ($250, as in the prior example) and the estimated uncollectible amount ($1,450) required at year-end.

The balance remaining in the account is $250 from the previous period.	The estimated uncollectible amount is $1,450	An amount of $1,200 must be recorded to bring the account to $1,450

Allowance for Doubtful Accounts

	Bal. 250

Allowance for Doubtful Accounts

	Bal. 250
	Bal. 1,450

Allowance for Doubtful Accounts

	Bal. 250
	1,200
	Bal. 1,450

The adjustment is recorded by the following journal entry:

Dec. 31	Bad Debt Expense	613	1,200	
	Allowance for Doubtful Accounts	111		1,200

This entry records the amount required to bring the balance in the allowance account to the $1,450 estimated uncollectible amount based on balance sheet values (accounts receivable). It thereby applies the matching concept to sales in a different manner from that used by the income statement method.

Writing Off Bad Debts

Once the estimated uncollectible amounts are determined, accounts receivable that are not collected in the subsequent year are usually written off against the allowance account. Assume that the account receivable from Bendix Inc. becomes uncollectible as a result of the bankruptcy of Bendix on January 1, 2015. The uncollectible account receivable is removed by this entry:

Jan. 1	Allowance for Doubtful Accounts	111	1,000	
	Accounts Receivable	110		1,000
	To write off uncollectible account from Bendix Inc.			

The $1,000 write-off reduces both accounts receivable and the allowance for doubtful accounts. Regardless of whether the income statement or balance sheet method is used, the balance remaining in the allowance for doubtful accounts represents the estimated amount of other accounts receivable that may also become uncollectible. The write-off does not affect the net accounts receivable amount.

	Before Write-Off	*After Write-Off*
Accounts receivable	$25,000	$24,000
Less: Allowance for doubtful accounts	1,450	450
Net accounts receivable	$23,500	$23,550

The 2014 bad debt expense account already includes an estimate for the Bendix uncollectible amount. Neither is the 2015 bad debt expense balance affected by the Bendix account receivable write-off.

Regardless of the method used, the amount estimated as an allowance for doubtful accounts seldom agrees with the amounts that actually prove uncollectible. A credit balance remains in the allowance account if fewer bad debts occur during the year than are estimated. There is a debit balance in the allowance account if more bad debts occur during the year than are estimated. By monitoring the balance in the Allowance for Doubtful Accounts general ledger account at each year-end, though, management can determine whether the estimates of uncollectible amounts are accurate. If not, they can adjust these estimates going forward.

Collection of Amounts Previously Written Off

When Bendix Inc. went bankrupt, its debt to Big Dog Carworks Ltd. was written off in anticipation that there would be no recovery of the amount owed. Assume that later, though, an announcement was made that 25 per cent of amounts owed by Bendix would be paid. This new information requires the reinstatement of the amount *expected* to be collected by BDCL—$250 ($1,000 x 25%) in this case. This transaction is recorded by the following journal entry:

Accounts Receivable	110	250	
Allowance for Doubtful Accounts	111		250

This entry reverses part of the amount previously written off and sets up the amount collected as a receivable. As a result, both accounts are increased. The effect of the two entries is as follows:

Accounts Receivable	
Bal. $25,000	
	1,000
250	

Allowance for Doubtful Accounts	
	Bal. 1,450
1,000	
	250

The actual collection of the reinstated amount is recorded by a second journal entry:

Cash	101	250	
Accounts Receivable	110		250

The collection is thus recorded in the normal manner. At this point, there is no effect on the allowance account.

Credit Balances in Accounts Receivable

Individual amounts owing from customers usually have debit balances. Occasionally a credit balance may occur in an individual account as a result of double payment, merchandise being returned, or an allowance granted. Theoretically, the total amount of credit balances should be classified on the balance sheet as a liability, since the individual amounts are actually owing to the customers involved. In actual practice, the net amount is usually shown as part of the accounts receivable total on the balance sheet, unless the credits would materially misrepresent the amount reported.

ASSIGNMENT MATERIALS

Discussion Questions

1. What is internal control?
2. How does the preparation of a bank reconciliation strengthen the internal control of cash?
3. What are some reconciling items that appear in a bank reconciliation?
4. What are the steps in preparing a bank reconciliation?
5. What is an NSF cheque?
6. What is an imprest petty cash system?
7. What is the difference between establishing and replenishing the petty cash fund?
8. How does use of allowance for doubtful accounts match expenses with revenue?
9. How does the income statement method calculate the estimated amount of uncollectible accounts?
10. What is an ageing schedule for bad debts, and how is it used in calculating the estimated amount of uncollectible accounts?
11. How are credit balances in accounts receivable reported on the financial statements?

Comprehension Problems

CP 6-1

The following information pertains to Ferguson Corp. at December 31, 2012, its year-end:

Cash per company records		$5,005
Cash per bank statement		7,000
Bank service charges not yet recorded in company records		30
Note collected by bank not yet recorded in company records		1,325
Amount of note receivable	$1,300	
Amount of interest	25	
	$1,325	
Fluet inc. cheque deducted in error by bank		200
December cheques not yet paid by bank in December		1,600
#631	$354	
#642	746	
#660	200	
#661	300	
	$1,600	
December deposit recorded by the bank January 3, 20x3		700

View Solution

Required: Prepare a bank reconciliation and all necessary adjusting journal entries at December 31, 2012.

CP 6-2

The Cash general ledger account balance of Gladstone Ltd. was $2,531 at March 31, 2014. On this same date, the bank statement had a balance of $1,500. The following discrepancies were noted:

a. A deposit of $1,000 made on March 30, 2014 was not yet recorded by the bank on the March statement.
b. A customer's cheque amounting to $700 and deposited on March 15 was returned NSF with the bank statement.
c. Cheque #4302 for office supplies expense, correctly made out for $125 and clearing the bank for this amount, was recorded in the company records as $152.
d. $20 for March service charges were recorded on the bank statement but not in the company records.
e. A cancelled cheque for $250 belonging to Global Corp. but charged by the bank to Gladstone Ltd. was included with the cancelled cheques returned by the bank.
f. There were $622 of outstanding cheques at March 31.
g. The bank collected a note receivable for $300 on March 31 including interest of $50. The bank charged Gladstone Ltd. a $10 service charge that also is not included in the company records.

View Solution

Required: Prepare a bank reconciliation and record all necessary adjusting entries at March 31, 2014.

CP 6-3

The following transactions were made by Landers Corp. in March 2013.

Mar. 1	Established a petty cash fund of $200		
12	Reimbursed the fund for the following:		
		Postage	$10
		Office supplies	50
		Maintenance	35
		Meals (selling expenses)	25
			$120
18	Increased the fund by an additional $200		
25	Reimbursed the fund for the following:		
		Office supplies	$75
		Delivery charges	30
			$105
28	Reduced the amount of the fund to $350.		

View Solution

Required: Prepare journal entries to record these transactions.

CP 6-4

Koss Co. Ltd. began operations on January 1, 2013. It had the following transactions during 2013, 2014, and 2015.

2013	Dec. 31	Estimated uncollectible accounts as $5,000 (calculated as 2% of sales)
2014	Apr. 15	Wrote off the balance of N. Lang, $700
	Aug. 8	Wrote off $3,000 of miscellaneous customer accounts as uncollectible
	Dec. 31	Estimated uncollectible accounts as $4,000 (1½% of sales)
2015	Mar. 6	Recovered $200 from N. Lang, whose account was written off in 2014; no further recoveries are expected
	Sept. 4	Wrote off as uncollectible $4,000 of miscellaneous customer accounts
	Dec. 31	Estimated uncollectible accounts as $4,500 (1½% of sales).

View Solution

Required:

1. Prepare journal entries to record the above transactions.
2. Assume that management is considering a switch to the balance sheet method of calculating the allowance for doubtful accounts. Under this method, the allowance at the end of 2015 is estimated to be $2,000. Comment on the discrepancy between the two methods of estimating allowance for doubtful accounts.

CP 6-5

Impusle Inc. had the following unadjusted account balances at December 31, 2013, its year-end.

	Account Balances	
	Debit	*Credit*
Accounts Receivable	$125,000	
Allowance for Doubtful Accounts		$ 3,000
Sales		750,000

Impulse estimates its uncollectible accounts as five per cent of its December 31 accounts receivable balance.

View Solution

Required:

1. Calculate the amount of estimated uncollectible accounts that will appear on Impulse's balance sheet at December 31, 2013.
2. Calculate the amount of bad debt expense that will appear on Impulse's income statement at December 31, 2013.
3. Prepare a partial balance sheet at December 31, 2013 showing accounts receivable, allowance for doubtful accounts, and the net accounts receivable.

CP 6-6

The following information is taken from the records of Salzl Corp. at its December 31 year-end:

	2015	*2016*
Accounts written off		
During 2015	$2,400	
During 2016		$1,000
Recovery of accounts written off		
Recovered in 2016		300
Allowance for doubtful accounts (adjusted balance)		
At December 31, 2014	8,000	
At December 31, 2015	9,000	

Salzl had always estimated its uncollectible accounts at two per cent of sales. However, because of large discrepancies between the estimated and actual amounts, Hilroy decided to estimate its December 31, 2016 uncollectible accounts by preparing an ageing of its accounts receivable. An amount of $10,000 was considered uncollectible at December 31, 2016.

View Solution

Required:

1. Calculate the amount of bad debt expense for 2015.
2. Calculate the amount of bad debt expense for 2016.

CP 6-7

Sather Ltd. had the following unadjusted account balances at December 31, 2015:

Accounts Receivable	$150,000
Allowance for Doubtful Accounts	3,000
Sales	750,000

View Solution

Required:

1. Assume that Sather Ltd. estimated its uncollectible accounts at December 31, 2015 to be two per cent of sales.
   a. Prepare the appropriate adjusting entry to record the estimated uncollectible accounts at December 31, 2015.
   b. Calculate the balance in the Allowance for Doubtful Accounts account after posting the adjusting entry.
2. Assume that Sather Ltd. estimated its uncollectible accounts at December 31, 2015 to be ten per cent of the net accounts receivable balance.
   a. Prepare the appropriate adjusting entry to record the estimated uncollectible accounts at December 31, 2015.
   b. Calculate the balance in the Allowance for Doubtful Accounts account after posting the adjusting entry.
3. Why is there a difference in the calculated estimates of doubtful accounts in questions 1 and 2**?**

CP 6-8

Elliot Inc. has the following unadjusted account balances at December 31, 2014:

	Account Balances	
	Debit	*Credit*
Accounts Receivable	$50,000	
Allowance for Doubtful Accounts	1,000	
Sales		$200,000

View Solution

Required:

1. Assume Elliot estimates that two per cent of its sales will not be collected.
   a. What amount of bad debt expense will be reported on Elliot's income statement at December 31, 2014?
   b. What amount of allowance for doubtful accounts will be reported on Elliot's balance sheet at December 31, 2014?
2. Assume Elliot estimates that five per cent of accounts receivable will not be collected.
   a. What amount of bad debt expense will be reported on Elliot's income statement at December 31, 2014?
   b. What amount of allowance for doubtful accounts will be reported on Elliot's balance sheet at December 31, 2014?
3. Which calculation provides better matching: that made in question 1 or in question 2? Why?

Problems

P 6-1

The reconciliation of the cash balance per bank statement with the balance in the Cash account in the general ledger usually results in one of five types of adjustments. These are

a. Additions to the reported general ledger cash balance
b. Deductions from the reported general ledger cash balance
c. Additions to the reported cash balance per the bank statement
d. Deductions from the reported cash balance per the bank statement
e. Information that has no effect on the current reconciliation.

Required:

1. Using the above letters *a* to *e* from the list, indicate the appropriate adjustment for each of the following items that apply to Goertzen Ltd. for December, 2015:

   ___ The company has received a $3,000 loan from the bank that was deposited into its bank account but was not recorded in the company records.

   ___ A $250 cheque was not returned with the bank statement though it was paid by the bank.

   ___ Cheques amounting to $4,290 shown as outstanding on the November reconciliation still have not been returned by the bank.

   ___ A collection of a note receivable for $1,000 made by the bank has not been previously reported to Goertzen. This includes interest earned of $50.

   ___ The bank has erroneously charged Goertzen with a $1,100 cheque, which should have been charged to Gagetown Ltd.

   ___ A $350 cheque made out by Fynn Company and deposited by Goertzen has been returned by the bank marked NSF; this is the first knowledge Goertzen has of this action.

   ___ A cheque for $840 was erroneously recorded as $730 in the company records.

   ___ A $600 bank deposit of December 31 does not appear on the bank statement.

   ___ Bank service charges amounting to $75 were deducted from the bank statement but not yet from the company records.

2. Prepare a bank reconciliation using the data given above. On December 31, the Cash account in the general ledger of Goertzen Ltd. showed a balance of $84,293. The bank statement showed a balance of $90,568.
3. Prepare journal entries required to adjust the general ledger Cash account of Goertzen Ltd. to the reconciled balance.

P 6-2

Gibson Energy Ltd. controls its cash by depositing receipts on a daily basis and making all disbursements by cheque. After all the posting for the month of November 2016 was completed, the Cash balance in the general ledger account at November 30 was $4,213. The bank statement for the month ended November 30 received from the First National Bank showed the balance to be $4,440. The following data are available for the purpose of reconciling these balances:

a. Cash receipts for November 30 amounting to $611 have been placed in the night depository and do not appear on the bank statement.

b. Bank memos previously not available to Gibson Energy are included with the bank statement. A memo for an NSF cheque, originally received as payment for an account receivable of $130, is included. A memo for bank charges of $10 is also included. Another memo advises Gibson Energy Ltd. that $494 has been deposited to the account, ($500 less a bank charge of $6). This represents the net proceeds of a collection the bank had made on behalf of Gibson Energy Ltd. on a $500 note receivable.

c. Cheques written during November but not included with the bank statement are no. 1154, $32; no. 1192, $54; no. 1193, $83; no. 1194, $109.

d. Cheque no. 1042 is returned with the bank statement. The cheque was made for $494, the correct amount owing for office expense. The cheque was recorded in the company records as $548.

e. Cheques outstanding at the end of October included cheques no. 1014 for $152 and no. 1016 for $179. Cheque no. 1016 was paid in the bank statement; cheque no. 1014 was not.

Required:

1. Prepare a bank reconciliation at November 30.
2. Prepare the necessary adjusting journal entries required to make the Cash account in the general ledger agree with the adjusted cash balance on the November 30 bank reconciliation.

P 6-3

The following balances appear in the unadjusted trial balance of Lapointe Inc. at its year-end, December 31, 2013.

	Account Balances	
	Debit	*Credit*
Accounts Receivable	$100,000	
Allowance for Uncollectible Accounts		$ 5,000
Sales (all on credit)		600,000

Lapointe uses the balance sheet method of calculating its allowance for doubtful accounts account. At December 31, 2013, it estimates that three per cent of accounts receivable would not be collected.

Lapointe had the following transactions during 2014:

a. Accounts receivable worth $9,000 were written off.
b. Credit sales amounted to $800,000.
c. Collections of accounts receivable amounted to $700,000.
d. Lapointe collected $2,000 in 2014 that was previously written off in 2013. This amount is not included in the collection of accounts receivable described in *c*.
e. At year-end, Lapointe estimated that the amount of doubtful accounts at December 31, 2014 was $10,000.

Required:

1. Prepare all journal entries required for 2013 and 2014.
2. If Lapointe had used the income statement method of estimating uncollectible accounts, calculate the balance in the Allowance for Doubtful Accounts general ledger account at December 31, 2013 and 2014. Assume that Lapointe estimated doubtful accounts to be one per cent of sales for both years.

P 6-4

The following balances are taken from the unadjusted trial balance of Penner Inc. at its year-end, December 31, 2014.

	Account Balances	
	Debit	*Credit*
Accounts Receivable	$150,000	
Allowance for Doubtful Accounts		$ 1,500
Sales	500,000	
Sales Returns and Allowances		50,000

An ageing of accounts receivable at December 31, 2014 reveals the following information:

Age (days)	*Accounts Receivable*	*Estimated Loss Percentage*
1-30	$ 50,000	2%
31-60	27,000	4%
61-90	40,000	5%
91-120	30,000	10%
Over 120	3,000	50%
Total	$150,000	

The balance for R. Laws of $1,000 is over 90 days past due. It is included in the ageing of accounts receivable balance and has not yet been written off.

Part A: 2014

Required: Prepare journal entries to record:

1. The write-off of R. Laws' account of $1,000 on December 31, 2014. (*Hint:* Recalculate the accounts receivable balance after the write-off.)
2. The appropriate adjusting entry to set up the required balance in the Allowance for Doubtful Accounts general ledger account at December 31, 2014. *(Hint:* Remember that R. Laws' account has been written off.)

Part B: 2015

The following transactions were made in 2015.

a. Sales on account were $700,000.
b. Collections of accounts receivable amounted to $599,000.
c. Penner wrote off $10,000 of accounts receivable.
d. An ageing of accounts receivable at December 31, 2015 revealed the following information:

Age (days)	*Accounts Receivable*	*Estimated Loss Percentage*
1-30	$170,000	2%
31-60	35,000	3%
61-90	-0-	4%
91-120	27,000	25%
Over 120	8,000	50%
Total	$240,000	

Required: Prepare the appropriate adjusting entry to set up the required Allowance for Doubtful Accounts general ledger account balance at December 31, 2015.

P 6-5

Tarpon Inc. made $1,000,000 in sales during 2012. Thirty per cent of these were cash sales. During the year, $25,000 of accounts receivable were written off as being uncollectible. In addition, $15,000 of the accounts that were written off in 2011 were unexpectedly collected. At its year-end, December 31, 2012, Tarpon had $250,000 of accounts receivable. The balance in the Allowance for Doubtful Accounts general ledger account was $15,000 credit at December 31, 2011.

Age (days)	*Accounts Receivable*
1-30	$100,000
31-60	50,000
61-90	25,000
91-120	60,000
Over 120	15,000
Total	$250,000

Required:

1. Prepare journal entries to record the following 2012 transactions:
   a. The write-off of $25,000
   b. The recovery of $15,000.
2. Recalculate the balance in the Allowance for Doubtful Accounts general ledger account at December 31, 2012.
3. Prepare the adjusting entry required at December 31, 2012 for each of the following scenarios:
   a. On the basis of experience, the estimated uncollectible accounts at December 31, 2012 is three per cent of credit sales.
   b. On the basis of experience, the estimated uncollectible accounts at December 31, 2012 is estimated at five per cent of accounts receivable.
   c. On the basis of experience, the estimated uncollectible accounts at December 31, 2012 is calculated as follows:

Age (days)	Estimated Loss Percentage
1-30	2%
31-60	4%
61-90	5%
91-120	10%
Over 120	50%

P 6-6

The Arcand Co. Ltd. has estimated its bad debts at 1 per cent of net credit sales. During 2015, Arcand decided to calculate the required balance for the allowance for doubtful accounts at year-end, December 31, by ageing its accounts receivable. The review suggested a required balance of $7,200. The following data, which already have been recorded in the company's books, are also available:

	2014	*2015*
Accounts written off		
On March 14, 2014 (Boven)	$600	
On March 30, 2015 (Seaton)		$300
Recoveries of accounts written off		
On June 5, 2015 (Boven)		400

The Allowance for Doubtful Accounts general ledger account reported the following balances: January 1, 2014—$1,500 credit; January 1, 2015—$3,900 credit.

Required: Prepare journal entries to record

1. The amount of bad debt expense for the year 2014
2. The bad debt expense on December 31, 2015
3. The collection from Boven on June 5, 2015.

P 6-7

At December 31, 2013, the Elias Paper Company Ltd. balance sheet had a balance of $1,268,800 in accounts receivable. In addition, a contra account showed an allowance for doubtful accounts balance of $32,400. Credit sales for 2014 were $8,540,000, with collections of the receivables amounting to $8,262,560, including $15,600 that Elias had written off as uncollectible in December 2013 from Huron Supplies Ltd. During 2014, Elias wrote off $33,660 as uncollectible.

On November 1, 2014, a customer with a $720,000 balance in accounts receivable sent $200,000 in cash (included in the cash collections) and a note receivable for the balance. The account was considered to be collectible.

At December 31, 2014, Elias' year-end, the balance in accounts receivable included $200,580 of past due accounts, which management estimated would result in a 10 per cent loss, based on past experience. In addition, it was management's policy to set up an allowance on remaining accounts receivable equal to 2 per cent of the balance outstanding.

Required:

1. Prepare general journal entries for all 2014 transactions relating to notes and accounts receivable.
2. Prepare all adjusting entries at December 31, 2014.
3. Show the amount that should appear in the 2014 income statement as bad debt expense.
4. What is the total for the allowance for doubtful accounts at December 31, 2014?

P 6-8

The balance of the accounts receivable account of Griffin Ltd. at December 31 was $74,460. Included in this balance are the credit balances of two customers, amounting to $3,200 and $1,800.

Required:

1. What amount for accounts receivable would be shown as assets on the balance sheet?
2. How would the credit balances in the customers' accounts be disclosed?

P 6-9

The accounts receivable listing of Grant Corporation shows the following on December 31, 2015. The general ledger showed a $200 credit balance in Allowance for Doubtful Accounts before adjustment.

Name of Customer	*Invoice Date*	*Amount*
Greenwood Fruit Packers Ltd.	May 2	$ 600
Granville Ltd.	August 15	335
Kutcher Inc.	October 2	720
Kutcher Inc.	December 8	275
Lamb Fruit Inc.	March 3	445
Grimm Fruit Company	November 11	822
Fehr Produce Corp.	November 20	250
Fehr Produce Corp.	September 4	465
Fehr Produce Corp.	July 10	922
Golden Fruit Ltd.	December 5	500

Required:

1. Prepare an aging of accounts receivable at December 31, 2015, divided into five time periods as follows:

   Age
   (days)
   1-30
   31-60
   61-90
   91-120
   121-150
   Over 150

2. Compute the estimated loss based on the following:

Age (days)	Estimated Loss Percentage
1-30	0.5%
31-60	1%
61-90	3%
91-120	10%
121-150	25%
Over 150	50%

3. Prepare the journal entry to record the bad debt expense for the year.

P 6-10

Zajic Corp. had the following transactions relating to uncollectible accounts during 2014:

Feb. 15	Wrote off F. Young's account of $200 as uncollectible
Apr. 30	Collected from G. Yopek Inc. $100 that had been written off in 2013
June 26	Received $300 from Wong Machine Ltd. (Wong's previous balance was $700); no further payments are expected and the balance was written off
Sept. 7	Wrote off H. Wolfe's account of $350
Dec. 31	Analysed accounts receivable, revealing the following:

a. Accounts to be written off:

S. Wuff	$300
P. Levesque	400
T. White	100

b. Ageing of accounts receivable:

Age (days)	Accounts Receivable	Estimated Loss Percentage
1-30	$ 20,000	2%
31-60	12,000	4%
61-90	5,000	5%
91-120	3,000	10%
Over 120	10,000	50%
Total	$ 50,000	

Required:

1. Assume that there was a credit balance of $1,735 in the Allowance for Doubtful Accounts general ledger account at December 31, 2013. Prepare the entry to write off the uncollectible accounts at December 31, 2014.
2. Prepare the appropriate adjusting entry to set up the required balance in the Allowance for Doubtful Accounts general ledger account at December 31, 2014.

Alternate Problems

View Solution

AP 6-1

The preparation of the bank reconciliation is an important internal control function of the accountant at Edison Life Ltd. Normally, five types of adjustments are used:

a. Additions to the reported general ledger cash balance
b. Deductions from the reported general ledger cash balance
c. Additions to the reported cash balance per the bank statement
d. Deductions from the reported cash balance per the bank statement
e. Information that has no effect on the current bank reconciliation.

Required:

1. Using the letters *a* to *e* from the list, indicate the appropriate adjustments for each of the following pieces of information derived from Edison Life Ltd.'s January 2017 bank statement.

   ___ A collection of a $2,000 note receivable was not previously reported to Edison Life. This included interest earned of $50.

   ___ A certified cheque amounting to $500 and dated January 15 was not returned with the January bank statement.

   ___ The January 31 deposit of $1,000 arrived too late at the bank to be included in the January bank statement.

   ___ A $225 cheque from Go-Slow Truckers was returned with the bank statement, marked NSF. This is the first knowledge Edison Life has of this.

   ___ A cheque received for $540 was recorded as $450 in the company records.

   ___ Service charges of $13 were deducted on the bank statement. These have not yet been recorded in the company records.

   ___ A $10,000 loan received from the bank was included in the bank statement but not in the company's general ledger.

   ___ A $150 December cheque had still not cleared the bank.

   ___ The bank credited Edison Life with a $2,000 deposit that should have been credited to Alva Life Insurance.

2. Prepare a bank reconciliation using the data given above. On January 31, the Cash account in the general ledger of Long Life Ltd. showed a balance of $24,848. The bank statement showed a balance of $37,850.

AP 6-2

The following is information for the Bittman Company Ltd.:

a. Balance per the bank statement for December 31 2017 is $25,430.
b. Balance of the Cash account in the general ledger at December 31 is $11,040.
c. A cheque for $840 that had been deposited in the bank was incorrectly recorded in the general ledger as $930.
d. A cheque for $2,100 deposited on December 21 was returned by the bank marked NSF; no entry has been made on the company records to reflect the returned cheque.
e. Among the cancelled cheques is one for $345 given in payment of an account payable; the cheque has been recorded as $480 in the company records.
f. Bank service charges for December amount to $50. These were not yet recorded in the company records.
g. The bank erroneously charged the Bittman Company account for a $10,000 cheque of the Pittman Company.
h. The bank had collected a $15,000 note plus accrued interest amounting to $75; $15,075 was credited to Bittman's account; a collection fee of $10 was debited to Bittman Company's account. None of these transactions were recorded in the company records.
i. The bank deposit made December 3 for $1,570 does not appear on the bank statement
j. Outstanding cheques at December 31 were no. 197, $4,000, and no. 199, $9,000.

View Solution

Required:

1. Prepare a bank reconciliation statement at December 31, 2017.
2. Prepare the necessary adjusting journal entries to make the Cash account in the general ledger agree with the bank reconciliation adjusted cash balance at December 31.

AP 6-3

The following items relate to the activities of Doke Company Ltd. during June 2018:

a. At June 30, the cash account shows a balance of $1,200.
b. The June bank statement shows a balance of $64.
c Of four cheques not returned by the bank in May, one still has not been returned in June: cheque no. 208 in the amount of $80.
d. Doke deposited cash received on June 29 (in the amount of $1,000) and June 30 (in the amount of $200) in the night depository on June 29 and 30, a Saturday and Sunday, respectively; these deposits do not appear on the bank statement.
e. On reviewing the cheques returned with the bank statement, Doke found the following: cheque no. 214, properly made out for $45, was coded as a debit to Office Supplies Expense and a credit to the Cash general ledger account for $54; a cheque of Poke Company in the amount of $200 was incorrectly processed through Doke's bank account by the bank.
f. Bank service charges for the month totalled $5.
g. Cheque no. 261 for $180 written in June was not returned with the cancelled cheques.

View Solution

Required:

1. Prepare a bank reconciliation at June 30, 2018.
2. Prepare the necessary adjusting journal entries to make the Cash general ledger account agree with the bank reconciliation adjusted cash balance at June 30.

AP 6-4

Montana Inc. had the following transactions relating to uncollectible accounts during 2013:

Jan.	22	Wrote off J. Asanti's account of $400 as uncollectible
Mar.	6	Collected from Z. Byrd $200 that had been written off in 2012
July	4	Received $600 from M. Peron (Peron's previous balance was $1,400); no further payments are expected and the balance was written off
Sept.	7	Wrote off R. Ngeun's account for $700
Dec.	31	Analysed accounts receivable, revealing the following:

a. Accounts to be written off:

R. Bouchard	$600
S. O'Malley	800
C. Macintosh	200

b. Ageing of accounts receivable:

Age (days)	*Accounts Receivable*	*Estimated Loss Percentage*
1-30	$ 40,000	2%
31-60	24,000	4%
61-90	10,000	5%
91-120	6,000	10%
Over 120	20,000	50%
Total	$100,000	

View Solution

Required:

1. Assume that there was a credit balance of $3,000 in the Allowance for Doubtful Accounts general ledger account at December 31, 2012. Prepare the entry to write off the uncollectible accounts at December 31, 2013.
2. Prepare the appropriate adjusting entry to set up the required balance in the Allowance for Doubtful Accounts general ledger account at December 31, 2013.

AP 6-5

The following balances are taken from the unadjusted trial balance of Sperling Corp. at its year-end, December 31, 2015:

	Account Balances	
	Debit	*Credit*
Accounts Receivable	$ 300,000	
Allowance for Doubtful Accounts		$ 3,000
Sales	1,000,000	
Sales Returns and Allowances		100,000

An ageing of accounts receivable at December 31, 2015 reveals the following information:

Age (days)	Accounts Receivable	Estimated Loss Percentage
1-30	$100,000	2%
31-60	54,000	3%
61-90	80,000	4%
91-120	60,000	25%
Over 120	6,000	50%
Total	$300,000	

The balance for J. Nelson of $2,000 is over 90 days past due. It is included in the ageing of accounts receivable chart and has not yet been written off.

Part A: 2015

View Solution

Required: Prepare journal entries to record:

1. The write-off of J. Nelson's account on December 31, 2015
2. The appropriate adjusting entry to set up the required balance in the Allowance for Doubtful Accounts general ledger account at December 31, 2015. (*Hint:* Remember that J. Nelson's account has been written off.)

Part B: 2016

The following transactions were made in 2016:

a. Sales on account were $1,400,000.
b. Collections of accounts receivable amounted to $1,198,000.
c. Sperling wrote off $20,000 of accounts receivable.
d. An ageing of accounts receivable at December 31, 2016 revealed the following information:

Age (days)	Accounts Receivable	Estimated Loss Percentage
1-30	$340,000	2%
31-60	70,000	3%
61-90	-0-	4%
91-120	54,000	25%
Over 120	16,000	50%
Total	$480,000	

View Solution

Required: Prepare the four journal entries required and the entry necessary to adjust the Allowance for Doubtful Accounts general ledger account balance at December 31, 2016.

AP 6-6

Clarke Auto Sales Ltd. reports to its shareholders the following balances on its December 31, 2012 year-end financial statements:

Accounts Receivable	$104,400
Less: Allowance for Doubtful Accounts	2,000
Net Accounts Receivable	$102,400

The following occurred in January 2013:

a. Accounts of $1,200 were written off as uncollectible.
b. An account for $300 previously written off was collected.
c. An analysis of the aged accounts receivable indicated a need for an allowance of $3,500 to cover the possibility of uncollectible accounts.

View Solution

Required: Reconstruct the journal entries to record the above items.

AP 6-7

On January 1, the Accounts Receivable general ledger account balance of Chapel Cycle Works Inc. was $265 and the balance in the Allowance For Doubtful Accounts general ledger account was $7. The firm's credit sales during the year were $2,105 and cash collections from customers amounted to $2,025. Among these collections was the recovery in full of a $3 receivable from K. Lush, a customer whose account had been written off as uncollectible in the previous year. During the current year it was necessary to write off as uncollectible customers' accounts totalling $8.

At December 31, the accounts receivable included $40 of past-due accounts. After careful study of all past-due accounts, the management estimated that the probable loss contained therein was 20 per cent and that, in addition, 2 per cent of the current accounts receivable might prove uncollectible.

View Solution

Required:

1. Calculate the balance of the accounts receivable account at December 31.
2. Prepare the necessary adjusting entry for the bad debts at December 31.
3. What amount should appear in this year's income statement as bad debt expense?
4. Show the balance sheet presentation of accounts receivable at December 31.

AP 6-8

The Accounts Receivable general ledger account of the Pure Springs Corporation shows a balance of $370,500 on June 30, 2017. A summary of the analysis of accounts receivable by age shows:

Age (days)	*Accounts Receivable*	*Estimated Loss Percentage*
1-30	$300,000	0.5%
31-60	25,000	4%
61-90	30,000	5%
91-120	12,500	15%
Over 120	3,000	40%
Total	$370,500	

On June 30, Allowance for Doubtful Accounts in the general ledger has a debit balance of $310 before adjustments.

View Solution

Required: Prepare the necessary adjusting entry.

AP 6-9

Caton China Corporation had credit sales of $610,000 for the year, accounts receivable of $60,500, and a credit balance of $250 in the Allowance for Doubtful Accounts general ledger account at the end of the year.

View Solution

Required:

1. Record the bad debt expense for the year, using each of the following methods for the estimate:
    a. The allowance for doubtful accounts is to be increased to 4 per cent of accounts receivable.
    b. Bad debt expense is estimated to be 0.45 per cent of charge sales.
    c. The allowance for doubtful accounts is to be increased to $3,700, as indicated by an ageing schedule.
2. Which method would you choose and why?

AP 6-10

The following balances appear in the unadjusted trial balance of Fleming Corp. at its year-end, December 31, 2012:

	Account Balances	
	Debit	*Credit*
Accounts Receivable	$200,000	
Allowance for Uncollectible Accounts		$ 10,000
Sales (70% on credit)		1,200,000

Fleming uses the balance sheet method of calculating its allowance for doubtful accounts. At December 31, 2012, it estimated that three per cent of accounts receivable would not be collected. Fleming had the following transactions during 2013:

a. It wrote off $18,000 of accounts receivable.
b. Credit sales amounted to $1,600,000.
c. Collections of accounts receivable amounted to $1,400,000.
d. Fleming collected $4,000 that was previously written off in 2012. This amount is not included in the collections described in transaction *c*.
e. At year-end, it was estimated that the amount of doubtful accounts at December 31, 2013 was $10,000.

View Solution

Required:

1. Prepare all journal entries required for 2012 and 2013.
2. If Fleming had used the income statement method of estimating uncollectible accounts, calculate the balance in the Allowance for Doubtful Accounts general ledger account at December 31, 2012 and 2013. Assume that Fleming estimates doubtful accounts to be one per cent of sales for both years.

AP 6-11

Zane Corp. had $2,000,000 in sales during 2013. Thirty per cent of these were cash sales. During the year, $50,000 of accounts receivable were written off as being uncollectible. In addition, $30,000 of the accounts that were written off in 2012 were unexpectedly collected. Accounts receivable at the year-end of Zane, December 31, 2013 amounted to $500,000, as shown below. The balance in the Allowance for Doubtful Accounts account was $30,000 credit at December 31, 2012.

Age (days)	*Accounts Receivable*
1-30	$200,000
31-60	100,000
61-90	50,000
91-120	120,000
Over 120	30,000
Total	$500,000

View Solution

Required:

1. Prepare journal entries to record the following 2012 transactions:
    a. The write-off of $50,000
    b. The recovery of $30,000.
2. Prepare an adjusting entry required at December 31, 2013 for each of the following scenarios:
    a. On the basis of experience, the uncollectible accounts at December 31, 2012 are estimated at 1% of credit sales.
    b. On the basis of experience, the uncollectible accounts at December 31, 2013 are estimated at 6% of accounts receivable.
    c. On the basis of experience, the estimated uncollectible accounts at December 31, 2013 are calculated as follows:

Age (days)	*Estimated Loss Percentage*
1-30	1%
31-60	3%
61-90	4%
91-120	5%
Over 120	30%

Decision Problem

DP 6-1

The internal control procedures for cash transactions in the Gallagher Corporation were inadequate. Sam Sly, the cashier-bookkeeper, handled cash receipts, made small disbursements from petty cash, maintained accounting records, issued and signed cheques, and prepared the monthly reconciliations of the bank account. At November 30, 2019, the bank statement showed a balance of $17,500. The outstanding cheques were as follows:

Cheque No.	*Amount*
7062	$268.55
7183	170.00
7284	261.45
8621	175.19
8623	341.00
8632	172.80

There was also an outstanding deposit of $3,347.20 at November 30.

The balance in the general ledger Cash account at November 30 was $20,258.31, which included some cash on hand. The bank statement for November included $200 arising from the collection of a note receivable; the company's books did not include an entry to record this collection.

Recognising the weakness existing in internal control over cash transactions, Sly prepared the following bank reconciliation and then wrote a cheque to himself, which he cashed:

Cash per general ledger	$20,258.31	Cash per bank		$17,500.00
		Add: Outstanding Deposit		3,347.30
				$20,847.30
		Less: Outstanding cheques		
		Cheque No.	*Amount*	
		8621	$175.19	
		8623	341.00	
		8632	172.80	
				(588.99)
		Adjusted cash balance		$20,258.31

Required:

1. Calculate the amount of cash taken by Sly.
2. Explain how Sly attempted to conceal his theft of cash.

CHAPTER SEVEN

The Communication of Accounting Information: The Financial Statements

Chapters 1 through 6 discussed and illustrated the steps in the accounting cycle. They also discussed the concepts, assumptions, and procedures that provide a framework for financial accounting as a whole.

Chapter 7 describes the content and presentation of financial statements. It consolidates what has been learned in previous chapters. The chapters you have already studied told you some of the rules of the game; this chapter will give you a better understanding of how the game is played.

At the end of this chapter is a series of discussion questions, each keyed to the chapter where the material is covered. These questions should help you apply the theoretical concepts you have learned to the actual practice of accounting. Questions addressed in this chapter include:

1. How does accounting for wealth differ between economists and accountants?
2. How is the balance sheet classified?
3. How is the income statement classified?
4. What are the advantages of classified financial statements?
5. What is the distinction between selling expenses, and general and administrative expenses?
6. What is the purpose of the statement of changes in equity?
7. What are the purposes of notes to the financial statements?
8. What are the purposes and components of the auditor's report and statement of management's responsibility for the financial statements?

A. Financial Statement Disclosure

The objective of financial statements is to communicate information. This objective focuses on the needs of financial statement *users*, pre-eminently a company's investors and creditors. Accounting information should make it easier for management to allocate resources and for shareholders to evaluate management. A related objective of financial statements is the fair presentation of the entity's economic resources, obligations, and equity. As well, financial statements should fairly present the economic performance of the entity.

Fulfilling these objectives is difficult. Accountants must make a number of subjective decisions about how to apply generally accepted accounting principles. For example, they must decide how to measure wealth and how to apply recognition criteria. They must also make practical cost-benefit decisions about how much information is useful to disclose. Some of these various decisions are discussed in the following section.

Making Accounting Measurements

Economists often define wealth as an increase or decrease in the entity's ability to purchase goods and services. Accountants use a more specific measurement—they consider only increases and decreases resulting from actual transactions. If a transaction has not taken place, they usually do not record a change in wealth.

The accountant's measurement of wealth is shaped and limited by the fundamental accounting concepts introduced and discussed in chapter 2: historical cost, the measuring unit, the entity, time periods, accrual accounting, revenue recognition, and going concern. These mean that accountants record transactions in one currency (for example, dollars). They assume the monetary currency retains its purchasing power. Changes in market values of assets are generally not recorded. The entity is expected to continue operating into the foreseeable future.

Economists, on the other hand, do recognise changes in market value. For example, if an entity purchased land for $100,000 that subsequently increased in value to $125,000, they would recognise a $25,000 increase in wealth. International Financial Reporting Standards generally do not recognize this increase until the entity actually disposes of the asset; accountants would continue to value the land at its $100,000 purchase cost. This practice is based on the application of the historical cost concept, which is a part of GAAP.

Economic wealth is also affected by changes in the purchasing power of the dollar. For example, if the entity has a $50,000 cash asset at the beginning of a time period and purchasing power drops by 10 per cent because of inflation, the entity has lost wealth. The same $50,000 can only purchase $45,000 of goods and services. Conversely, the entity gains wealth if purchasing power increases by 10 per cent. In this case, the same $50,000 can purchase $55,000 worth of goods and services. However, accountants do not record any changes because of the GAAP assumption that the currency unit is a stable measure.

Accountants must also consider the impact of recognition criteria. At what point in time will they record an item in the financial statements? Recall from chapter 2 that accountants recognise an item when it has an appropriate basis for measurement and the transaction involves probable future benefits. At this time, accountants can make a reasonable estimate of the amount involved.

Qualities of Accounting Information

Accountants do not always report information that could be useful to readers of financial statements. Financial statements are focussed primarily on the needs of external investors and creditors, rather than on employees, for instance. To provide this information parsimoniously, accountants make cost-benefit judgements. They use materiality considerations to decide whether particular items of information should be disclosed. If the costs associated with financial information preparation is too high or if an amount is not sufficiently large or important, it will not be disclosed. For example, companies do not list small office equipment as assets but rather immediately expense these costs.

Accountants must also make decisions based on whether information is useful. Is it comparable to prior periods? Is it verifiable? Is it presented with clarity and conciseness to make it understandable? How well these qualitative considerations are addressed by preparers of financial statements determines how useful accounting information is perceived to be by readers.

B. Classified Financial Statements

The double-entry accounting process has been a focus of preceding chapters. This chapter focuses on the preparation of financial statements, including how financial information is disclosed in financial statements and how it is *classified* (the way accounts are grouped) on various financial statements.

There is no prescribed order for financial statements. A common order is the following:

Balance sheet
Income statement
Statement of changes in equity
Statement of cash flows
Notes to the financial statements

In addition, the financial statements are often accompanied by an auditor’s report and a statement entitled “Management’s Responsibility for Financial Statements”. Each of these items will be discussed below. Except for a limited number of exceptions, financial statement information must be disclosed for the most recent year and the prior year.

Because external users of financial statements have no access to the accounting records of the entity, it is important that financial statements be organised in a manner that is easy to understand. Thus, financial data are grouped into useful, similar categories within **classified financial statements**, as discussed below.

The Classified Balance Sheet

The classification of accounts into meaningful categories is designed to facilitate the analysis of balance sheet information by external users. Chiefly, assets and liabilities are customarily classified as either or *non-current*.

Current Assets

Current assets are those resources that the entity expects to convert to cash or to consume during the next year or within the operating cycle of the entity, whichever is longer. By convention, many companies list current assets before non-current assets, and also list assets within each category by decreasing levels of *liquidity* – their ability to be converted into cash. There is no requirement to follow these ordering conventions under GAAP, however. Some examples of current assets are:

1. Cash, comprising paper currency and coins, deposits at banks, cheques, and money orders;
2. Temporary investments, the investment of cash that will not be needed immediately in short-term, interest bearing notes that are easily convertible back into cash;
3. Accounts receivable that are due to be collected within one year;
4. Notes receivable, usually formalised account receivables – written promises to pay specified amounts with interest, and due to be collected within one year; and
5. Merchandise inventory that is expected to be sold within one year.

The current asset category also includes accounts whose future benefits are expected to expire in a short period of time. These are not expected to be converted into cash:

6. Prepaid expenses that will expire within the next year, usually consisting of advance payments for insurance, rent, and other similar items; and
7. Supplies on hand at the end of an accounting year that will be used during the next year.

Non-current Assets

Non-current assets are assets that will be useful for more than one year; they are sometimes referred to as **long-lived assets**. Non-current assets often consist of property, plant, and equipment (PPE), also called **capital assets***,* used in the operations of the business. Some examples of PPE are:

8. Land
9. Buildings
10. Equipment
11. Motor vehicles such as trucks.

The cost of non-current assets with limited lives is allocated to operations over their estimated useful lives. The recording of this depreciation expense was explained in chapter 3. More examples of non-current assets and their accounting treatments will be discussed in subsequent chapters.

Current Liabilities

Current liabilities are obligations that must be paid within the next 12 months or within the next operating cycle of the entity, whichever is longer. By convention, they are often shown first in the Liabilities section of the balance sheet and are listed in order of their due dates, with any bank loans shown first. There is no requirement under GAAP to do this, however. Common examples of current liabilities include:

1. Bank loans (often referred to as ‘borrowings’) that are payable on demand or due within the next fiscal year;
2. Accounts payable;
3. Accruals (similar to accounts payable and to be discussed later), and usually grouped with accounts payable;

4. Unearned revenue, arising when cash has been received from customers to provide goods or services in the next fiscal year;
5. The portion of non-current liabilities that will be paid in the next fiscal year; and
6. Income taxes payable.

Non-current Liabilities

Non-current liabilities are obligations or borrowings that do not require repayment for more than one year, often represented by a bank loan or a **mortgage** – a liability that is secured by real estate and that the borrower agrees to pay back over a number of years.

Shareholders' Equity

The shareholders' equity category of the classified balance sheet consists of two major accounts: share capital and retained earnings. Equity is discussed in more detail in chapter 9.

The following illustrates the presentation of Big Dog Carworks Ltd.'s classified balance sheet after several years of operation.

Big Dog Carworks Ltd.
Balance Sheet
At December 31, 2016

Assets	*2016*	*2015*	*Liabilities*	*2016*	*2015*
Current			*Current*		
Cash	$ 10,800	$ 12,000	Borrowings (Note 5)	$ 39,000	$ 82,250
Accounts Receivable	26,000	24,000	Accounts Payable	24,000	22,000
Merchandise Inventories	120,000	100,000	Income Taxes Payable	15,000	10,000
Prepaid Expenses	1,200	570	Total Current Liabilities	78,000	114,250
Total Current Assets	158,000	136,570			
Property, Plant, and Equipment (Note 4)	126,645	10,430			
			Non-Current		
			Borrowings (Note 5)	163,145	-0-
			Total Liabilities	241,145	114,250
			Shareholder's Equity		
			Share Capital (Note 6)	11,000	11,000
			Retained Earnings	32,500	21,750
			Total Shareholders' Equity	43,500	32,750
Total Assets	$284,645	$ 147,000	Total Liabilities and Shareholders' Equity	$284,645	$147,000

Notes are included at the end of the financial statements. Among other purposes, they provide details about a particular category on the balance sheet or income statement.

The balance sheet can be presented in either the **account form**, as shown above. Liabilities and equities are presented to the right of the assets. An acceptable alternative is the **report form.** Liabilities and equities are presented below the assets.

The Classified Income Statement

Recall that the income statement is a financial report that summarises a company's revenue less expenses over a period of time. An income statement for BDCL was presented in chapter 1 as follows:

Big Dog Carworks Ltd.
Income Statement
For the Month Ended January 31, 2011

Revenue		$10,000
Expenses:		
Rent	$1,600	
Salaries	3,500	
Supplies	2,200	
Truck Operation	700	
Total Expenses		8,000
Net Income		$ 2,000

This format was sufficient to disclose relevant financial information for the company's simple start-up operations. For more complex entities, more disclosure and classification is often needed, as well as comparative figures from the prior year.

First, in more complex companies, this financial statement would be titled "**Comprehensive Income Statement**" or something similar. Comprehensive income includes not only revenue and expenses related to normal business operations (initially for BDCL: repair revenue, rent expense, etc.) but also other types of revenues and expenses that are not directly related to its operations. In exceptional cases, for example, a company may choose to revalue land it owns. If the value of the land has increased since it was purchased, the resulting gain on revaluation is shown as a component of other comprehensive income, separate from the operating profit of the company. These types of income and expenses are beyond the scope of introductory financial accounting. Accordingly, the title "Income Statement" will continue to be used for BDCL's comprehensive income statement.

Second, all income and expense items that are *material* must be disclosed separately so that users will not otherwise be misled. Materiality is a matter for judgement. Office supplies of $1,200 per month used by BDCL at the start of its operations might be a material amount and therefore disclosed as a separate item on its first year's income statement. If its annual revenues grow to $1 million though, $1,200 per month for supplies might be considered immaterial. These expenditures would be then grouped with other similar items and disclosed as a single amount.

In chapter 1, income statement items were classified into just revenue and expense accounts. In actual practice, the income statement of a merchandising firm is usually further classified, with revenues and expenses broken into categories and subtotals provided for each classification. This was discussed in chapter 4. This classification highlights interrelationships of important amounts.

For instance, the importance of the *gross profit* subtotal was previously discussed; it represents the amount of sales revenue less related cost of goods sold that remains to pay other expenses necessary to operate the business. The balance is an important measure for many stakeholders—the *net income* amount. For instance, net income represents the return on shareholders' investments and the amount of profit available for distribution to them. For bankers, the net income indicates the ability of the entity to expand its operations through debt financing and to generate sufficient cash in the future to make loan payments. For labour unions, the entity's net income may inform salary demands in labour negotiations.

There are many acceptable formats for income statements. As illustrated below for Big Dog Carworks Ltd., the classified income statement can include the general categories of *Operating Expenses* and *Financing Expenses.* The latter includes items like interest expense. Financing costs like interest expense are classified separately because of the impact that financing the entity's activities through debt has on the calculation of net income.

Operating expenses are further divided into two categories: *Selling Expenses* and *General and Administrative Expenses*. BDCL management has assumed that this format is the most useful to users of its financial statements. It is used as the standard format in the rest of this text.

Selling expenses are those incurred to sell BDCL's merchandise, like advertising and sales commissions. *General and administrative* expenses are those incurred to support BDCL's merchandising operations, like communication costs and the president's salary. While most operating expenses are easily distinguished as one or the other category, sometimes classification is made on the basis of expediency particularly if the amounts involved are not material. As noted below, insurance expense, which presumably covers both the sales and administrative activities, has been classified only as an administrative expense by BDCL management, for example.

The 2016 income statement shown below illustrates all the major classifications chosen for Big Dog Carworks Ltd. Other could choose different classifications to highlight important interrelationships relevant to specific aspects of their operations.

Big Dog Carworks Ltd.
Income Statement
For the Year Ended December 31, 2016

	2016	*2015*
Sales	$300,000	$264,500
Cost of Goods Sold:		
Opening Inventory	80,000	-0-
Cost of Goods Purchased	240,000	271,700
Goods Available for Sale	320.000	271,700
Less: Ending Inventory	(120,000)	(80,000)
Cost of Goods Sold	200,000	191,700
Gross Profit	100,000	72,800
Operating Expenses:		
Selling Expenses:		
Advertising	10,000	8,000
Commissions	15,000	12,000
Delivery	6,000	4,000
Total Selling Expenses	31,000	24,000
General and Administrative Expenses:		
Depreciation	3,785	285
Insurance	1,200	1,000
Rent	3,600	3,000
Employee Benefits	17,815	15,915
Telephone	1,080	900
Utilities	1,520	1,200
Total General and Admin. Expenses	29,000	22,300
Total Operating Expenses	60,000	46,300
Income from Operations	40,000	26,500
Financing Costs:		
Interest	10,000	9,000
Income before Income Taxes	30,000	17,500
Income Taxes	15,000	8,750
Net Income	$ 15,000	$ 8,750

This income statement likely is too detailed for the needs of most users. A condensed income statement would be more useful. However, under GAAP, there are certain types of revenues and expenses that must be presented at a minimum in the comprehensive income statement, regardless of materiality levels. For our purposes, these include revenue, employee benefits like salaries, income taxes expense, depreciation expense, financing costs like interest expense, and net profit or loss. A more concise yet acceptable income statement for BDCL would be as follows:

Big Dog Carworks Ltd.
Income Statement
For the Year Ended December 31, 2016

	2016	*2015*
Sales	$300,000	$264,500
Cost of Goods Sold (Note 7)	200,000	191,700
Gross Profit	100,000	72,800
Operating Expenses:		
Selling, General, and Administrative	38,400	30,100
Depreciation	3,785	285
Employee Benefits	17,815	15,915
Total Operating Expenses	60,000	46,300
Income from Operations	40,000	26,500
Financing Costs:		
Interest	10,000	9,000
Income before Income Taxes	30,000	17,500
Income Taxes	15,000	8,750
Net Income	$ 15,000	$ 8,750

Both income statements shown above are prepared according to the *function of expense* method. This means that information is organised according to the company's business processes; chiefly, goods are purchased and sold, and other expenses are incurred to sell the goods and operate the company.

Income statements formatted according to the *nature of expense* method are also permitted. In this case, revenue and expenses are disclosed if they are material or otherwise required to be disclosed (for example, depreciation), without regard to grouping these according to business function. Using this method, BDCL's income statement might be shown as follows:

Big Dog Carworks Ltd.
Income Statement
For the Year Ended December 31, 2016

	2016	*2015*
Revenues (net)	$ 300,000	$ 264,500
Cost of Materials	(240,000)	(271,700)
Change in Inventories	40,000	80,000
Employee Benefits	(17,815)	(15,915)
Depreciation	(3,785)	(285)
Interest	(10,000)	(9,000)
Income Taxes	(15,000)	(8,750)
Commissions	(15,000)	(12,000)
Advertising	(10,000)	(8,000)
Other Expenses	(13,400)	(10,100)
Net Income	$ 15,000	$ 8,750

These categories must be disclosed regardless of materiality.

These are disclosed because they are deemed material.

Other expenses are composed of items not required to be disclosed or those deemed individually immaterial.

These two amounts total 2016 cost of goods sold of $200,000 (2015: $191,700) shown on the *function of expense* format income statement above.

Net income is unchanged from the *function of expense* format shown above.

Statement of Changes in Equity

The composition and format of the statement of changes in equity was discussed in chapter 1. Net income for the period as shown on the income statement is added to opening retained earnings. **Dividends** are distributions of profit to shareholders. These are deducted to arrive at ending retained earnings. This ending amount is shown on the balance sheet.

The statement of changes in equity primarily provides information about changes to share capital and retained earnings during the period. There are other types of information that may be disclosed on this statement, but these are beyond the scope of introductory financial accounting. The statement also provides a link between the income statement and balance sheet. Ending retained earnings shown on the balance sheet is the sum of all years' net incomes to date less total dividends distributed to shareholders since the company was started.

BDCL's statement of changes in equity for the year ended December 31, 2016 is as follows:

Big Dog Carworks Ltd.
Statement of Changes in Equity
For the Year Ended December 31, 2016

	2016			*2015*
	Share Capital	*Retained Earnings*	*Total Equity*	*Total Equity*
Opening Balance	$11,000	$21,750	$32,750	$24,000
Net Income		15,000	15,000	8,750
Dividends Declared		(4,250)	(4,250)	-0-
Ending Balance	$11,000	$32,500	$43,500	$32,750

These balances agree to the figures shown in the shareholders' equity section of BDCL's balance sheet.

This statement shows that since its inception in 2011 until the end of 2016, Big Dog Carworks Ltd. has issued $11,000 in share capital. It has retained $21,750 of profit to the end of 2015. It earned $15,000 in 2016 and declared $4,250 dividends to shareholders during the year. The 2016 ending amount of earnings retained in the company amounts to $32,500 ($21,750 + $15,000 - $4,250). This amount of retained earnings is represented by net assets held by the corporation; these are available for use in future expansion of the company, to absorb any losses that may occur, and pay more dividends in the future.

The Statement of Cash Flows (SCF)

Together with the balance sheet, income statement, and statement of changes in equity, the **statement of cash flows** (SCF) must be presented for a set of financial statements to be complete. Cash flow refers to the amount of cash received and paid by the company during the period. The SCF classifies cash flow into *operating*, *financing*, and *investing* activities. Operating activities represents cash inflow less cash outflow related to the day-to-day business of the company, primarily the purchase and sale of merchandise. Investing activities show the cash transactions resulting from the addition or disposal of non-current assets. Financing activities show the cash inflows and outflows that have affected non-current liabilities and equity accounts on the balance sheet. Chapter 13 discusses the statement of cash flows in detail. BDCL's statement of cash flows for the year Ended December 31, 2016 is shown below.

Big Dog Carworks Ltd.
Statement of Cash Flows
For the Year Ended December 31, 2016

	2016	*2015*
Operating Activities		
Income before Income Taxes	$30,000	$17,500
Item not Affecting Cash Flow		
Depreciation	3,785	285
Net Changes in Non-cash Working Capital	(20,630)	2,400
Income Taxes Paid	(10,000)	(5,000)
Net Cash from Operating Activities	3,155	15,185
Investing Activities		
Purchase of Land and Buildings	(120,000)	-0-
Financing Activities		
Proceeds from Mortgage	163,145	-0-
Repayment of Bank Loans	(43,250)	(10,185)
Dividends Paid	(4,250)	(3,000)
Net Cash from Financing Activities	115,645	(13,185)
Net Change in Cash	(1,200)	2,000
Cash at Beginning of Year	12,000	10,000
Cash at End of Year	$10,800	$12,000

These amounts agree to the amount of cash shown in the assets section of BDCL's balance sheet.

Notes to Financial Statements

As an integral part of its financial statements, a company provides *notes to the financial statements*. Among other purposes, these provide more details about particular categories on the balance sheet or income statement. In the notes, accounting policies are also disclosed with respect to revenue recognition, valuation of inventories, the treatment of non-current assets, and other issues significant to the business. The notes help external users to understand and analyse the financial statements. Any changes in accounting policies or errors in previous years' financial statements would as well be disclosed, and significant events that may have occurred after the financial statements are published, like a major fire. A discussion of many of these items is beyond the scope of introductory financial accounting.

Details of balance sheet and income statement amounts can also be placed in the notes to the financial statements without cluttering up the financial statements if more disclosure is desired. For instance, details about property, plant, and equipment shown on the balance sheet are shown in note 4 following. Additional details about the cost of goods sold amount shown in the preceding income statement are disclosed in Note 7.

The 2016 financial statements of Big Dog Carworks Ltd. would include the following notes to comply with International Financial Reporting Standards:

Big Dog Carworks Ltd.
Notes to the Financial Statements
For the Year Ended December 31, 2016

1. Nature of operations
   The principal activity of Big Dog Carworks Ltd. is the purchase and re-sale of used vehicles.

2. General information and statement of compliance with IFRS
   Big Dog Carworks Ltd. is a limited liability company incorporated and domiciled in Canada. Its registered office and principal place of business is 123 Fox Street, Owlseye, Alberta, T1K0L1, Canada. Big Dog Carworks Ltd.'s shares are listed on the Toronto Stock Exchange.

   The financial statements of Big Dog Carworks Ltd. have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued the International Accounting Standards Boards (IASB).

   The financial statements for the year ended December 31, 2016 were approved and authorised for issue by the board of directors on March 17, 2017.

3. Summary of accounting policies
   The financial statements have been prepared using the significant accounting policies and measurement bases summarized below.

   a. Revenue

   Revenue arises from the sale of goods and the rendering of service. It is measured by reference to the fair value of consideration received or receivable. Sale of goods is recognised when the company has transferred to the buyer the significant risks and rewards of ownership, generally when the customer has taken undisputed delivery of the goods.

   b. Operating expenses

   Operating expenses are recognised in the income statement upon utilisation of the service or at the date of their origin. Expenditure for warranties is recognised and charged against the associated provision when the related revenue is recognised.

   c. Borrowing costs

   Borrowing costs directly attributable to the acquisition, construction or production of property, plant, and equipment are capitalised during the period of time that is necessary to complete and prepare the asset for its intended use or sale. Other borrowing costs are expensed in the period in which they are incurred and reported as interest expense.

   d. Property, plant, and equipment

   Land held for use in production or administration is stated at cost. Other property, plant, and equipment are initially recognised at acquisition cost plus any costs directly attributable to bringing the assets to the locations and conditions necessary to be employed in operations. They are subsequently measured using the cost model: cost less subsequent depreciation.

Depreciation is recognized on a straight-line basis to write down the cost, net of estimated residual value. The following useful lives are applied:

Buildings: 25 years
Equipment: 10 years
Truck: 5 years

Residual value estimates and estimates of useful life are updated at least annually.

e. Inventories

Inventories are stated at the lower of cost and net realisable value. Cost includes all expenses directly attributable to preparing items for resale. Net realisable value is the estimated selling price in the ordinary course of business less any applicable selling expenses. Costs of items are determined using specific identification.

f. Income taxes

Current income tax liabilities comprise those obligations to fiscal authorities relating to the current or prior reporting periods that are unpaid at the reporting date. Calculation of current taxes is based on tax rates and tax laws that have been enacted or substantively enacted by the end of the reporting period.

g. Share capital

Share capital represents the nominal value of shares that have been issues.

h. Estimation uncertainty

When preparing the financial statements, management undertakes a number of judgements, estimates and assumptions about the recognition and measurement of assets, liabilities, income and expenses. Information about estimates and assumptions that have the most significant effect on recognition and measurement of assets, liabilities, income and expenses is provided below. Actual results may be substantially different.

Useful lives of depreciable assets

Management reviews its estimate of the useful lives of depreciable assets at each reporting date, based on the expected utility of the asset.

Inventories

Management estimates the net realisable values of inventories, taking into account the most reliable evidence available at each reporting date. The future realisation of these inventories may be affected by future technology or other market-driven changes that may reduce future selling prices.

4. Property, Plant, and Equipment

Details of the company's property, plant, and equipment and their carrying amounts at December 31 are as follows:

	2016					*2015*
	Land	*Building*	*Equip.*	*Truck*	*Total*	*Total*
Gross Carrying Amount						
Balance, January 1	$ -0-	$ -0-	$ 3,000	$8,000	$ 11,000	$11,000
Additions	30,000	90,000			120,000	
Balance, December 31	30,000	90,000	3,000	8,000	131,000	11,000
Depreciation						
Balance, January 1		-0-	90	480	570	285
Deprecation for year		3,500	45	240	3,785	285
Balance, December 31		3,500	135	720	4,355	570
Carrying Amount						
December 31	$30,000	$86,500	$ 2,865	$ 7,280	$126,645	$10,430

These amounts agree to the amount of PPE shown in the assets section of BDCL's balance sheet.

5. Borrowings

Borrowings include the following financial liabilities measured at cost:

	Current		*Non-Current*	
	2016	*2015*	*2016*	*2015*
Demand bank loan	$ 20,000	$ 52,250	$ -0-	$ -0-
Subordinated shareholder loan	13,762	30,000	-0-	-0-
Mortgage	5,238	-0-	163,145	-0-
Total carrying amount	$39,000	$82,250	$163,145	$ -0-

The bank loan is due on demand and bears interest at 6% per year. It is secured by accounts receivable and inventories of the company.

The shareholder loan is due on demand, non-interest bearing, and unsecured.

The mortgage is payable to First Bank of Capitalville. It bears interest at 5% per year and is amortised over 25 years. Monthly payments including interest are $960. It is secured by land and buildings owned by the company. The terms of the mortgage will be re-negotiated in 2019.

6. Share Capital

The share capital of Big Dog Carworks Ltd. consists of fully-paid common shares with a stated value of $1 each. All shares are eligible to receive dividends, have their capital repaid, and represent one vote at the annual shareholders' meeting. There were no shares issued during 2015 or 2016.

7. Cost of Goods Sold

Cost of goods sold consists of the following:

	2016	*2015*
Opening Inventory	$ 80,000	$ -0-
Purchases	240,000	270,000
Less: Purchase Returns and Allowances	(12,600)	(9,800)
Purchases Discounts	(2,400)	(1,500)
Net Purchases	115,000	258,700
Add: Transportation In	15,000	13,000
Cost of Goods Purchased	240,000	271,700
Cost of Goods Available	320,000	271,700
Ending Inventory	(120,000)	(80,000)
Cost of Goods Sold	$200,000	$191,700

The Auditor's Report

Financial statements are often accompanied by an auditor's report. An **audit** is an external examination of a company's financial statement information and its system of internal controls.

Recall from chapter 6 that internal controls are the processes instituted by management of a company to direct, monitor, and measure the accomplishment of its objectives. This includes the prevention and detection of fraud and error. An audit seeks not certainty, but reasonable assurance that the financial statement information is not materially misstated.

The auditor's report is a structured statement issued by an independent examiner, usually a professional accountant, who is contracted by the company to report the audit's findings to the company's board of directors. An audit report provides some assurance to present and potential investors and creditors that the financial statements of the company are trustworthy. Therefore, it is a useful means to reduce the risk of their financial decisions.

An example of an unqualified auditor's report for BDCL is shown below, along with a brief description of each component.

The auditor's independence from the company is stated.

INDEPENDENT AUDITOR'S REPORT

The audit report is addressed to the board.

The Board of Directors of Big Dog Carworks Ltd.
Owlseye, Alberta

The audited information is described.

I have audited the accompanying financial statements of Big Dog Carworks Ltd., which comprise the balance sheet as at December 31, 2016, the income statement, statement of changes in equity, and statement of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management Responsibility for the Financial Statements

Management's responsibilities are described.

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian generally accepted accounting principles, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

The auditor's responsibilities and the audit standards are described.

My responsibility is to express and opinion on the financial statements based on my audit. I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

The audit procedures are described in general terms.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluation the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statement.

A conclusion about the adequacy of audit evidence is stated.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

Opinion

An opinion is expressed about the financial statement information.

In my opinion, the financial statements present fairly, in all material respects, the financial position of Big Dog Carworks Ltd. as at December 31, 2016, and its financial performance and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

The report is signed by the auditor and dated.

(signed)
H. K. Walker, CPA
March 15, 2017
Anywhereville, AB

Management's Responsibility for Financial Statements

The final piece of information often included with the annual financial statements is a statement describing management's responsibility for the accurate preparation and presentation of financial statements. This statement underscores the division of duties involved with the publication of financial statements. Management is responsible for preparing the financial statements, including estimates that underlie the accounting numbers. Some examples of these have been covered, like inventory valuation and Bad Debts Expense.

The independent auditor is responsible for examining the financial statement information as prepared by management, including the reasonableness of estimates, and then expressing an opinion on their accuracy. In some cases, the auditor may assist management with aspects of financial statement preparation. For instance, the auditor may provide guidance on how a new accounting standard will affect financial statement presentation or other information disclosure. Ultimately, however, the preparation of financial statements is management's responsibility.

An example of a statement describing management's responsibility for the preparation and presentation of annual financial statements is shown below.

MANAGEMENT’S RESPONSIBILITY FOR FINANCIAL STATMENTS

Management responsibility for all aspects of financial statement presentation and disclosure is expressly stated.

The accompanying financial statements of the company are the responsibility of management. The financial statements were prepared by management in accordance with accounting principles generally accepted in Canada, applied on a consistent basis, and conforming in all material respects with International Accounting Standards. The significant accounting policies, which management believes are appropriate for the company, are described in note 3 to the financial statements.

Management responsibility for estimates used and maintenance of internal controls is acknowledged.

Management is responsible for the integrity and objectivity of the financial statements. Estimates are necessary in the preparation of these statements and, based on careful judgments, have been properly reflected. Management has established systems of internal control that are designed to provide reasonable assurance that assets are safeguarded from loss or unauthorised use, and to produce reliable accounting records for the preparation of financial information.

the board of directors’ and audit committee’s respective roles are explained.

The board of directors is responsible for ensuring that management fulfils its responsibilities for financial reporting and internal control. The audit committee of the board, which is comprised solely of directors who are not employees of the company, is appointed by the board of directors annually. The audit committee of the board meets regularly with financial management of the company and with the shareholders’ independent auditor to discuss internal controls, audit matters, including audit scope and auditor remuneration, and financial reporting issues. The independent shareholders’ auditor has unrestricted access to the audit committee. The audit committee reviews the annual financial statements and reporting to the board, and makes recommendations with respect to their acceptance. The audit committee also makes recommendations to the board with respect to the appointment and remuneration of the company’s auditor.

Management acknowledges its obligation to oversee all aspects of the company’s operations in a legal and ethical manner.

Management recognises its responsibility for conducting the company’s affairs in compliance with established financial standards and applicable laws and maintains proper standards of conduct for its activities.

The officer responsible for the financial affairs of the company signs and dates the statement.

(signed) March 3, 2017
Bill Brown II, Chief Financial Officer

ASSIGNMENT MATERIALS

Discussion Questions

Refer to the Big Dog Carworks Ltd. financial statements for the year ended December 31, 2016 and other information included in this chapter to answer the following questions.

Chapter 1

1. Identify the economic resources of Big Dog Carworks Ltd. in its financial statements.
2. What comprise the financial statements of BDCL?
3. Why does BDCL prepare financial statements?
4. From the balance sheet at December 31, 2016 extract the appropriate amounts to complete the following accounting equation:
   ASSETS = LIABILITIES + EQUITY
5. If ASSETS – LIABILITIES = NET ASSETS, how much is net assets at December 31, 2016? Is net assets synonymous with shareholders' equity?
6. What types of assets are reported by Big Dog Carworks Ltd.? What types of liabilities?

Chapter 2

7. Accounting for financial transactions makes it possible to measure the progress of the entity. How do generally accepted accounting principles positively affect this measurement process?
8. From reading the financial statements including the notes to the financial statements, can you tell whether BDCL has made any cost-benefit judgements about certain disclosures? How do these take materiality into account?

Chapter 3

9. What kind of operating expense recognition criteria do you think Big Dog Carworks Ltd. uses?
10. At what point is revenue recognised in Big Dog Carworks Ltd.? What would the journal entry be if the company received $10,000 in advance of its being earned?
11. Does Big Dog Carworks Ltd. use the cash basis of accounting or the accrual basis? How can you tell?
12. What kind of assumptions is made by Big Dog Carworks Ltd. about asset capitalisation? Over what periods of time are assets being amortised?
13. Should the salary of BDCL's president be recorded as an asset since his salary brings benefits to the company in future accounting periods?

14. What adjustments might management make to the financial information when preparing the annual financial statements? Consider the following categories:
    a. Current asset accounts
    b. Non-current asset accounts
    c. Current liability accounts
    d. Non-current liability accounts.

    Indicate several examples in each category. Use the BDCL balance sheet and notes 3 and 5 for ideas.

15. What sequence of steps is likely followed in preparing BDCL's annual financial statements?

Chapter 4

16. How much is the gross profit of Big Dog Carworks Ltd. and what are the gross profit percentages for 2015 and 2016? Are these increasing or decreasing? What are the implications of any changes?
17. What steps does the sales and collection cycle include at Big Dog Carworks Ltd.? What accounts are affected?
18. What is included in Big Dog Carworks Ltd.'s purchase and payment cycle? What accounts does this cycle involve?
19. What components are involved in the calculation of the cost of goods sold?
20. What is the opening inventory for the year ended December 31, 2016? What is the closing inventory? What is the net cost of purchases for the year?

Chapter 5

21. Explain how BDCL's inventory cost is calculated.
22. If the ending inventory of Big Dog Carworks Ltd. at December 31, 2015 was understated by $10,000, what would be the impact on the following financial statements?
    a. The 2015 income statement
    b. The 2015 balance sheet
    c. The 2016 income statement
    d. The 2016 balance sheet
23. What cost flow method is a merchandiser like BDCL likely to use? Is the company using this method?
24. What might be the impact on the income statement and balance sheet of using a different inventory cost flow assumption?
25. Is a periodic or a perpetual inventory system used by Big Dog Carworks Ltd.? How can you tell?
26. Does the LCNRV method play a role at BDCL? How would it work?

Chapter 6

27. According to the balance sheet, accounts receivable at December 31, 2016 are $26,000, with no indication of an allowance for bad debts. Doesn't Big Dog Carworks Ltd. have any bad debts? Why aren't they indicated?
28. Assume cash is handled at many locations. What kind of cash controls might Big Dog Carworks Ltd. use?
29. If Big Dog Carworks Ltd. operated several hundred stores, how might the company do its bank reconciliations?

30. When might Big Dog Carworks Ltd. rather have cash invested in temporary investments? Who would make this decision?

Chapter 7

31. What classifications are found in the BDCL's detailed income statement using the function of expense format? in the balance sheet?
32. According to the accountant's measurement, what is the amount of wealth created by Big Dog Carworks Ltd. during the year ended December 31, 2016? How does the accountant's measurement of wealth differ from that of the economist? How could you calculate the amount according to the economist's measurement? Which is a more precise calculation?
33. What expense categories are presented in the detailed income statement of Big Dog Carworks Ltd. for the year ended December 31, 2016? Why might this format have been chosen by management?
34. What are the advantages of using a classified balance sheet? Why are current accounts shown before non-current ones on BDCL's balance sheet?
35. Compare the BDCL income statement presented using the "function of expense" method with that presented using the "nature of expense" method. On the income statement presented using the nature of expense method, what expenses are included as "Other Expenses totalling $13,400 for 2016? Why are these combined?
36. How does Big Dog Carworks Ltd. make it easier to compare information from one time period to another?
37. Who is the auditor of BDCL? What does the auditor's report tell you about BDCL's financial statements? Does it raise any concerns?
38. What does the auditor's report indicate about the application of generally accepted accounting principles in BDCL's financial statements?
39. What is BDCL management's responsibility with respect to the company's financial statements? Do the financial statements belong to management? the auditor? the board of directors? shareholders?

Problems

P 7-1

The following data pertain to Ringland Hardware Inc. for the year ended December 31, 2017:

Salespersons' Salaries Expense	$ 16,400
Salaries Expense (office)	6,200
Sales	157,500
Transportation In	2,200
Rent Expense (selling space)	9,600
Rent Expense (office space)	1,200
Rent Payable	800
Sales Discounts	1,500
Depreciation Expense—Office Equipment	320
Delivery Expense	2,700
Purchases	97,300
Sales Returns and Allowances	1,300
Merchandise Inventory (Jan. 1)	15,500
Advertising Expense	1,800
Insurance Expense	130
Income Tax Expense	3,650
Merchandise Inventory (Dec. 31)	17,900
Purchases Discounts	1,100
Store Supplies Expense	850
Purchases Returns and Allowances	550
Office Supplies Expense	250
Depreciation Expense—Store Equipment	1,550
Dividends Payable	2,500

Required: Prepare an expanded version of an income statement using the function of expense method. Assume all accounts have normal debit or credit balances.

P 7-2

The following information is extracted from the general ledger of Olson Limited at December 31, 2018:

Merchandise Inventory (Dec. 31)	$ 184,000
Merchandise Inventory (Jan. 1)	200,000
Sales	781,600
Sales Returns and Allowances	16,400
Sales Discounts	16,480
Purchases	391,000
Purchases Returns and Allowances	15,200
Purchases Discounts	4,800
Transportation In	6,560
Salespersons' Salaries Expense	88,000
Advertising Expense	5,600
Delivery Expense	69,200
Miscellaneous Selling Expense	15,000
Salaries Expense (office)	80,000
Property Tax Expense	3,500
Miscellaneous General Expense	32,440
Supplies Expense	2,060
Interest Earned	840
Insurance Expense	11,160
Depreciation Expense	22,080
Interest and Bank Charges Expense	2,112
Income Taxes Expense	18,530

Required: Prepare a condensed income statement in proper form using the nature of expense format. Assume all accounts have normal debit or credit balances, and that amounts less than $10,000 are considered immaterial.

P 7-3

The following accounts and account balances are taken from the records of Joyes Enterprises Ltd. at December 31, 2016, its fiscal year-end.

	Dr.	*Cr.*
Accounts Receivable	$ 8,000	
Accounts Payable		7,000
Accumulated Depreciation—Buildings		1,000
Accumulated Depreciation—Equipment		4,000
Bank Loan (due 2017)		5,000
Buildings	25,000	
Cash	2,000	
Dividends Declared	1,000	
Equipment	20,000	
Income Tax Payable		3,000
Land	5,000	
Merchandise Inventory	19,000	
Mortgage Payable (due 2019)		5,000
Prepaid Insurance	1,000	
Share Capital		48,000
Retained Earnings, Jan. 1 2016	-	2,000
Totals	81,000	75,000
Net Income	-	6,000
Totals	-0-	-0-

Required:

1. Using the above information, prepare a classified balance sheet.
2. Does Joyes Enterprises Ltd. have sufficient resources to meet its obligations in the upcoming year?
3. Calculate the proportion of shareholders' to creditors' claims on the assets of Joyes.

P 7-4

The following unadjusted trial balance is taken from the records of Crown Jewellery Inc. at December 31, 2015, its fiscal year-end.

	Account Balances	
	Dr.	*Cr.*
Accounts Payable		20,540
Accounts Receivable	11,000	
Accumulated Depreciation - Equipment		1,000
Advertising Expense	700	
Bank Loan, due March 2016		4,000
Cash	750	
Commissions Expense	4,800	
Delivery Expense	650	
Depreciation Expense – Equipment	1,000	
Dividends Declared	1,000	
Equipment	14,400	
Income Taxes Expense	2,400	
Income Taxes Payable		2,400
Insurance Expense	350	
Interest and Bank Charges Expense	600	
Merchandise Inventory (Jan. 1)	6,000	
Office Supplies Expense	350	
Purchases	33,000	
Purchases Discounts		300
Purchases Returns and Allowances		1,700
Rent Expense	1,950	
Retained Earnings, Jan. 1 2015		600
Sales		50,000
Sales Discounts	500	
Sales Returns and Allowances	1,500	
Share Capital		2,000
Telephone Expense	300	
Transportation In	1,000	
Utilities Expense	290	
Total Debits and Credits	$82,540	$82,540

Assume merchandise inventory at December 31, 2015 is $8,000 and all amounts are material.

Required: Prepare the following financial statements:

a. Classified income statement (assume the advertising, commissions, and delivery expenses are considered selling expenses)
b. Statement of changes in equity
c. Classified balance sheet.

P 7-5

The following balance sheet was prepared for Abbey Limited:

Abbey Limited
Balance Sheet
As at November 30, 2011

Assets			*Liabilities*		
Current			*Current*		
Cash	$ 1,000		Accounts Payable	$ 5,600	
Accounts Receivable	6,000		Notes Payable (due 2012)	2,000	
Building	12,000		Bank Loan (due 2018)	1,000	
Merchandise Inventory	3,000		Total Current Liabilities		$ 8,600
Total Current Assets		$22,000			
Non-current			*Non-current*		
Temporary Investments	3,000		Mortgage Payable (due 2019)	7,000	
Equipment	1,500		Retained Earnings	1,000	
Unused Office Supplies	100		Salaries Payable	250	
Truck	1,350		Total Non-current Liabilities		8,250
Total Non-current Assets		5,950	Total Liabilities		16,850
			Shareholders' Equity		
			Share Capital		11,100
Total Assets		$27,950	Total Liabilities and Assets		$27,950

Required:

1. Identify the errors that exist in the balance sheet of Abbey Limited and why you consider this information incorrect.
2. Prepare a corrected, classified balance sheet.
3. Based on the balance sheet categories, what additional information should be disclosed in the notes to the financial statements?

Alternate Problems

AP 7-1

The following list of accounts is taken from the records of the Norman Company Ltd. at December 31, 2012:

Account Title	*Balance*
Accounts Payable	$125
Accounts Receivable	138
Building	400
Cash	250
Share Capital	400
Equipment	140
Land	115
Mortgage Payable (due 2019)	280
Bank Loan, due within 90 days	110
Notes Receivable, due within 90 days	18
Prepaid Insurance	12
Retained Earnings	214
Salaries Payable	14
Unused Office Supplies	70

View Solution

Required: Prepare a classified balance sheet.

AP 7-2

The Washington Corporation has been operating for a number of years. On October 31, 2014 the accountant of the company disappeared, taking the records with him. You have been hired to reconstruct the accounting records, and with this in mind you assemble a list of all company assets. By checking with banks, counting the materials on hand, and investigating the ownership of buildings and equipment, you developed the following information as of October 31.

Account Title	*Balance*
Land	$15
Equipment	25
Buildings	20
Accounts Receivable	10
Temporary Investments	5
Inventories	14
Cash	56

Statements from creditors and unpaid invoices found in the office indicate that $40 is owed to trade creditors. There is a $10 long-term mortgage outstanding. Interviews with the board of directors and a check of the share capital records indicate that there are 1,000 shares outstanding. Shareholders paid $30 in total to the corporation for these. No record is available regarding past retained earnings.

View Solution

Required: Prepare a classified balance sheet at October 31, 2014.

AP 7-3

The assets, liabilities, and equity accounts of Lawson Corporation at December 31, 2015 are as follows:

Accounts Payable	$10,000
Accounts Receivable	15,200
Accumulated Depreciation – Building	1,000
Accumulated Depreciation – Equipment	500
Building	14,000
Cash	5,600
Equipment	4,000
Land	5,000
Merchandise Inventory	5,600
Mortgage Payable, due in 5 years	8,000
Notes Payable, due within 90 days	7,500
Notes Receivable, due in 120 days	3,000
Prepaid Insurance	400
Retained Earnings	16,000
Share Capital	10,000
Unused Office Supplies	200

View Solution

Required:

1. Prepare a classified balance sheet.
2. a. What is the proportion of shareholder and creditor claims to the total assets of the corporation?
   b. What is the proportion of creditor's claims to the total assets of the corporation?
3. What does this indicate to you?

AP 7-4

The following unadjusted trial balance has been extracted from the records of Dark Edge Sports Inc. at December 31, 2012, its fiscal year-end.

	Account Balances	
	Dr.	*Cr.*
Accounts Payable		$ 8,350
Accounts Receivable	$18,700	
Accumulated Depreciation – Equipment		2,000
Advertising Expense	7,200	
Bank Loan, due May 31, 2013		10,000
Cash	1,500	
Depreciation Expense	1,100	
Dividends Declared	600	
Equipment	6,500	
Income Taxes Expense	2,300	
Income Taxes Payable		3,600
Insurance Expense	1,200	
Interest and Bank Charges Expense	1,300	
Merchandise Inventory (Jan. 1)	6,000	
Prepaid Insurance	1,300	
Prepaid Rent	600	
Purchases	34,800	
Retained Earnings (Jan. 1)		2,000
Rent Expense	550	
Sales		83,000
Sales Returns and Allowances	2,250	
Sales Discounts	750	
Salaries Expense	21,600	
Share Capital		3,000
Telephone Expense	100	
Utilities Expense	3,600	
Totals	$111,950	$111,950

Note: Inventory on hand at December 31, 2012 was $5,000.

View Solution

Required

1. Prepare the following financial statements:
    a. Condensed income statement using the nature of expense method. Assume amounts less than $1,500 are immaterial.
    b. Statement of changes in equity
    c. Classified balance sheet.
2. By what amounts do total current assets exceed total current liabilities?
3. Assume a $5,000 bank loan is received, payable in six months. What is the effect on your answer to (2) above?
4. As the bank manager, what questions might you raise regarding the loan?

CHAPTER EIGHT

Long-lived Assets

Long-lived or *capital* assets are used in the normal operating activities of the business and are expected to provide benefits for a period in excess of one year. Long-lived assets covered in this chapter consist of three types: property, plant, and equipment (PPE), intangible assets, and goodwill. *Depreciation* and *amortisation* are also discussed. These are both techniques to allocate the cost of most long-lived assets over their estimated useful lives. Related topics covered in this chapter include:

1. What is the distinction between capital expenditures and revenue expenditures?
2. How do generally accepted accounting principles prescribe what amount should be capitalised?
3. How should a corporation record the cost of a long-lived asset it has constructed?
4. What is the difference between a tangible and intangible long-lived asset?
5. What different methods can be used to calculate depreciation for property, plant, and equipment?
6. How are disposals of property, plant, and equipment recorded in the accounting records?
7. How are intangible assets amortised?
8. What is goodwill and what is its accounting treatment?

A. Establishing Cost of Property, Plant and Equipment (PPE)

Property, plant and equipment are **tangible** long-lived assets that are held for use in the production or supply of goods and services, have been acquired for use on a continuing basis, and are not intended for sale in the ordinary course of business. Examples include land, office and manufacturing buildings, production machinery, trucks, ships or aircraft used to deliver goods or transport passengers, salespersons' automobiles owned by a company, or a farmer's production machinery like tractors and wagons. All these items can by physically touched. There are other types of non-current assets that are *intangible* – existing only as legal concepts – like copyrights and patents. These will be discussed later in the chapter.

A long-term asset can be considered a bundle of future benefits that will be used up over a period of years. Each year, a pre-determined portion of these benefits is allocated to expense on the income statement. This concept was briefly introduced in Chapter 3. It will be examined more fully in this chapter as well.

Capital Expenditures

Any cash disbursement is referred to as an *expenditure*. A **capital expenditure** results in the acquisition of a non-current asset, including any additional costs involved in preparing the asset for use. Examples of various costs that may be incurred to prepare property, plant, and equipment for use are listed below.

	Capital Expenditures		
	Land	*Building*	*Equipment*
Costs To Acquire PPE	Purchase price Commission to real estate agent Legal fees	Purchase price Commission to real estate agent Legal fees	Invoice cost Transportation Insurance (during transportation)
Costs To Prepare PPE for Use	Costs of draining, clearing, and landscaping; demolition Assessments for streets and sewage system	Repair and remodelling costs before use Payments to tenants for premature termination of lease	Assembly Installation (including wages paid to company employees) Special floor foundations or supports Wiring Inspection Test run costs

Assume that equipment is purchased for $20,000, transportation costs $500, installation costs $1,000, construction of a cement foundation costs $2,500, and test runs to debug the equipment cost $2,000. The total capitalised cost of the asset to put it into use is $26,000.

Determining whether an outlay is a capital expenditure or a **revenue expenditure** is a matter of judgement. A revenue expenditure does not have a future benefit beyond one year. The concept of materiality enters into the distinction between capital and revenue expenditures. As a matter of expediency, an expenditure of $200 that has all the characteristics of a capital expenditure would probably be expensed rather than capitalised in a large corporation, because the time and effort required by accounting staff to capitalise and then expense the item over its estimated useful life is so much greater than the benefits derived from doing so. Policies are established by many companies to resolve the problem of distinguishing between capital and revenue expenditures. For example, a company policy may state that all capital expenditures equal to or greater than $1,000 should capitalised, while all capital expenditures under $1,000 should be expensed when incurred.

Not all asset-related expenditures incurred after the purchase of an asset are capitalised. An expenditure made to maintain PPE in satisfactory working order is a revenue expenditure, recorded as a debit to a repair expense account on the income statement. Examples of these expenditures include the cost of replacing small parts of an asset that normally wear out (in the case of a truck, for example: new tires, new muffler, new battery), continuing expenditures for maintaining the asset in good working order (for example, oil changes, antifreeze, transmission fluid changes), and costs of renewing structural parts of an asset (for example, repairs of collision damage, repair or replacement of rusted parts).

Although some expenditures for repair and maintenance may benefit more than one accounting period, they may not be material in amount or they may have uncertain future benefits. They are therefore treated as expenses. These three criteria should all be met for an expenditure to be considered capital in nature:

1. Life of the part: will it benefit two or more accounting periods?
2. Effect of the expenditure: will it enhance the service potential of the asset, or make it more valuable or more adaptable?
3. Materiality of the expenditure: is the dollar amount large and made infrequently?

Land

Land is also considered a capital expenditure when it is used in the operation of a business. In addition to the costs listed in the schedule above, the cost of land should be increased by the cost of removing any unwanted structures on it. This cost is reduced by the proceeds, if any, obtained from the sale of the scrap. For example, assume that the purchase price of land is $100,000 before an additional $15,000 cost to raze an old building: $1,000 is expected to be received for salvaged materials. The cost of the land is $114,000 ($100,000 + 15,000 - 1,000).

Frequently, land and useful buildings are purchased for a *lump sum*. That is, one price is negotiated for their entire purchase. In this case, the purchase price must be apportioned between the land and buildings on the basis of their respective market values, perhaps established by a municipal assessment or a professional land appraiser. Assume that a lump sum of $150,000 is paid for land and buildings, and that the land is appraised at 25% of the total purchase price. The asset account Land would be debited for $37,500 ($150,000 x 25%). The asset Building would be debited for the difference, or $112,500.

Building and Equipment

When a capital asset is purchased, its cost includes the purchase price plus all costs to prepare the asset for use. However, a company may construct its own building or equipment. In the case of a building, for example, costs include those incurred for excavation, building permits, insurance and property taxes during construction, engineering fees, the cost of labour incurred by having company employees supervise and work on the construction of the building, and the cost of any interest incurred to finance the construction during the construction period.

In other cases, one asset may be exchanged for another asset. Assume that a piece of land acquired several years ago at a cost of $25,000 is exchanged for a piece of equipment owned by another company. At the time of the exchange, the **fair value (FV))** of the land is $50,000 and the FV of the equipment is $60,000. What is the cost of the equipment?

This situation requires that the cost of the asset acquired (equipment) be calculated as the fair value of the asset given up (land, FV $50,000); if the FV of the land cannot be established or is not clear, then the FV of the asset acquired (equipment, FV $60,000) is used.

B. The Nature of Depreciation

The role of **depreciation** is to allocate the cost of an asset with a limited useful life over the accounting periods expected to receive benefits from its use. Depreciation begins when the asset is in the location and condition necessary for it to be put to use. Depreciation continues even if the asset becomes idle or is retired from use, unless it is fully depreciated.

An important exception is land. Land is not generally depreciated, as it is assumed to have an unlimited life. In cases where the land does have a limited useful life, it should be depreciated. Landfill sites and quarries are examples of land with limited useful lives.

Three methods of depreciation are discussed in the following sections of this chapter.

Building and Equipment Cost Allocation Methods

Depreciation is an example of the matching concept.

> According to generally accepted accounting principles, a company should select a method of deprecation that represents the way in which the asset's future economic benefits are estimated to be used up.

The most frequently used methods to allocate the cost of property, plant, and equipment over their estimated useful lives are through usage or over time. There are three factors necessary to calculate depreciation of PPE:

- Cost of the asset, discussed above
- Residual value
- Estimated useful life or productive output.

Residual value is the estimated worth of the asset at the end of its estimated useful life. It may be immaterial compared to the cost of the asset, and therefore is often ignored when calculating depreciation.

Useful life is the length of time that a long-lived asset is estimated to be of benefit *to the current owner*. This is not necessarily the same as the asset's economic life. If a company has a policy of replacing its delivery truck every two years, its useful life is two years even though it may be used by the next owner for several more years.

Productive output is the amount of goods or services expected to be provided, generally by equipment. It may be measured in units of output, hours used, or kilometres driven, for example.

Usage Methods

Usage methods of calculating depreciation may be employed when the output of an asset varies from period to period. Depreciation is calculated for each unit produced, each hour worked, each kilometre driven, or each tonne hauled, for example. Assume that Big Dog Carworks Ltd. purchases a piece of equipment costing $20,000 on January 1, 2011. It has a residual value of $2,000 and is expected to have an estimated productive life of 10,000 units. If 1,500 units were processed during 2011, the depreciation expense for the period would be $2,700, calculated as follows:

$$\frac{\text{(Cost – residual value)}}{\text{Estimated number of units of productive output}} = \left(\begin{array}{l}\text{Depreciation} \\ \text{per unit}\end{array} \text{ x } \begin{array}{l}\text{number of units} \\ \text{produced}\end{array}\right) = \text{Depreciation expense}$$

Using the figures given, the calculation would be: ($20,000 - 2,000)/10,000 units = =$1.80 per unit x 1,500 units = $2,700 depreciation expense for 2011. At the time of purchase, this journal entry would be made:

Jan. 1, 2011	Equipment	183	20,000	
	Cash	101		20,000

At the fiscal year end, the following entry would be made in the accounting records:

Dec. 31, 2011	Depreciation Expense - Equipment	623	2,700	
	Accumulated Depreciation - Equipment	193		2,700

The **carrying amount** of the asset (cost less accumulated depreciation) on the December 31, 2011 balance sheet would be $17,300 ($20,000 - 2,700).

> Note that the residual value is only used to calculate depreciation expense. It is not recorded in the accounts of the company or included as part of the carrying amount on the balance sheet.

If 2,000 units were produced during 2012, depreciation expense for that year would be $3,600 ($1.80 per unit x 2,000 units). At December 31, 2012, the following journal entry would be made:

Dec. 31, 2012	Depreciation Expense - Equipment	623	3,600	
	Accumulated Depreciation - Equipment	193		3,600

The carrying amount at December 31, 2012 would be $13,700 ($20,000 – 2,700 – 3,600). If the equipment produces 1,000 units in 2013, 2,500 units in 2014, and 3,000 units in 2015, depreciation expense and carrying amounts would be as follows each year:

(a) *Year*	*(b)* *Carrying amount at start of year*	*(c)* *Usage (units)*	*(d)* *Rate*	*(e)* *Dep'n expense*	*(F)* *Carrying amount at end of year (b) – (e)*
2011	$20,000	1,500	$1.80	$2,700	$17,300
2012	17,300	2,000	1.80	3,600	13,700
2013	13,700	1,000	1.80	1,800	11,900
2014	11,900	2,500	1.80	4,500	7,400
2015	7,400	3,000	1.80	5,400	2,000
		10,000		$18,000	

If the equipment produces exactly 10,000 units over its useful life and is then retired, depreciation expense over all years will total $18,000 (10,000 x $1.80) and the carrying amount will equal residual value of $2,000.

> Usage methods assume that the asset will contribute to the earning of revenues in relation to the amount of output during the accounting period. Therefore, the depreciation expense will vary from year to year.

Time-Based, Straight-Line Method

The **straight-line method of depreciation** – introduced briefly in Chapter 3 – ignores asset usage and assumes that the asset will contribute to the earning of revenues equally during each period. Therefore, equal amounts of depreciation are recorded during each year of its useful life. The straight-line method considers depreciation to be a function of time. On a graph, the plotted points of the yearly depreciation expense would form a straight line; therefore, it is called the straight–line method.

Straight-line method depreciation expense can be calculated as follows:

$$\frac{\text{Cost – residual value}}{\text{Estimated useful life}} = \text{Yearly depreciation expense}$$

Assume that the same $20,000 piece of equipment used earlier, with an estimated service life of five years and an estimated net residual value of $2,000, is depreciated using the straight-line method. The annual depreciation expense under the straight-line method is ($20,000 - 2,000)/5 years = $3,600 per year.

Over the five-year useful life of the equipment, depreciation expense and carrying amounts will be as follows:

(a) *Year*	*(b)* *Carrying amount at start of year*	*(c)* *Dep'n expense*	*(d)* *Carrying amount at end of year (b) – (c)*
2011	$20,000	$3,600	$16,400
2012	16,400	3,600	12,800
2013	12,800	3,600	9,200
2014	9,200	3,600	5,600
2015	5,600	3,600	2,000
		$18,000	

Carrying amount at the end of December 31, 2015 again will be $2,000 ($20,000 – 18,000), the same as the residual value.

Under the straight-line method, depreciation expense for each accounting period remains the same dollar amount over the useful life of the asset.

Accelerated Depreciation

An **accelerated depreciation** method assumes that a long-lived asset will contribute more to the earning of revenues in the earlier stages of its useful life than in the later stages. Accordingly, more depreciation is recorded in earlier years with the depreciation expense gradually decreasing each year. This approach is most appropriate where assets experience high technological obsolescence in the early part of their useful lives (for example, computers) or where the value of the service rendered is not the same in the first year when the asset is new and efficient. compared to the last year when it may be nearly worn out.

Under an accelerated depreciation method, depreciation expense decreases each year over the useful life of the asset.

One type of accelerated depreciation is the *double-declining balance (DDB)* method. To calculate, the percentage cost of the asset (100%) is divided by its estimated useful life, without regard to residual value. The resulting rate is doubled. The doubled rate is applied at the end of each year to the carrying amount of the asset.

For example, assume the same $20,000 equipment with an estimated useful life of five years. The straight-line rate is 20 per cent, calculated by dividing 100 per cent by five years (100%/5 = 20%). This straight-line rate of 20 per cent is then doubled to 40%.

The declining balance rate is applied to the carrying amount of the asset without regard to residual value. However, *the asset is not depreciated below its residual value.* In other words, in the example used above, depreciation expense would not be recorded once the carrying amount is $2,000.

A 40 per cent double-declining balance rate applied to the carrying amount remaining at the end of each year gives the following results for the five years.

(a)	*(b)*	*(c)*	*(d)*	*(e)*
Year	*carrying amount at start of year*	*DDB rate*	*Dep'n expense (b) x (c)*	*Carrying amount at end of year (b) – (d)*
2011	$20,000	40%	$8,000	$12,000
2012	12,000	40%	4,800	7,200
2013	7,200	40%	2,880	4,320
2014	4,320	40%	1,728	2,592
2015	2,592	40%	592	2,000
			$18,000	

Although the depreciation expense should be $1,037 ($2,592 x 40%), only $592 is recorded to bring the carrying amount of the asset down to its residual value of $2,000.

At the end of five years, the carrying amount is once again equal to the residual value of $2,000.

Partial Year Depreciation

Assets may be purchased or sold during a fiscal year. Should depreciation be calculated for a whole year in such a case? The answer depends on corporate accounting policy. There are a number of options. One is to calculate depreciation starting in the month of acquisition, or up to the month in which the asset is sold. The method illustrated below and used thereafter records half a year's depreciation regardless of when an asset purchase or sale occurs during the year.

Assume again that Big Dog Carworks Ltd. purchases a piece of equipment for $20,000 with an estimated useful life of five years and a residual value of $2,000. Recall that depreciation expense for 2011 was $3,600 using the straight-line method. Because of the ½ year rule, depreciation expense for 2011 would be $1,800 ($3,600 x ½) even though the asset was purchased on the first day of the fiscal year. Using the double-declining balance method, depreciation expense for 2011 would be $4,000 ($8,000 x ½). Under the usage method, 2011 depreciation would not be affected. Presumably usage would be less if the asset is purchased part way through the year, so this depreciation method already takes this into account.

Partial year depreciation (using the ½ year rule hereafter) is also recorded in the year when an asset is disposed under the straight-line and accelerated depreciation methods.

Revision of Depreciation Estimates

Both the useful life and residual value of a depreciable asset are estimated at the time it is purchased. As time goes by, these estimates may prove inaccurate. In these cases, the depreciation expense is recalculated from the date of the change in the accounting estimate and applied going forward. *No change is made to depreciation expense already recorded.*

Consider the example of the equipment purchased for $20,000 on January 1, 2011, with an estimated useful life of five years and residual value of $2,000. If the straight-line depreciation method is used, the yearly depreciation expense is $3,600.

After two years, the carrying amount at the end of 2012 is $12,800 ($20,000 - 3,600 - 3,600). Assume that on January 1, 2013, management estimates the remaining useful life of the equipment to be not three years but six years, and the residual value to be $5,000 rather than $2,000.

Depreciation expense for the next six years would be calculated as follows:

$$\frac{\text{(Remaining carrying amount – revised residual value)}}{\text{Estimated useful life}}$$

$$= \frac{(\$12,800 – 5,000)}{6 \text{ years}}$$

$$= \$1,300 \text{ per year}$$

Subsequent Capital Expenditures

As noted earlier, normal, recurring expenditures that relate to day-to-day servicing of depreciable assets are not capitalised, but rather expensed when incurred. Oil changes and new tires for vehicles are examples. Some parts of these assets also need to be replaced at regular intervals - airplane and truck engines, for instance, or parts of production machinery. Other parts need to be replaced infrequently and on an unscheduled basis, such as replacement of a building’s interior. If the costs of these expenditures are material and can be reliably measured, and the items will likely contribute to future economic benefits of the company, they are added to the cost of the asset rather than being expensed when incurred.

If the costs of the replaced parts can be reasonably determined, their carrying amounts are *derecognised* (removed from the accounting records) at the same time as the replacements are capitalised. In addition, costs of major inspections are capitalised even if no major parts are replaced. Prior inspection’s costs are derecognised if determinable.

Additions to existing depreciable assets affect future depreciation expense in the same manner as changes in accounting estimates discussed above. Recall our original example: Equipment is purchased on January 1, 2011 for $20,000. It has an estimated useful life of five years and a residual value of $2,000. Assume that a $5,000 device is added to the equipment on January 1, 2014 to reduce pollution emissions. Further, assume that the addition of the device will increase the residual value of the equipment to $3,000 but will not extend its useful life. The journal entry to record the addition is:

Jan. 1, 2014	Equipment	183	5,000	
	Cash	101		5,000

If the straight-line depreciation method had been used ($3,600 per year), the carrying amount of this equipment would be $14,200 ($20,000 - 3,600 - 3,600 - 3,600 + 5,000). *The ½ year rule does not apply to additions to existing depreciable assets*.

Depreciation expense for the next two years will be $5,600, calculated as follows:

$$\frac{\text{(Remaining carrying amount - residual value)}}{\text{Remaining useful life}}$$

$$= \frac{\$14{,}200 - 3{,}000}{2 \text{ years}}$$

$$= \$5{,}600 \text{ per year}$$

At the end of December 31, 2015, carrying amount will equal the revised residual value of $3,000 ($20,000 – 3,600 – 3,600 – 3,600 + 5,000 – 5,600 – 5,600).

If the double-declining balance method of depreciation is used, the same calculation is performed as before. In our example, the 2014 carrying amount using the double-declining balance method and prior to the additional $5,000 capital expenditure is $4,320, as follows:

(a)	*(b)*	*(c)*	*(d)*	*(e)*
Year	*Carrying amount at start of year*	*DDB rate*	*Dep'n expense (b) x (c)*	*Carrying amount at end of year (b) – (d)*
2011	$20,000	40%	$8,000	$12,000
2012	12,000	40%	4,800	7,200
2013	7,200	40%	2,880	4,320

Depreciation expense for the next two years will be as follows:

(a)	*(b)*	*(c)*	*(d)*	*(e)*
Year	*Carrying amount at start of year*	*DDB rate*	*Dep'n expense (b) x (c)*	*Carrying amount at end of year (b) – (d)*
2014	$9,320	40%	$3,728	$5,592
2015	5,592	40%	2,237	3,355

This amount is the $4,320 carrying amount at December 31, 2013 plus the $5,000 addition.

Note that the carrying value of the asset at the end of 2015 ($3,355) is still above its new estimated residual value of $3,000, so full depreciation is claimed in 2015.

Impairment of Property, Plant, and Equipment

Under generally accepted accounting principles, management must compare the **recoverable amount** of a long-lived asset with its carrying amount (cost less accumulated depreciation) at the end of each reporting period. The recoverable amount is the fair value of the asset at the time less any estimated costs to sell it. If the recoverable amount is lower than the carrying amount, and **impairment loss** must be recorded.

An impairment loss may occur because of technological obsolescence, an economic downturn, or a physical disaster, for instance. When an impairment is recorded, subsequent years' depreciation expense must also be revised.

Recall again our $20,000 equipment purchased January 1, 2011 with an estimated useful life of five years and a residual value of $2,000. Assume straight-line depreciation has been recorded for 2011 and 2012 at $3,600 per year. At December 31, 2012, the carrying amount of the equipment is $12,800 ($20,000 – 3,600 – 3,600). At that point management determines that new equipment with equivalent capabilities can be purchased for much less than the old equipment due to technological changes. As a result, the fair value of the original equipment at December 31, 2012 is estimated to be only $8,000. Estimated disposal costs are $1,000 and residual value is now zero.

The recoverable amount for the old equipment is $7,000 ($8,000 – 1,000). Because the recoverable amount is less than its carrying amount of $12,800, an impairment loss of $5,800 ($12,800 – 7,000) is recorded in the accounting records of BDCL as follows:

Dec. 31, 2012	Impairment Loss	625	5,800	
	Accumulated Depreciation - Equipment	193		5,800

Note that the decline in carrying amount is recorded in the Accumulated Depreciation account of the related asset.

This reduces the carrying amount of the equipment to $7,000. The loss is reported on the income statement in the same section as related depreciation expense.

Revised depreciation expense of $2,333 per year would be recorded at the end of 2013, 2014, and 2015, calculated as follows:

$$\frac{\text{(Revised carrying amount – revised residual value)}}{\text{Remaining useful life}}$$

$$= \frac{\$7,000 – 0}{\text{3 years}}$$

$$= \$2,333 \text{ per year}$$

Impairment losses can be reversed in subsequent years. Also, if the fair value of a long-lived asset can be reliably measured, it can be revalued to more than original cost. However, the revaluation process needs to be conducted thereafter on a regular basis. These topics are beyond the scope of introductory financial accounting.

Significant Parts

Each *major component* that has a different estimated useful life than the rest of an asset needs to be recorded and depreciated separately. For instance, assume a commercial airliner is purchased for $100 million ($100M) on January 1, 2011 with the following components: airframe, engines, landing gear, interior, and other parts. Original cost, estimated residual value, and estimated useful lives are as shown in the table below. Assuming the straight-line method is used, annual depreciation is calculated as follows on each component:

(a)	*(b)*	*(c)*	*(d)*	*(e)*
Component	*Component cost*	*Residual value*	*Useful life (years)*	*Annual dep'n. expense [(b) – (c)]/(d)*
Airframe	$60M	$4M	20	$2.8M
Engines	20M	2M	5	3.6M
Landing Gear	10M	-0-	2	5M
Interior	2M	-0-	10	.2M
Other	8M	-0-	4	2M
Total	$100M			

The cost of each component as well as the accumulated depreciation related to each component should be recorded separately in the company's records. Yearly depreciation expense is also calculated separately for each component as shown in the last column above, but these expenses are usually combined into one amount when reported on the income statement.

Components that have the same estimated useful life, residual value, and depreciation method can be grouped together. In the above, example, "Engines" are considered one component, even though there may be several on the aircraft.

C. Derecognition of Property, Plant, and Equipment

Property, plant, or equipment is *derecognised* (that is, removed from the accounting records) when it is sold or when no future economic benefit is expected. As discussed earlier, partial depreciation must be recorded when a disposal occurs. The means to account for the disposal of common types of PPE, such as buildings and equipment, is discussed next.

Sale or Retirement of PPE

When a capital asset has reached the end of its useful life it can be either sold or retired. In either case, the asset cost and accumulated depreciation are removed from the records, after depreciation expense has been recorded up to the date of disposal or retirement.

Recall the calculation of straight-line depreciation for the $20,000 of equipment with an estimated useful life of five years and a residual value of $2,000. Assume that the general ledger T-accounts of Equipment and Accumulated Depreciation contain the following entries for the last five years:

Equipment			
Year 1	20,000		

Accumulated Depreciation			
		Year 1	3,600
		Year 2	3,600
		Year 3	3,600
		Year 4	3,600
		Year 5	3,600
			18,000

Assume that the equipment is sold at the end of 2015, when accumulated depreciation totals $18,000. The carrying amount at this date is $2,000 ($20,000 cost – $18,000 accumulated depreciation). Three different situations are possible.

1. Sale at carrying amount

   Assume the equipment is sold for its residual value of $2,000. No gain or loss on disposal would occur:

Cost	$ 20,000
Accumulated depreciation	(18,000)
Carrying amount	2,000
Proceeds of disposition	(2,000)
Gain on disposal	$ -0-

2. Sale above carrying amount

   Assume the equipment is sold for $3,000. A gain of $1,000 would occur:

Cost	$ 20,000
Accumulated depreciation	(18,000)
Carrying amount	2,000
Proceeds of disposition	(3,000)
Gain on disposal	$ (1,000)

3. Sale below carrying amount

   Assume the equipment is sold for $500. A loss on disposal of $1,500 would occur:

Cost	$ 20,000
Accumulated depreciation	(18,000)
Carrying amount	2,000
Proceeds of disposition	(500)
Loss on disposal	$ 1,500

The journal entry to record each of these scenarios is as follows:

Sale at Carrying Amount
The asset is sold for $2,000.

Cash	101	2,000	
Acc. Dep'n – Equipment	193	18,000	
Equipment	183		20,000

Sale above Carrying Amount
The asset is sold for $3,000.

Cash	101	3,000	
Acc. Dep'n – Equipment	193	18,000	
Gain on Disposal	750		1,000
Equipment	183		20,000

Sale below Carrying Amount
The asset is sold for $500.

Cash	101	500	
Acc. Dep'n – Equipment	193	18,000	
Loss on Disposal	760	1,500	
Equipment	183		20,000

In each of these cases, the cash proceeds must be recorded (by a debit) and the cost and accumulated depreciation must be removed from the accounts. A credit difference represents a gain on disposal that is reported on the income statement; a debit difference represents a loss on disposal. It is also reported on the income statement.

Disposal Involving Trade-In

It is a common practice to exchange a used capital asset for a new one. This is known as a **trade-in.** The value of the trade-in agreed by the purchaser and seller is called the **trade-in allowance** . This amount is applied to the purchase price of the new asset, and the purchaser pays the difference. For instance, if the cost of a new asset is

$10,000 and a trade-in allowance of $6,000 is given for the old asset, the purchase will pay $4,000 cash ($10,000 – 6,000).

Sometimes as an inducement to the purchaser, the trade-in allowance is higher than the fair value of the used asset on the open market. Regardless, the cost of the new asset must be recorded at its fair value, calculated as follows:

Cost of new asset = Cash paid + fair value of asset traded

If there is a difference between the fair value of the old asset and its carrying value, a gain or loss results.

Assume again that equipment was purchased by BDCL for $20,000 and has accumulated depreciation of $18,000 at the end of 2015. It is traded on January 1, 2016 for new equipment with a list price of $25,000. A trade-in allowance of $2,500 is given on the old equipment, which has a fair value of only $1,800. In this case, the cost of the new asset is calculated as follows:

Cash paid + fair value of asset traded = Cost of new asset
$22,500 + 1,800 = $24,300

Cash paid will equal the difference between the selling price of the new equipment less the trade-in allowance, or $22,500 ($25,000 - 2,500). The fair value of the asset traded-in is $1,800. The cost of the new asset is therefore $24,300 ($23,000 + 1,800).

There will be a loss on disposal of $200 on the old equipment, calculated as follows:

Cost	$ 20,000
Accumulated depreciation	(18,000)
Carrying amount	2,000
Fair value	(1,800)
Loss on disposal	$ 200

The journal entry to record the purchase of the new equipment and trade-in of the old equipment is:

Jan. 1, 2016	Equipment (new)	183	24,300	
	Accumulated Depreciation – Equipment	193	18,000	
	Loss on Disposal	760	200	
	Equipment (old)	183		20,000
	Cash	101		22,500

By this entry, the cost of the new equipment ($24,300) is entered into the accounts, the accumulated depreciation and cost of the old equipment is removed from the accounts, and the amount of cash paid is recorded. The debit difference of $200 represents the loss on disposal of the old equipment. This is recorded on the income statement as an expense.

D. Intangible Assets

Another major category of capital assets do not have physical substance. These are called **intangible assets**. These are long-lived assets that are capable of being sold or transferred by the company, or arise from legal rights. The characteristics of various types of intangible assets are discussed below.

Patents

A **patent** is an intangible asset that affects how a company produces its products. A patent is granted when the state gives a company an exclusive legal privilege to produce and sell a product or use a process for a specified period. This period varies depending on the nature of the product or process patented, and legislation in effect in each country. Modifications to the original product or process can result in a new patent being granted, in effect extending the life of the original patent.

Patents are recorded at cost. If purchased from an inventor, the patent's cost is easily identified; if developed internally, the patent's cost includes all expenditures incurred in the development of the product or process, including salaries and benefits of staff involved. The formula for Coca-Cola is patented (and secret).

Copyrights

A **copyright** is another intangible asset that confers on the holder an exclusive legal privilege to publish a literary or artistic work. In this case, the state grants control over a published or artistic work for the life of the copyright holder (often the original artist) and for a specified period afterward. This control extends to the reproduction, sale, or other use of the copyrighted material.

Trademarks

A **trademark** is a symbol or a word used by a company to identify itself or one of its products in the marketplace. Symbols are often logos printed on company stationery or displayed at company offices, on vehicles, or in advertising. Well-known examples are Coke® and IBM®. The right to use a trademark can be protected by registering it with the appropriate state agency. The symbol '®' denotes that a trademark is registered. Normally a trademark does not diminish in value through the passage of time or usage but its value may be impaired by a loss of market share for the related product, for instance.

Franchises

A **franchise** is a legal right granted by one company (the franchisor) to another company (the franchisee) to sell particular products or to provide certain services in a given territory using a specific trademark or trade name. In return, the franchisee pays a fee to the franchisor. McDonald's® is one example of a franchised fast-food chain. The right to manufacture and sell Coke is another example.

Another example of a franchise is one granted by government for the provision of certain services within a given geographical location: for example, television stations and telephone services authorized by the telecommunications branch of the state, or garbage collection authorized within a given community.

In addition to the payment of an initial franchise fee, which is capitalised, a franchise agreement usually requires annual payments. These payments are considered operating expenses.

Computer Software

Computer software programs may be developed by a company, patented, and then sold to customers for use on their computers. Productivity software like Microsoft Office® is an example. The cost of acquiring and developing computer software programs is recorded as an intangible asset, even if it is stored on a physical device like a computer. However, computer software that is integral to machinery – for instance, software that is necessary to control a piece of production equipment – is included as the cost of the equipment and classified as PPE.

Capitalisation of Intangible Assets

Normally, intangible assets are measured at cost at the time of acquisition and are reported on the company's balance sheet. Cost of an acquired intangible asset includes its purchase price and any expenditures needed to directly prepare the asset for its intended use, like the cost of testing. Only rarely are subsequent expenditures added to the initial cost of a purchased intangible asset. Instead, these are expensed as they are incurred.

Intangible assets may also be internally-generated. That is, the entity may expend resources to create processes (for example, computer software) that will provide future economic benefits to it. In this case, a distinction is made between *research* expenditures, which be definition have no demonstrable future economic benefit and therefore may not be capitalised, and *development* expenditures. These may be capitalised if certain criteria are met – for instance, if the product or process has demonstrated technical feasibility, and there is a clear intention to use or sell the intangible asset. Detailed discussion of these topics is beyond the scope of this text.

Amortisation of Intangible Assets

Like depreciation when referring to property, plant, and equipment, **amortisation** is the systematic process of allocating the cost of intangible assets over their estimated useful lives. This is generally done on a straight-line basis, but should reflect the expected pattern of consumption of the related future economic benefits. Residual value is almost always considered to be zero where applicable - for example, when using the straight-line amortisation method.

Like PPE considerations, useful life and residual value of intangible assets are estimated by management and must be reviewed annually for reasonableness. Any effects on amortisation expense because of changes in estimates are accounted for prospectively. That is, prior accounting periods' expenses are not changed.

In some unusual cases, an intangible asset may have an indefinite life. The value of a registered trademark like Pepsi® might be an example. In these cases, the cost of the intangible asset is not amortised. However, the assumption that an intangible asset has an indefinite life is unusual, and must be reviewed and confirmed by management annually.

Examples of amortisation calculations are relatively straightforward. If a patent is purchased by BDCL for $20,000 on July 1, 2011, the accounting entry would be:

Jul. 1, 2011	Intangible Assets	187	20,000	
	Cash	101		20,000

Assuming the patent will last forty years, there is no residual value, and that the ½ year amortisation rule is applied in the years of acquisition and disposal, amortisation expense of $250 ($20,000/40 yrs. X ½ yr.) would be recorded in the accounting records at December 31, 2011 as follows:

Dec. 31, 2011	Amortisation Expense – Intangible Assets	626	250	
	Accumulated Amortisation – Intangible Assets	188		250

Impairment losses, and gains and losses on disposal of intangible assets are calculated and recorded in the same manner as for property, plant, and equipment. For instance, if the patent is judged to be worth only $10,000 on December 31, 2012, the following entries would be recorded:

Dec. 31, 2012	Amortisation Expense Intangible Assets	626	500	
	Accumulated Amortisation – Intangible Assets	188		500
	To record 2012 amortisation ($20,000/40 years)			
Dec. 31, 2012	Impairment Loss	625	9,250	
	Accumulated Amortisation – Intangible Assets	188		9,250
	To record impairment in patent value at Dec. 31, 2012:			

Cost	$20,000
Accumulated amortisation ($250 + 500)	(750)
Carrying amount	19,250
Fair value	(10,000)
Impairment loss	$ 9,250

Note that the decline in carrying amount is recorded in the Accumulated Amortisation account of the related asset.

If the patent is sold on March 31, 2013 for $8,000, and assuming amortisation is calculated based on the ½ year rule, the entries would be:

Mar. 31, 2013	Amortisation Expense Intangible Assets	626	132	
	Accumulated Amortisation – Intangible Assets	188		132
	To record 2013 amortisation to date of disposal: [($20,000 - 250 - 500 - 9,250)/38 years] x ½ year			

The amortisation period is adjusted from the date that the impairment loss was recorded.

Mar. 31, 2013	Cash	101	8,000	
	Loss on Disposal	760	1,868	
	Accumulated Amortisation – Intangible Assets	188	10,132	
	Intangible Assets	187		20,000

To record loss on sale of patent as follows:

Cost	$20,000
Accumulated amortisation ($250 + 500 + 9,250 + 132)	(10,132)
Carrying amount	9,868
Proceeds of sale	(8,000)
Loss on disposal	$ 1,868

E. Goodwill

Assume that Big Dog Carworks Ltd. purchases another company for $10 million ($10M). BDCL takes over all operations, including management and staff. There are no liabilities. The fair values of the purchased assets consist of the following:

Patents	$2M
Machinery	$7M
Total	$9M

Why would BDCL pay $10M for assets with a fair value of only $9M? That answer is that the extra $1M represents **goodwill**. Goodwill is the value attached to the ability of an entity to generate superior earnings compared to other companies in the same industry.

Goodwill is the combination of individually-unidentifiable attributes of a company – like a well-trained workforce, better retail locations, superior products, or excellent senior managers – the value of which is recognised only when a significant portion of the business is purchased by another company.

Recall that among other characteristics, intangible assets must be separately identifiable. Because components of goodwill are not separately identifiable, goodwill is not considered an intangible asset. However, it does have future value and therefore is recorded as a long-lived asset.

In our example above, BDCL is willing to pay $1M for goodwill of the acquired company. Assume the purchase took place on January 1, 2011. The entry to record the purchase would be:

Jan. 1, 2011	Machinery	183	7M	
	Intangible Assets	187	2M	
	Goodwill	189	1M	
	Cash	101		10M

Goodwill is assumed to have an unlimited life. It is therefore not amortised. However, its value may be impaired. A key member of the acquired company’s management team may leave unexpectedly, for instance. In these situations, an impairment loss would be estimated and recorded, and the value of goodwill would be reduced accordingly on the balance sheet, as previously discussed.

F. Disclosure

When long-lived assets are presented on the balance sheet, the notes to the financial statements need to disclose the following:

- details of each class of assets (for example, land; equipment including separate parts; patents; goodwill).
- measurement basis (usually historical cost)
- type of amortisation or depreciation methods used, including estimated useful lives
- cost and accumulated amortisation/depreciation at the beginning and end of the period, including additions, disposals, and impairment losses
- whether the assets are constructed by the company for its own use (if PPE) or internally developed (if intangible assets)
- whether any assets are considered to have indefinite useful lives.

Examples of appropriate disclosure of long-lived assets were shown in notes 3(d), 3(h), and 4 of BDCL's financial statements in chapter 7.

ASSIGNMENT MATERIALS

Discussion Questions

1. The cost of a long-lived asset is said to be *capitalised*. What does this mean?
2. How does a capital expenditure differ from a revenue expenditure?
3. Assume that you have purchased a computer for business use; illustrate, using examples, capital and revenue expenditures associated with its purchase.
4. A company purchases land and buildings for a *lump sum*. What does this mean? What is the acceptable manner of accounting for a lump sum purchase?
5. How does the concept of materiality affect the recording of an expenditure as a capital or revenue item?
6. List the three criteria used to determine whether a replacement part for equipment is considered a capital or revenue expenditure.
7. When one long-lived asset is exchanged for another, how is the cost of the newly-acquired asset determined?
8. What is depreciation?
9. Long-lived assets can be considered future benefits to be used over a period of years. The value of these benefits in the first years may not be the same as in later years. Using a car as an example, indicate whether you agree or disagree.
10. Assume that you have recently purchased a new sports car. Is a usage or a time-based method preferable for recording depreciation? Why?
11. Why is residual value ignored when depreciation is calculated using the declining balance method but not the straight-line method? Is this inconsistent? Why or why not?
12. What is the formula for calculating the declining balance method of depreciation? the straight-line method?
13. What is the double-declining balance rate of depreciation for an asset that is expected to have a ten-year useful life?
14. Explain two types of partial-year depreciation methods.
15. What changes in estimates affect calculation of depreciation expense using the straight-line method? Explain the appropriate accounting treatment when there is a revision of an estimate that affects the calculation of depreciation expense.
16. Explain the effect on the calculation of depreciation expense for capital expenditures made subsequent to the initial purchase of property, plant, or equipment.
17. Explain the process for determining whether the value of a long-lived asset has been impaired, and the required adjustments to the accounting records.
18. Your friend is concerned that the calculation of depreciation and amortisation relies too much on the use of estimates. Your friend believes that accounting should be precise. Do you agree that the use of estimates makes accounting imprecise? Why or why not?
19. Why are the significant parts of property, plant, and equipment recorded separately?
20. When does the derecognition of PPE not result in a gain or loss on disposal?
21. What is a trade-in? Explain whether a trade-in is the same as the sale of an asset.

22. Why might a trade-in allowance, particularly in the case of a car, be unrealistic? Why would a dealer give more trade-in allowance on a used car than it is worth?
23. How is the cost of a new capital asset calculated when a trade-in is involved?
24. How are intangible assets different from property, plant, and equipment? the same?
25. What is a patent? Assume a patent's legal life is twenty years. Does a patent's useful life correspond to its legal life? Why or why not? Support your answer with an example.
26. How does a copyright differ from a trademark? Give an example of each.
27. What is goodwill? Why is a company's internally-generated goodwill usually not recorded in its accounting records?
28. How are intangible assets valued, and what are their financial statement disclosure requirements?

Comprehension Problems

CP 8-1

Ekman Corporation purchased a new laser printer to be used in its business. The printer had a list price of $4,000, but Ekman was able to purchase it for $3,250. The company expects it to have a useful life of five years, with an estimated residual value of $250. Ekman is paying the delivery costs of $100, set-up and debugging costs of $300, and the costs of purchasing an appropriate table for $50. There was sales tax of 10 per cent on the purchase price of the printer but not on the other costs.

View Solution

Required:

1. Calculate the total cost of the laser printer.
2. Ekman management asks you whether the straight-line or double-declining balance method of depreciation would be most appropriate for the printer. Provide calculations to support your answer.

CP 8-2

Glasgo Holdings Inc. purchased a property including land and a building for $300,000. The market value of the land was $100,000 and the building, $300,000.

View Solution

Required: Using these appraisals, prepare a journal entry to record the purchase.

CP 8-3

Freeman Inc. purchased a piece of agricultural land several years ago for $125,000. The land has a fair value of $200,000 now. The company plans to exchange this land for equipment owned by a land developer that has a fair value of $240,000. The equipment was originally purchased for $325,000, and $80,000 of depreciation has been recorded to the date of the sale on April 30, 2013.

View Solution

Required:

1. Prepare the journal entry on the books of
    a. Freeman
    b. the developer.
2. Why would the developer give up an asset with a fair value of $240,000 in exchange for an asset with a fair value of only $200,000?

CP 8-4

Mayr Inc. purchased a machine for its factory on June 6, 2016 for $110,000. The machine is expected to have an estimated useful life of ten years with a residual value of $10,000.

View Solution

Required: Compute the depreciation for 2016 and 2017 using

1. The straight-line method
2. The double-declining balance method.

CP 8-5

Global Flow Inc. purchased a computer on January 1, 2011 for $3,000 cash. It had an estimated useful life of three years and no residual value. Global Flow made the following changes to the computer:

Mar. 1, 2011	Added storage capacity at a cost of $1,000. This had no effect on residual value or estimated useful life.
Apr. 1, 2012	Added a new processing board for $2,000, which extended the estimated useful life of the computer another three years but did not affect residual value.

View Solution

Required:

1. Prepare a journal entry to record each of the above expenditures. Assume all amounts are material.
2. Calculate and prepare journal entries to record depreciation expense for 2011 and 2012, assuming a December 31 fiscal year-end and ½ year partial depreciation policy.

CP 8-6

Refer to the information in CP 8-4. At December 31, 2018, Mayr revised its estimate of the machine's useful life to four years.

View Solution

Required: Calculate the depreciation for 2018 using
1. The straight-line method
2. The double-declining balance method.

CP 8-7

Refer to the information in CP 8-4 and 8-6. Assume Mayr disposed of the machine on January 1, 2019. (2019 depreciation calculations are not necessary.)

View Solution

Required: Using the straight-line method of depreciation, make the necessary calculations, assuming
1. The equipment was sold for $60,000
2. The equipment was sold for $85,000
3. The equipment was sold for $71,250.

CP 8-8

Refer to the information in CP 8-4 and 8-6. Assume Mayr traded in the machine on an improved model with a listed selling price of $150,000. The company received a trade-in allowance of $100,000 on the old machine. The fair value of the old machine was $95,000.

View Solution

Required: Prepare the journal entry to record the trade-in on the equipment at January 1, 2019. Assume the straight-line method of depreciation is used.

CP 8-9

Penny Corp. purchased a new car on March 1, 2011 for $25,000. The estimated useful life of the car was five years or 500,000 kms. Estimated residual value was $2,000. The car was driven 120,000 kms. in 2011 and 150,000 kms. in 2012.

View Solution

Required: Calculate the depreciation for 2011 and 2012 using
1. The straight-line method
2. Usage method (kms.)
3. Double-declining balance method.

CP 8-10

Accountants distinguish between capital and revenue expenditures for some types of transactions. The entries for such transactions can be made to any one of the following accounts:

Balance Sheet Accounts
a. Land
b. Buildings
c. Equipment
d. Trucks
e. Automobiles
f. Accumulated depreciation

Income Statement Accounts
g. A revenue account
h. An expense account.

View Solution

Required: For each transaction below, indicate the account to be adjusted. Assume all expenditures are material in amount. Explain your answers.

Example:
__b_ Architect fees to design building

____ Battery purchased for truck
____ Cash discount received on payment for equipment
____ Commission paid to real estate agent to purchase land
____ Cost of equipment test runs
____ Cost to remodel building
____ Cost to replace manual elevator with automatic elevator
____ Cost of sewage system
____ Equipment assembly expenditure
____ Expenditures for debugging equipment
____ Installation of air-conditioner in automobile
____ Insurance paid during construction of building
____ Legal fees associated with court case to defend title to land purchased
____ Oil change for truck
____ Payment for landscaping
____ Proceeds received on demolition of derelict building on land purchased
____ Expenditures for removal of derelict structures
____ Repair made to building after moving in
____ Repair of collision damage to truck
____ Repair of torn seats in automobile
____ Replacement of rusted fender on automobile
____ Replacement of transmission in automobile
____ Special floor foundations for installation of equipment
____ Tires purchased for truck
____ Transportation expenditures to bring equipment to plant.

CP 8-11

Murphy Limited purchased a $30,000 asset with a five-year life expectancy and no residual value. Two alternative methods of calculating depreciation expense are presented below.

Year	*Method A*	*Method B*
1	$3,000	$6,000
2	6,000	9,600
3	?	?

View Solution

Required:

1. Identify the method of depreciation and compute the depreciation expense for the third year under each method.
2. The comptroller of Murphy considers depreciation to be nothing more than an arbitrary calculation, based on unreliable estimates. She proposes to use Method B for Years 1 and 2 and Method A for Years 3, 4, and 5. In this way, she can deduct the maximum depreciation each year over the life of the asset. Is her proposal acceptable? Why or why not?
3. What factors should be considered in choosing a method of depreciation?

CP 8-12

The Savage Corporation purchased three milling machines on January 1, 2013 and immediately placed them in service. The following information relates to these purchases:

	Machine 1	*Machine 2*	*Machine 3*
Cost	$7,500	$7,500	$7,500
Residual value	-0-	1,200	300
Useful life	5 Years	6 Years	8 Years

The company uses the straight-line method of depreciation, and records ½ year depreciation in the years of acquisition and disposal. On January 1, 2018, machine 1 was sold for $500. On the same day, management re-evaluated the estimated useful lives and the residual values of the remaining machines. They came to the conclusion that machine 2 had a remaining useful life of two years (that is, to December 31, 2019), while residual value remained unchanged. Machine 3 had a remaining useful life of five years (that is, to December 31, 2X12) but now no residual value.

View Solution

Required: Prepare journal entries

1. To record the sale of machine 1 on January 1, 2018.
2. To record the revised 2018 depreciation expense for machine 2.
3. To record the revised 2018 depreciation expense for machine 3.

CP 8-13

The following Equipment and Accumulated Depreciation accounts appear in the general ledger of the Sadler Corporation at December 31, 2016.

Equipment — No. 183

Date 2014	Description	F	Debit	Credit		Balance
Jan. 1	Machine #1		5000–		DR	5000–
Jan. 1	Machine #2		10000–		DR	15000–

Accumulated Depreciation—Equipment — No. 193

Date 2016	Description	F	Debit	Credit		Balance
	Bal. Fwd.				CR	2250–
Dec. 31	Depreciation 2016			1500–	CR	3750–

The company uses the ½ year rule in the years of acquisition and disposal. At the time of purchase, the machines had an estimated useful life of ten years with no residual value. The straight-line method of depreciation is used by the. On January 1, 2017, it was estimated that the equipment would last only four more years (to December 31, 2020).

View Solution

Required:

1. Calculate the depreciation expense for 2017.
2. Prepare the journal entry to record 2017 depreciation expense.
3. Post the accumulated depreciation part of the entry in 2 above to the general ledger and calculate the new balance in the account.
4. How much should the depreciation amount have been in each year if the actual four-year useful life of the equipment had been known in 2016?
5. Given the substantial difference between the depreciation amounts in 2016 and 2017, is the information conveyed to the reader of Sadler Corporation's 2017 financial statements reasonable?

CP 8-14

St. Laurent Limited purchased a truck for cash on January 1, 2014. The company's fiscal year end is December 31. The company uses the ½ year rule to calculate depreciation in the year of acquisition and disposal. The following details apply:

Cost	*Useful life*	*Residual value*	*Depreciation method*
$10,500	5 years	$500	Double-declining balance

On March 1, 2015, the company paid $3,500 for gas and oil, a tune-up, new tires, and a battery. It also paid $4,000 to install a lift on the back of the truck.

View Solution

Required:

1. Prepare journal entries to record
   - a. The purchase of the truck
   - b. Depreciation for 2014
   - c. The 2015 expenditures relating to the truck
   - d. Depreciation for 2015.
2. Prepare the journal entries to record the sale of the truck on March 3, 2016 for $8,000 cash, including 2016 depreciation expense.

CP 8-15

Brown Company paid $900,000 cash to purchase the following tangible and intangible assets of Coffee Company on January 1, 2014:

Land and building	$500,000
Patents	100,000
Machinery	250,000

The land and building were appraised at fair values of $275,000 each, for a total of $550,000. The building is depreciated using the double-declining balance method, has an estimated useful life of ten years, and a residual value of $410,000. The patents have an estimated useful life of twenty years and are amortised on a straight-line basis. They have no residual value. On December 31, 2015, the value of the patents was estimated to be $80,000. The machinery has an estimated useful life of five years and a residual value of 10% of cost. Depreciation expense is calculated on the basis of productive output. The machinery's productive output was estimated to be 60,000 units. Actual production was as follows:

2014	10,000
2015	15,000
2016	20,000

The machinery was sold on December 2, 2016 for $100,000. The company uses the ½ year rule to calculate depreciation and amortisation expense in the years of acquisition and disposal. Its fiscal year-end is December 31.

View Solution

Required: Prepare journal entries to record in the records of Brown:

1. The $900,000 purchase
2. Depreciation and amortisation expense for 2014
3. The decline in value of the patents at December 31, 2015
4. The sale of the machinery.

Problems

P 8-1

Arrow Construction Company Ltd. purchased a farm from K. Jones. Arrow and Jones completed the transaction under the following terms: a cheque from Arrow to Jones for $140,000; bank loan assumed by Arrow, $100,000. Legal, accounting, and brokerage fees amounted to $20,000.

It was Arrow's intention to build homes on the property after sub-dividing. Crops on the farm were sold for $6,000; a house, to be moved by the buyer, was sold for $1,600; barns were razed at a cost of $6,000, while salvaged lumber was sold for $4,400. The property was cleared and levelled at a cost of $10,000.

The necessary property was turned over to the township for roads, schools, churches, and playgrounds. Riverside still expected to secure a total of 500 identical lots from the remaining land.

Required: Prepare a schedule showing the cost to Arrow of the 500 lots.

P 8-2

The following items relate to the acquisition of a new machine by the Bohn Group Inc. On the right-hand side are a number of possible accounting treatments; on the left-hand side are a number of independent accounting situations:

Situation

___ Invoice price of new machine, net of cash discount offered

___ Cash discount on the above, which has not yet been taken

___ Anticipated first year's savings in operating costs from use of new machine

___ Two-year service contract on operations of new machine paid in full

___ Cost of materials used while testing new machine

___ Cost of installing sound insulation in wall near machine so that nearby office employees will not be disturbed by it

___ Cost of removing machine that new machine replaces.

Accounting Treatment

(1) Debit Machinery account
(2) Debit an expense account for the current period
(3) Debit an asset other than the machine and amortize the asset separately from the machine
(4) Credit Machinery account
(5) None of the above; explain what account would be appropriate, if applicable.

Required: Indicate the appropriate accounting treatment for each situation. Record any assumptions that you think might be necessary for any given situation.

P 8-3

Northland Shows Ltd. acquired a new amusement ride on July 1. The following details apply to the purchase:

Cost per supplier's invoice (The invoice provided a 1% cash discount if paid within 30 days. It was paid on July 15.)	$20,000
Cash payment on July 4 to Dalton Construction Ltd. for cement base for new ride	4,000
Transportation paid on purchase, July 5	520
Insurance for operation of ride paid in cash on July 5 for three-year term, commencing July 6	90
Alterations to new ride paid in cash July 5 (25% of this will be reimbursed by the vendor)	900
Installation costs paid in cash July 6	188

Required:

1. Prepare journal entries to record the acquisition of Northland's new ride.
2. Calculate the carrying amount of the asset.

P 8-4

Janz Corporation purchased a piece of machinery on January 1, 2015. The company's year-end is December 31. The following information is applicable:

Cost	*Useful life*	*Residual value*	*Depreciation method*
$90,000	9,000 units	-0-	Usage

Output during 2015 and 2016 was 2,000 and 3,000 units, respectively.

Required:

1. Calculate the depreciation expense for 2015 and 2016.
2. What is the balance of accumulated depreciation at the end of 2016?
3. What is the carrying amount of the machinery shown on the balance sheet at the end of 2016?
4. Prepare a partial comparative balance sheet for Janz Corporation at the end of 2016.

P 8-5

Livingston Corp. purchased printer on January 1, 2013. The company year-end is December 31. The following information is applicable:

Cost	*Estimated useful life*	*Residual value*	*Usage (units)*	
$5,000	4 years	$1,000	2013	10,000
			2014	15,000
			2015	20,000
			2016	5,000

Required:

1. Calculate the depreciation expense for a four-year period under each of these depreciation methods: straight-line, double-declining balance, and usage. Assume the company uses the ½ year rule to calculate depreciation expense in the year of acquisition and disposal under the straight-line and double-declining balance bases. Present your solution in the following format:

	Depreciation expense		
Year	*Straight-line*	*Double-declining balance*	*Usage*
2013			
2014			
2015			
2016			
Total			

2. The president has asked you to describe one factor that might affect depreciation rate and residual value estimates, and how these changes to estimates will be accommodated should they occur. How would you respond?
3. Which method of depreciation would you recommend in this case? Why?

P 8-6

Roberto Trucks Inc. purchased a delivery van on January 1, 2013. Assume this was the company's only capital asset and that the company uses the ½ year rule in the year of acquisition and disposal for straight-line and double-declining balance depreciation methods. The following information is available.

Cost	*Estimated useful life*	*Residual value*
$11,000	4 years or 75,000 kms.	$2,000

The truck was driven 20,000 km in 2013.

Required:

1. Calculate the depreciation for 2013 under each of the following methods:
    a. Usage
    b. Straight-line
    c. Double-declining balance
2. Compare the depreciation expense, accumulated depreciation, and carrying amount for 2013 for each of these methods.
3. If one of management's objectives is to maximize 2013 net income, what method should be adopted?

P 8-7

Wynne Ltd. purchased a machine on January 1, 2016 for $23,000. Transportation charges paid by Wynne amounted to $600 and another $1,400 cost was incurred for installation. The residual value of the machine is estimated to be $1,000.

Required:

1. Calculate the amount of the machine on which depreciation will be calculated (that is, the depreciable amount not the carrying amount).
2. In journal entry form, record the depreciation for each year of the expected useful life of the machine under
    a. Straight-line method (estimated useful life three years)
    b. Double-declining balance method.
    Assume that the ½ year rule is not used in the years of acquisition and disposal.
3. On January 1, 2017, Wynne changed the estimated useful life on the machine from a total of three years to a total of five years. Residual value remains at $1,000. Calculate the depreciation that should be recorded in 2017 and each year thereafter assuming the company used the straight-line method.

P 8-8

On January 1, 2011, Young Inc. purchased a machine for $30,000. Its engineers had estimated useful life for the machine at twenty years. The residual value is estimated to be 10 per cent of the original cost. Seven years later, on January 1, 2018, experts were hired to review the expected useful life and residual value of the machine. Here are the findings:

Estimated useful life as of January 1, 2018	8 years
New residual value	$6,000

Depreciation has not yet been recorded in 2018. Assume that the straight-line method of depreciation is used and the company uses the ½ year rule in the years of acquisition and disposal.

Required:

1. Calculate the carrying amount of the machine at December 31, 2017.
2. Calculate the cost of the machine that remains to be depreciated at January 1, 2018 based on the new estimates.
3. Calculate the amount of depreciation expense to be recorded at December 31, 2018, and prepare the necessary journal entry.
4. Record the journal entries if the machine is sold on March 31, 2019 for $22,000.

P 8-9

Part A

Davies Fabricating Inc. started business on May 1, 2014. The year-end of the company is December 31. On May 5, 2014, the company purchased equipment for $130,000 cash. The equipment had an estimated useful life of four years, an estimated total production output of 100,000 units, and a residual value of $10,000. The equipment was depreciated using the units-of-production (usage) method. Estimated units of output over three years were: 2014— 12,000; 2015—30,000; and 2016—20,000.

On January 1, 2017, the company traded in the original equipment for new equipment. The company paid and additional $140,000 cash for the new equipment. The company had used the units-of-output (usage) method to calculate depreciation on the old manufacturing equipment. The fair value of the original equipment was $60,000 at the date of the trade.

Required: Prepare journal entries to record the transactions on the following dates:

1. May 1, 2014
2. January 1, 2017

Part B

On January 1, 2015, Davies Fabricating Inc. was able to buy a nearby warehouse for the storage of its finished product. The cost included land, $50,000; building, $300,000. The company signed a ten-year bank loan for $320,000 and paid the balance in cash. The building had an estimated useful life of fifty years with no residual value. On June 28, 2019, the warehouse was totally destroyed by fire. On July 31, the company was notified that it would receive $270,000 from the insurance company as settlement in full for the building at a later date. The building was depreciated on the straight-line basis. The ½ year rule was *not* used.

Required: Prepare journal entries to record the transactions on the following dates:

1. January 1, 2015
2. June 28, 2019.

P 8-10

Robbins Inc. purchased the following assets of Marine Company for $500,000 cash on September 30, 2011:

Land	$300,000
Building	100,000
Computer software	75,000

The building will be depreciated using the straight-line method. It has an estimated useful life of forty years and a residual value of 10% of cost.

The computer software has an estimated useful life of three years and no residual value. It will be amortised using the double-declining balance method. On January 2, 2012, the value of the computer software was estimated at $50,000. The computer software was sold on September 15, 2013 for $65,000.

Robbins Inc. uses the ½ year rule to calculate depreciation and amortisation expense in the year of acquisition and disposal. Its fiscal year-end is December 31.

Required:

1. Prepare journal entries to record
    a. the $500,000 purchase
    b. depreciation and amortisation expense for 2011
    c. the increase in the value of the computer software at January 2, 2012
    d. the sale of the computer software on September 15, 2013.
2. Calculate the carrying amounts of the assets acquired from Marine Company at January 1, 2014.

Alternate Problems

AP 8-1

McPherson Ltd. commenced construction of a new plant on July 1, 2011. All construction activities were completed by March 31, 2012, after which time the plant went into operation. Total cost incurred during the construction period included

	(000s)
Cost of land (includes the cost of an old building on it)	$ 55
Engineering fees:	
Analysis of sub-soil	$ 8
Construction supervision	50
Analysis of the electrical system design	30
Planning of a new production process (required in order to use new equipment that will be installed in the new building)	45
	$ 133
Subcontractor's charges:	
Demolition of the old building	$ 3
Wages and material for building (excluding landscaping)	531
Landscaping	4
	$ 538
Charges included in the company's operating accounts:	
Wages of employees on construction site	$ 460
Construction materials	1,267
Property taxes payable in advance for the entire fiscal year commencing July 1, 2011)	18
	$1,745

View Solution

Required: As comptroller of McPherson Ltd., determine which of the above costs should properly be included in the cost of the new plant accounts. Briefly explain why you would include or exclude each cost item.

AP 8-2

Rhodes Corp. operates a plant in a building adjacent to its office building. The plant building is old and requires continuous maintenance and repairs. During the year, the following cash expenditures relating to the plant building were incurred:

a.	Continuing, frequent, and low-cost repairs	$26,000
b.	Overhaul of the plumbing system (old costs not known)	17,000
c.	Construction of a new storage shed attached to the plant building (estimated useful life, ten years)	48,000
d.	Replacement of old shingle roof with a new tile roof (cost of the old shingle roof was $30,000; accumulated depreciation was $5,000)	60,000
e.	Inspection of heating furnaces (prior inspection costs totalled $4,000; ½ of these amounts had been depreciated)	10,000

View Solution

Required: Prepare journal entries to record each of items *a* to *e*. Assume all listed costs are material in amount.

AP 8-3

Sheren Limited purchased the following equipment on January 1, 2012.

Cost	*Estimated useful life*	*Residual value*
$6,000	5 years	$300

View Solution

Required:

1. Calculate the total depreciation for the five-year period 2012-2016, under the straight-line and double-declining balance methods. Assume the company uses the ½ year rule to calculate depreciation expense in the year of acquisition and disposal.
2. List the advantages of
   a. The straight-line method of depreciation
   b. The double-declining balance method.

AP 8-4

Stahn Inc., an oil production company, purchased a machine on April 1, 2014. The following information applies:

Cost	*Estimated useful life*	*Residual value*
$40,000	3 years (100,000 tonnes)	$4,000

The machine has an estimated useful life in production output of 100,000 tonnes. Actual output was: Year 1 — 40,000 tonnes; Year 2 — 20,000 tonnes; Year 3 — 10,000 tonnes. The year-end of the company is December 31. The company calculates full-year depreciation in the year of acquisition and disposal.

View Solution

Required:

1. Calculate the depreciation expense and the carrying amount at year-end for the three-year period under each of these depreciation methods: straight-line, double-declining balance, and usage.
2. Assume depreciation has been recorded based on machine usage as calculated above. The machine is obsolete at the end of three years and must be sold, even though the president believes that it could have been used to process an additional 30,000 tonnes of output. He thinks that too little depreciation expense has been charged against income during the three years and that the company has therefore issued inaccurate financial statements. Do you agree? Why or why not?

AP 8-5

Spellman Inc. purchased its first piece of equipment on January 1, 2016. The following information pertains to this machine:

Cost	*Estimated useful life*	*Residual value*
$11,000	5 years	$1,000

As the chief accountant for the company, you need to choose the depreciation method to be used.

View Solution

Required:

1. Calculate the straight-line and double-declining balance method depreciation for 2016, 2017, and 2018. Assume the ½ year rule does not apply to any of these years.
2. Using the format provided, complete comparative partial income statements and balance sheets at December 31 for both the straight-line and declining balance methods of depreciation.

Partial Income Statement	*2016*	*2017*	*2018*
Income before Depreciation and Income Taxes	$30,000	$25,000	$35,000
Depreciation Expense	?	?	?
Income before Income Taxes	$?	$?	$?
Partial Balance Sheet			
Equipment	$?	$?	$?
Less: Accumulated Depreciation	?	?	?
Carrying Amount	$?	$?	$?

3. Which depreciation method should be used to maximize income before income taxes? to maximize the equipment’s carrying amount at December 31, 2018? Explain.

AP 8-6

Fox Creek Machining Ltd. purchased a cutting machine at the beginning of 2014 for $46,000. Fox Creek paid additional charges of $1,200 and $2,800 for freight and installation, respectively. It paid $1,000 to have the building in which the machine was housed suitably altered. Residual value was $2,000. The company uses the ½ year rule for calculating depreciation expense in the year of acquisition and disposal.

View Solution

Required:

1. Calculate the capitalised cost of the machine.
2. In journal form, record the depreciation expense that would be calculated for 2014, 2015, and 2016 using
    a. Straight-line method (with a life estimate of three years)
    b. Double-declining balance method.
3. On January 2015, Fox Creek revised the estimated useful life of the machine from a total of three years to a total of five years. Residual value remained at $2,000. Calculate the depreciation that should be recorded in 2015, 2016, 2017 and 2018 using the straight-line method of depreciation.

AP 8-7

On the first business day of its new fiscal year January 1, 2011, Kencor Trucking Ltd. purchased for $12,000 cash a new, heavy-duty truck from a local dealer. Records indicated it should have a ten-year life span but no residual value. During the first week of January, 2015, the truck's engine was rebuilt for $2,400 and new tires were purchased for $800. These amounts are considered material. On April 1, 2016, the truck was completely wrecked. Alpha Insurance Co. settled the claim for $4,000.

Assume the company calculates depreciation expense based on kilometres driven and that the ½ year rule is used in the year of acquisition and disposal. The estimated total usage was 800,000 kms., including 100,000 in 2016. Actual usage was as follows:

2011: 100,000
2012: 120,000
2013: 80,000
2014: 120,000
2015: 150,000
2016: 30,000

View Solution

Required: State any necessary assumptions and prepare journal entries to record:

1. Purchase of the truck
2. 2014 depreciation expense
3. 2015 engine rebuild
4. 2015 depreciation expense
5. 2016 depreciation expense, write-off of the truck, and receipt of the insurance proceeds.

AP 8-8

The following accounts appear in the general ledger of the Bruce Corp. at December 31, 2014.

Equipment No. 183

Date 2014	Description	F	Debit	Credit		Balance
Jan. 1	Machine 1		6400–		DR	6400–

Accumulated Depreciation—Equipment No. 193

Date 2014	Description	F	Debit	Credit		Balance
Dec. 31	Depreciation for 2014			1000–	CR	1000–
Dec. 31	Depreciation for 2015			1000–	CR	2000–

Machine 1 was estimated to have a useful life of six years, with a residual value of $400. On January 1, 2016, machine 1 was traded in for machine 2. The purchase price of machine 2 was $8,000 and Bruce Corp. received a trade-in allowance of $4,500.

Machine 2 is estimated to have a useful life of eight years, with a residual value of $1,000. The fair value of machine 1 was $4,000 at the date of the trade-in.

View Solution

Required:

1. Prepare a journal entry to record the trade-in of machine 1 for machine 2.
2. Post the appropriate parts of the entry prepared in 1 above to the general ledger accounts and calculate the new balance in each account.
3. The installation cost of machine 2 amounted to $500 and was recorded in the Repairs and Maintenance Expense account when paid. Prepare a correcting entry at December 31, 2016.
4. Prepare the entry to record the depreciation expense for 2016. (Assume the correcting entry required in 3 above has already been made.) Post the appropriate part of this entry to the Accumulated Depreciation account and calculate the new balance in that account.

AP 8-9

Listed below are three long-lived assets:

a. Trademarks
b. Patents
c. Goodwill.

View Solution

Required: Explain the accounting treatment you would suggest for each including amortisation method, with reasons.

AP 8-10

Four machines were acquired by Gold Star Co. Ltd. during 2014 and 2015. Machine A was placed in use at the end of August 2014. Its cost was $26,400, the estimated useful life eight years, and the residual value $2,400. Depreciation was to be calculated on the straight-line basis. The company year-end is December 31. The company uses the ½ year rule to calculate depreciation expense in the year of acquisition and disposal. Machine A was valued at $12,000 by management on December 31, 2016. Estimated disposal costs were $1,000. Residual value was zero. It was sold on December 31, 2017 for $10,000.

Machine B was ready for use October 1, 2014. Depreciation was to be calculated on a units-of-production basis. The cost was $23,600, with a five-year life expectancy and a residual value of $3,600. Estimated production over the five years is 50,000 units. In 2014, 3,000 units were produced, 11,500 in 2015 and 12,000 during 2016. Machines C and D were purchased for a combined total of $34,200 in April 2015 and were in production on July 1 of that year.

The following additional information about machines C and D is available:

Machine	*Appraised value*	*Residual value*	*Estimated life*	*Installation cost*	*Depreciation method*
C	$16,000	$1,000	6 Years	$ 500	Straight-line
D	20,000	1,600	10 Years	1,000	Double-declining balance

View Solution

Required:

1. For each of the four machines, calculate depreciation expense for 2014 and 2015.
2. Prepare journal entries to record payment and to record installation for machines C and D. Assume installation costs were paid on the date they were placed in service.
3. Prepare the 2016 and 2017 journal entries for machine A.

CHAPTER NINE

Equity Financing

Corporations sometimes finance a large portion of their operations by issuing equity in the form of shares. This chapter discusses in detail the nature of the corporate form of organisation, the different types of shares used to obtain funds for business activities, and how these transactions are recorded. It also discusses matters related to the declaration and payment of *dividends* – the distribution of profits to shareholders.

Debt is another type of financing available to corporations – for example, obtaining a bank loan. Debt financing is discussed in a subsequent chapter. In this chapter, the following questions will be examined:

1. What are the defining characteristics of a corporation?
2. What are the rights of shareholders in a corporation?
3. What types of shares can a corporation issue to equity investors?
4. How are share transactions recorded and disclosed in the financial statements?
5. Which features are included with certain classes of shares to make them more attractive to investors?
6. What is a share split and how is it recorded?
7. How are dividends recorded?
8. How are restrictions on retained earnings recorded?
9. What is *book value* and how is it calculated?
10. How does the corporation record a share dividend?

A. The Corporate Structure

The accounting equation expresses a relationship between assets owned by a corporation and the claims against those assets by creditors and shareholders. The accounting for assets and their financial statement disclosure was discussed in preceding chapters. The accounting for shareholders' equity is covered in this chapter. Accounting for equity in a corporation requires a distinction between the two main sources of shareholders' equity: **share capital** and retained earnings**.**

These two basic components are discussed in detail in order to explain the main features of corporate accounting and the guidelines used by accountants for shareholders' equity disclosure. Their relationship to the accounting equation is shown in Figure 9–1.

ASSETS = LIABILITIES + SHAREHOLDERS' EQUITY

SHARE CAPITAL	RETAINED EARNINGS
This is the mount shareholders have paid to purchase ownership interests in a company	This is the total net income earned by a company over its life that has not been distributed to shareholders as dividends.

Figure 9–1 Share capital versus retained earnings

Corporate Characteristics

A unique characteristic of the corporation is that it is legally separate from its owners, who are called *shareholders*. Each unit of ownership of a corporation is called a **share**. If a corporation issues 1,000 shares and you own 100 of them, you own 10% of the company. Corporations can be *privately-held* or *publicly-held*. A privately-held corporation usually has only a relatively few shareholders. Its shares are not issued for sale to the general public. A publicly-held corporation may have many thousands of shareholders. Its shares are offered for sale to the general public sometimes on a stock market like the New York Stock Exchange or the Toronto Stock Exchange.

A corporation has some of the same rights and obligations as individuals. For instance, it pays income taxes on its earnings, can enter into legal contracts, can own property, and can sue and be sued. A corporation also has distinctive features. It has an indefinite life, its owners have limited liability, it can usually acquire capital more easily than in individual, and it is separately regulated by law. These features are discussed below.

Creation by Law

A corporation is formed under legislation enacted by a country or a political jurisdiction within it. For instance, in Canada a company can be formed under either federal or provincial laws. Although details may vary among jurisdictions, a legal document variously described as *articles of incorporation*, a *memorandum of association*, or *letters patent* is submitted for consideration to the appropriate government by prospective shareholders. The document lists the *classes* or types of shares that will be issued as well as the *authorised*, or total, number of shares of each class that can be issued.

When approved, the government issues a *certificate of incorporation*. Investors then purchase shares from the corporation. They meet and elect a *board of directors*. The board formulates corporation policy and broadly directs the affairs of the corporation. This includes the appointment of a person in charge of the day-to-day operations, often called a president, chief executive officer, or similar title. This person in turn has authority over the employees of the corporation.

A shareholder or group of shareholders who control more than 50% of the voting shares of a corporation are able to elect the board of directors and thus direct the affairs of the company. In a large public corporation with many shareholders, minority shareholders with similar ideas about how the company should be run sometimes delegate their votes to one person who will vote on their behalf by signing a *proxy statement*. This increases their relative voting power, as many other shareholders may not participate in shareholders' meetings.

Shareholders usually meet annually to vote for a board of directors—either to re–elect the current directors or to vote in new directors. The board meets regularly, perhaps monthly or quarterly, to review the operations of the corporation and to set policies for future operations. The board may decide to distribute some assets of the corporation as a dividend to shareholders. It may also decide that some percentage of the assets of the corporation legally available for dividends should be made unavailable; in this case, a *restriction* is created. Accounting for such restrictions is discussed later in this chapter.

Wherever it is incorporated, a company is generally subject to these regulations:

1. It must provide timely financial information to investors.
2. It must file required reports with the government.
3. It cannot distribute profits arbitrarily but must treat all shares of the same class alike.
4. It is subject to special taxes and fees.

Despite these requirements, a corporation's advantages usually outweigh its disadvantages when compared to other forms of business like a proprietorship or partnership. These features are described further below.

Indefinite Life

A corporation has an existence separate from that of its owners. Individual shareholders may die, but the corporate entity continues. The life of a corporation comes to an end only when it is dissolved, becomes bankrupt, or has its charter revoked for failing to follow laws and regulations.

Limited Liability

The corporation's owners are liable only for the amount that they have invested in the corporation. If the corporation fails, its assets are used to pay creditors. If insufficient assets exist to pay all debts, there is no further liability on the part of shareholders. This situation is in direct contrast to a proprietorship or a partnership. In these forms of organisation, creditors have full recourse to the personal assets of the proprietorship or partners if the business is unable to fulfil its financial obligations. For the protection of creditors, the limited liability of a corporation must be disclosed in its name. The words "Limited", "Incorporated", or "Corporation" (or the abbreviations "Ltd.", "Inc.", or "Corp.") are often used as the last word of the name of a company to indicate this corporate form.

Ease of Acquiring Capital

Issuing shares allows many individuals to participate in the financing of a corporation. Both small and large investors are able to participate because of the relatively small cost of a share, and the ease with which ownership can be transferred—shares are simply purchased or sold. Large amounts of capital can be raised by a corporation because the risks and rewards of ownership can be spread among many investors.

A corporation only receives money when shares are first issued. Once a share is issued, it can be bought and sold a number of times by various investors. These subsequent transactions between investors do not affect the corporation's balance sheet.

Income Taxes on Earnings

Because corporations are considered separate legal entities, they pay income taxes on their earnings. To encourage risk-taking and entrepreneurial activity, certain types of corporations may be taxed at rates that are lower than other corporations and individual shareholders' income tax rates. This can encourage research and development activity or small-company start-ups, for instance.

Classes of Shares

There are many different types of shares. Differences exist with regard to voting rights, dividend rights, liquidation rights, and other preferential features. The rights of each shareholder depend on the class or type of shares held. The amount of ownership by each shareholder depends on the number of shares held in relation to total shares outstanding.

Each share in a class must be treated like every other share in that class with respect to whatever rights and privileges attach to it. Every corporation issues *common* (or *ordinary*) shares. The rights and privileges usually attached to common shares are

1. The right to participate in the management of the corporation by voting at shareholders' meetings (this participation includes voting to elect a board of directors; each share normally corresponds to one vote);
2. The right to participate in dividends when they are declared by the corporation's board of directors;
3. The right to participate in a distribution of assets on liquidation of the corporation; and
4. The right to appoint auditors.

These rights attach to each common share unless otherwise restricted in the incorporation documents. Some or all of these rights are usually restricted in other classes of shares. The articles of incorporation may also grant the shareholders the **pre-emptive** right to maintain their proportionate interests in the corporation if additional shares are issued.

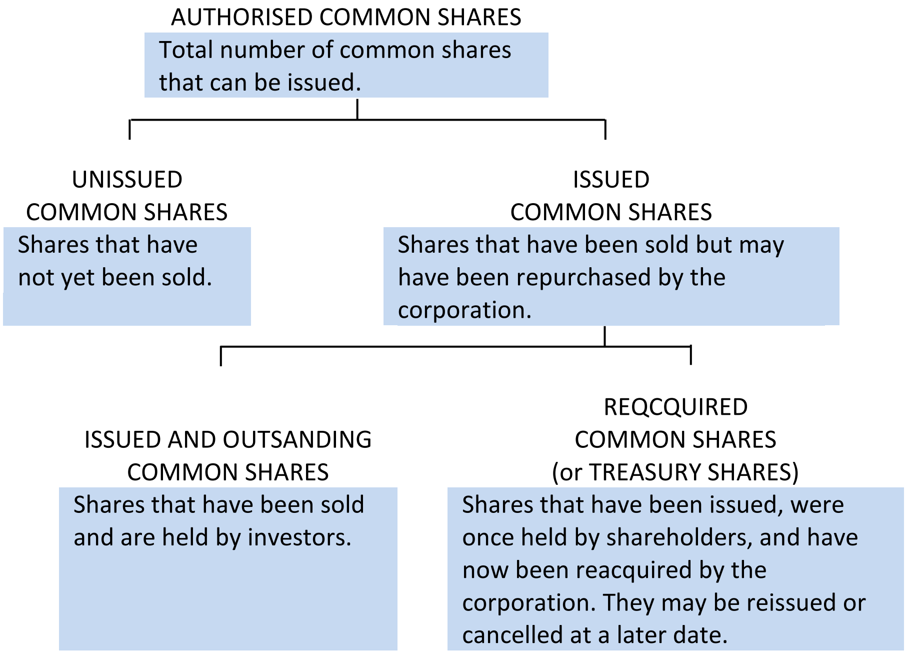
If the company is successful, common shareholders have the potential to receive large dividends payments. As well, the value of common shares may significantly increase. Common shareholders can submit a proposal to raise any matter at an annual meeting and have this proposal circulated to other shareholders at the corporation’s expense. If the corporation intends to make fundamental changes in its business, these shareholders can often require the corporation to buy their shares at their fair value. In addition, shareholders can apply to the courts for an appropriate remedy if they consider that their interests have been unfairly disregarded by the corporation.

Some corporations also issue different classes of shares in order to appeal to as large a group of investors as possible. This permits different risks to be assumed by different classes of shareholders in the same company. For instance, a corporation may issue common shares but divide these into different classes like class A and class B common shares. When dividends are declared, these might only be paid to holders of class A shares.

Preferred shares are another example of how shares can be structured to appeal to a different type of investor. Holders of preferred shares are entitled to payment of dividends before owners of common shares. They usually receive their share of corporate assets first if a corporation ceases to carry on business. In return, though, these shares usually do not carry voting privileges and the amount of dividends their owners receive is limited, though predictable. Preferred shareholders typically assume less risk than common shareholders. In return, they receive only a limited amount of dividends and are given little or no real influence in the control of the corporation. These variations allow a corporation to raise additional capital without existing shareholders giving up control. Other characteristics of preferred shares and dividend payments are discussed later in this chapter.

Status of Common Shares

The shares of a corporation can have a different status at different points in time. They can be **unissued** or **issued**, issued and **outstanding**, or issued and reacquired by the corporation (called **treasury shares**). The meaning of these terms is summarised in Figure 9–2:



AUTHORISED COMMON SHARES

Total number of common shares that can be issued.

UNISSUED COMMON SHARES

Shares that have not yet been sold.

ISSUED COMMON SHARES

Shares that have been sold but may have been repurchased by the corporation.

ISSUED AND OUTSANDING COMMON SHARES

Shares that have been sold and are held by investors.

REQCQUIRED COMMON SHARES (or TREASURY SHARES)

Shares that have been issued, were once held by shareholders, and have now been reacquired by the corporation. They may be reissued or cancelled at a later date.

Figure 9–2 Status of common shares

B. Share Capital Transactions

Share capital refers to all of a corporation's preferred and common shares. The recording of share capital transactions is influenced by the legislation of the jurisdiction under which the company is incorporated. The following examples are generally representative across all jurisdictions.

Recording Share Transactions

At the time of incorporation, a company indicates the permitted issue of either an unlimited number of each type of share or a designated number of shares of each class called **authorised** shares. The number of authorised shares may be changed by amending the company's charter. Shares also have a stated (or *nominal)* value – the amount for which they are issued. This amount remains fixed while the share is outstanding. Other shares may disclose their **par-value** instead. The par-value of a share is the amount stated in the corporate charter below which shares of a certain class cannot be sold upon initial offering. By promising not to issue further shares below par-value, investors can be confident that no one else will receive a more favourable issue price. The concept of par-value has fallen out of favour. Nowadays, most common shares are issued as *no par-value* shares. The stated value, or amount for which they are actually sold, is merely used.

The process of recording the issuance of shares is as follows: Assume that commencing January 1, 2011, New World Corporation is authorised to issue share capital consisting of an unlimited number of voting, no par-value common shares and 100,000 non-voting, no par-value preferred shares under its incorporation charter. The amount of authorised shares can be shown in the accounts as follows:

GENERAL JOURNAL

2011
Jan. 1 Memorandum

Authorised to issue unlimited voting, no par-value common shares and 100,000 non-voting, no par-value preferred shares.

GENERAL LEDGER

Common Shares No. 320

2011
Jan. 1 Authorised to issue unlimited voting, no par-value common shares.

Preferred Shares No. 325

2011
Jan. 1 Authorised to issue 100,000 non-voting, no par-value common shares.

Assume that the following three transactions then take place:

Transaction 1 – January 1, 2011
New World sells 1,000 common shares to its first shareholders for a nominal value of $10 per share, or $10,000 cash. The journal entry to record this transaction is:

Jan. 1, 2011	Cash	10,000	
	Common Shares		10,000

The $10,000 cash received is not available to pay out as dividends. Should the corporation cease operations, the $10,000 represents the maximum amount of losses that will be absorbed by shareholders. Any remaining loss will be absorbed by creditors.

Transaction 2 – February 1, 2011
2,500 preferred shares with a nominal value of $34 each are issued to the owner of land and buildings that have a fair value of $35,000 and $50,000, respectively. The journal entry to record this transaction is:

Feb. 1, 2011	Land	35,000	
	Building	50,000	
	Preferred Shares		85,000

Transaction 3 – March 1, 2011
Usually, one or more individuals decide to form a corporation and may then proceed to pay for lawyer and government fees, travel and promotional costs, and so on with their own funds before the corporation is created. When the corporation is legally formed, it is common practice for the corporation to issue shares to these organisers for these amounts. These expenditures are examples of intangible assets.

Assume, then, that 500 common shares are issued to the organisers of New World to pay for their services, valued at $5,000. The journal entry to record this transaction is:

Mar. 1, 2011	Intangible Assets	5,000	
	Common Shares		5,000

The shareholders' equity section of the New World Corporation balance sheet would show the following at December 31, 2011, assuming no further transactions:

Shareholders' Equity	
Share Capital (Note X)	$ 100,000

The relevant note to the financial statements would state:

Note X

The authorised share capital of New World Corporation consists of an unlimited number of no par-value common shares and 100,000 no par-value, non-voting preferred shares. Preferred shares take precedence when dividends are declared and upon repayment of capital. Common shares represent one vote each at shareholders' meetings of New World Corporation.

During the year, 1,500 common shares were issued to founding shareholders for a stated value of $10 per share. This represented 100% of total common shares issued. 2,500 preferred shares were issued for a stated value of $34 per share in consideration for land and buildings used in the company's operations. This represented 100% of total preferred shares issued. Information related to number of shares outstanding is as follows:

	Common Shares	*Preferred Shares*	*Total Shares*
Shares outstanding at January 1, 2011	-0-	-0-	-0-
Shares issued during 2011	1,500	8,500	10,000
Shares outstanding at December 31, 2011	1,500	8,500	10,000

The statement of changes in equity would show:

	2011		
	Common Shares	*Preferred Shares*	*Total Equity*
Opening Balance	$ -0-	$ -0-	$ -0-
Shares Issued	15,000	85,000	100,000
Ending Balance	$15,000	$85,000	$100,000

(No information is presented above for retained earnings, as no net income was earned or dividends declared.)

Transaction 4: December 1, 2012

Corporate legislation permits a company to reacquire some of its shares, provided that the purchase does not cause insolvency. Assume that New World Corporation decides to repurchase 200 common shares on December 1, 2012. Since the company has not commenced operations, assume that the agreed price of each share is the average value of the outstanding common shares, or $10. (In actual practice, the price paid will be roughly equal to the proportion of the fair value of the net assets of the company. This will likely not be equal to the average issue price per share because of profits that the company may have earned or losses incurred in the meantime, among other factors.)

The journal entry to record the repurchase of the 200 common shares for $2,000 is:

Dec. 1, 2012	Common Shares	2,000	
	Cash		2,000

The reacquired 200 shares are removed from the issued shares, and shareholders' equity is reduced by $2,000. Assuming no further transactions, the shareholders' equity section of the New World Corporation balance sheet would show the following at December 31, 2012,:

Shareholders' Equity

	2012	*2011*
Share Capital (Note X)	$ 98,000	$100,000

The relevant note to the financial statements would state:

> Note X
>
> The authorised share capital of New World Corporation consists of an unlimited number of no par-value shares and 100,000 no par-value, non-voting preferred shares. Preferred shares take precedence when dividends are declared and upon repayment of capital. Common shares represent one vote each at shareholders' meetings of New World Corporation.
>
> During the year, 200 common shares with a stated value of $10 per share were repurchased by the corporation and are held as treasury shares. This represents 13.3% of common shares issued as of December 31, 2012. Information related to number of shares outstanding is as follows:

	Common shares	*Preferred shares*	*Total shares*
Shares outstanding at January 1, 2011	-0-	-0-	-0-
Shares issued during 2011	1,500	8,500	10,000
Shares outstanding at December 31, 2011	1,500	8,500	10,000
Shares reacquired and held as treasury shares during 2012	(200)	-0-	(200)
Shares outstanding at December 31, 2012	1,300	2,500	3,800

(Note that information is disclosed for the current and prior year.)

The statement of changes in equity would show:

	Common Shares	*Preferred Shares*	*Total Shares*
Balance at January 1 2011	$ -0-	$ -0-	$ -0-
Shares Issued During 20x1	15,000	85,000	100,000
Balance at December 31, 2011	15,000	85,000	100,000
Shares Reacquired and Held as Treasury Shares During 2012	(2,000)	-0-	(2,000)
Balance at December 31, 2012	$ 13,000	$ 85,000	$ 98,000

Share Splits

A corporation may find its shares selling at a high price on a stock exchange, perhaps putting them beyond the reach of many investors. To increase the marketability of a corporation's shares, management may opt for a **share split**. A share split increases the number of shares outstanding and proportionately lowers the cost of each new share. The originally-issued shares are exchanged for a larger number of new shares.

Assume that on December 1, 2013 New World Corporation issues three new common shares to replace each currently-outstanding common share. The old outstanding share certificates are *called in* and three new certificates are issued as replacements for each old share. The number of outstanding shares has now been tripled. The market price of each share will decrease to one-third of its former market price, since the underlying value of the company has not changed, but there are three times as many common shares being actively traded. This is summarised as follows:

	Number of common shares outstanding	*Total common shares outstanding*	*Market price per common share (assumed)*
Before share split	1,300	$13,000	$75
After share split	3,900	$13,000	$25

This information appears in the financial statements of the corporation.

This information is available from the applicable stock market.

Since there is no change in the $13,000 dollar amount of common shares, no debit–credit entry is required to record the share split. A memorandum should be recorded in the general ledger, however, indicating the new number of shares outstanding, as follows:

Common Shares No. 320

Dec. 1 2013	Description	F	Debit	Credit		Balance
	Memorandum					
	The outstanding common shares were					
	increased from 13,000 to 39,000					
	by a 3-for-1 share split.					

The dollar amount shown on the balance sheet and statement of changes in shareholders' equity will not change. The only change is the increase in the number of issued and outstanding common shares from 13,000 to 39,000. The shareholders' equity section of the New World Corporation would be shown on the December 31, 2013 balance sheet as follows:

Shareholders' Equity

	2013	*2012*
Share Capital (Note X)	$ 98,000	$ 98,000

The relevant note to the financial statements would show:

Note X

The authorised share capital of New World Corporation consists of an unlimited number of no par-value shares and 100,000 no par-value, non-voting preferred shares. Preferred shares take precedence when dividends are declared and upon repayment of capital. Common shares represent one vote each at shareholders' meetings of New World Corporation.

Shares issued and paid at December 31:

	2013	*2012*
Common shares (3,900)	$13,000	$13,000
Preferred shares (2,500)	85,000	85,000
Total	$98,000	$98,000

The company holds 600 issued common shares as treasury shares. On December 1, 2013 the company declared a 3:1 share split on common shares. The effect of this was as follows:

	Before share split	*After share split*
Number of common shares outstanding	1,300	3,900
Nominal value per outstanding commons share	$10	$3.33
Total nominal value of outstanding common shares	$13,000	$13,000

The statement of changes in equity would show:

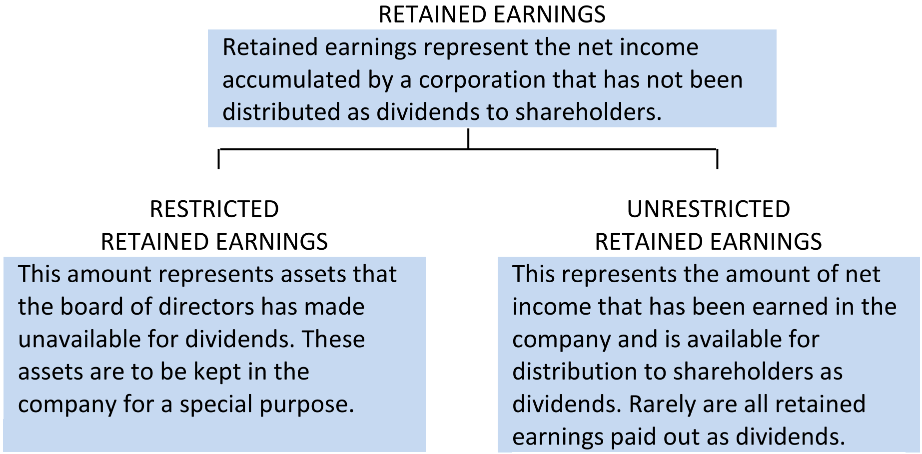
	Common Shares	*Preferred Shares*	*Total Shares*
Balance at January 1, 2012	$ 15,000	$ 85,000	$100,000
Shares Reacquired and Held as Treasury Shares during 2012	(2,000)	-0-	(2,000)
Balance at December 31, 2012 and 2013	$ 13,000	$ 85,000	$ 98,000

C. Retained Earnings

As discussed in a prior chapter, retained earnings represent the net income earned by a company over its life that has not been distributed as dividends to shareholders. The retained earnings account normally has a credit balance. If the retained earnings account has a debit balance, the corporation has incurred a **deficit**; that is, its expenses incurred and dividends declared have exceeded revenues over the life of the corporation. The result of a deficit is that the company can no longer pay dividends. It may also indicate that a company is *insolvent*.

Restrictions on Retained Earnings

Retained earnings can be either **restricted** or **unrestricted** with respect to dividend distributions, as follows:



RETAINED EARNINGS

Retained earnings represent the net income accumulated by a corporation that has not been distributed as dividends to shareholders.

RESTRICTED RETAINED EARNINGS

This amount represents assets that the board of directors has made unavailable for dividends. These assets are to be kept in the company for a special purpose.

UNRESTRICTED RETAINED EARNINGS

This represents the amount of net income that has been earned in the company and is available for distribution to shareholders as dividends. Rarely are all retained earnings paid out as dividends.

Figure 9–3 Restricted and unrestricted retained earnings

Assume that New World Corporation earns $120,000 of net income for the year ended December 31, 2014 and therefore $120,000 of retained earnings at that date. The board of directors passes a resolution at December 31, 2014 to restrict $70,000 of retained earnings for a plant expansion. The full cycle of the restriction within retained earnings is shown in Figure 9–4.

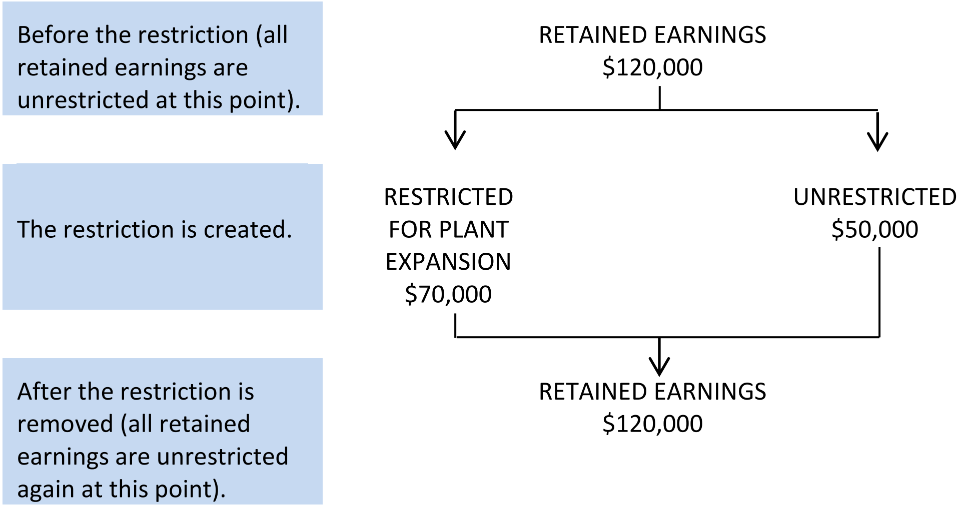


Figure 9–4 Restriction for plant expansion: creation and removal

As can be seen, the creation of a restriction on retained earnings divides the $120,000 amount into a restricted component of $70,000 and an unrestricted component of $50,000.

Recording a Restriction on Retained Earnings

The creation of a restriction on retained earnings indicates management's intention to use assets for a particular purpose. It is reported on the financial statements so that investors and creditors are informed that these assets are unavailable for dividends. These restrictions do not in any way alter the total amount of retained earnings or shareholders' equity.

The journal entry to record the creation of the above $70,000 restriction for plant expansion reads:

Dec. 31, 2014	Retained Earnings	70,000	
	Retained Earnings – Restriction for Plant Expansion		70,000

This restriction records a portion of these earnings in an account specifically designated to indicate its purpose—plant expansion. The restricted amount is still part of retained earnings. It is classified as retained earnings in the shareholders' equity section of the balance sheet at December 31, 2014 as follows:

Shareholders' Equity

	2014	*2013*
Share Capital (Note X)	$ 98,000	$ 98,000
Retained Earnings (Note Y)	120,000	-0-
Total Shareholders' Equity	$218,000	$ 98,000

The relevant note to the financial statements would show:

> Note Y
>
> On December 31, 2014 the board of directors authorised a $70,000 restriction on the retained earnings of the company for plant expansion.

The statement of changes in equity would show:

	2014				
	Common Shares	*Preferred Shares*	*Retained Earnings*		*Total*
			Unrestricted	*Restricted*	
Opening Balance	$ 13,000	$ 85,000	$ -0-	$ -0-	$ 98,000
Net Income			120,000		120,000
Restriction for Plant Addition (Note Y)			(70,000)	70,000	-0-
Ending Balance	$ 13,000	$ 85,000	$50,000	70,000	$218,000

It is important to understand that recording a restriction for plant expansion does not set up some kind of cash fund for the expansion. It merely ensures that investors are aware that all the retained earnings of the corporation are not eligible to be paid out as dividends while the restriction is in place and that the assets represented by the restriction will be used for another purpose in the meantime.

Removing a Restriction on Retained Earnings

When the special restriction account has served its purpose and the requirement for which it was set up no longer exists, the amount in the restriction account is returned to the retained earnings account from which it was created. The entry setting up the restriction is reversed. Assume the plant expansion occurs in 2015.

The construction of the plant is recorded in the normal manner. Assume that the plant expansion costs $70,000 and is paid in cash on August 31, 2015. The construction and payment is recorded as follows.

Aug. 31, 2015	Plant	70,000	
	Cash		70,000

This journal entry records the actual plant expenditure. It also shows that restricted retained earnings are *not* used to pay for the plant. The expenditure is paid with the asset cash. At August 31, 2015, the entry to reverse the original journal entry and eliminate the restricted amount for plant expansion is made:

Aug. 31, 2015	Retained Earnings – Restriction for Plant Expansion	70,000	
	Retained Earnings		70,000

The restriction account is reversed when the plant has been built because dividends are no longer restricted by the need for a plant expansion.

D. Dividends

Both creditors and shareholders are interested in the amount of assets that can be distributed as dividends. Stated share capital and restricted retained earnings represent assets that are not available for distribution as dividends. These categories are intended to protect creditors because they prevent shareholders from withdrawing assets as dividends to the point where remaining assets become insufficient to pay creditors; they are also intended to ensure the continued operation of the business.

Dividend Policy

Sometimes the board of directors may choose not to declare any dividends. There may be financial conditions in the corporation that make the payment impractical even though the corporation has unrestricted retained earnings.

Consideration 1: There May Not Be Adequate Cash

Corporations regularly reinvest their earnings in assets in order to make more profits. Growth occurs in this way and reliance on creditor financing can be minimised. As a result, there may not be enough cash on hand to declare and pay a cash dividend. The assets of the corporation may be tied up in property, plant, and equipment, for instance.

Consideration 2: A Policy of the Corporation May Preclude Dividend Payments

Some corporations pay no dividends. They reinvest their earnings in the business. Shareholders generally benefit through increased earnings, reflected in increased market price for the corporation's shares. A stated policy to this effect can apprise investors. This type of dividend policy is often found in growth-oriented corporations.

Consideration 3: No Legal Requirement that Dividends Have To Be Paid

The board of directors may decide that no dividends should be paid. Legally, there is no requirement to do so. If shareholders are dissatisfied, they can elect a new board or sell their shares.

Consideration 4: Dividends May Be Issued in Shares of the Corporation Rather than in Cash

Share dividends may be issued to conserve cash or to increase the number of shares to be traded on the stock market. Shares dividends are discussed in the appendix of this chapter.

Dividend Declaration

Dividends can be paid only if they have been officially declared by the board of directors. The board must pass a formal resolution authorising the dividend payment. Notices of the dividend are then published. Once a dividend declaration has been made public, the dividend becomes a liability and must be paid. An example of a dividend notice is shown in Figure 9–5.

New World Corporation
Dividend Notice

On May 25, 2016 the board of directors of New World Corporation declared a dividend of $0.50 per share on common shares outstanding (3,900). The dividend will be paid on June 26, 2016 to shareholders of record on June 7, 2016.

By order of the board

[signed]
Lee Smith
Secretary
May 25, 2016

Figure 9–5 A typical dividend notice

Three different and important dates are associated with the dividend. Usually dividends are declared on one date, the **date of declaration** (May 25, 2011 in this case); they are payable to shareholders on a second date, the **date of record** (June 7, 2016); and the dividend itself is actually paid on a third date, the **date of payment** (June 26, 2016).

Date of Declaration

The dividend declaration provides an official notice of the dividend. It specifies the amount of the dividend and which shareholders will receive the dividend. The liability for the dividend is recorded in the books of the corporation at its declaration date.

The following entry would be made in the general ledger of New World Corporation on the date of declaration:

May 25, 2016	Cash Dividends Declared	1,950	
	Dividends Payable		1,950
	To record $.50 per common share cash dividend declared (3,900 x $.50 = $1,950)		

At the year-end of the corporation, this Cash Dividends Declared account is closed to the Retained Earnings account as follows:

Dec. 31, 2016	Retained Earnings	1,950	
	Cash Dividends Declared		1,950

Date of Record

Shareholders who own shares on the date of record will receive the dividend even if they have sold the shares before the dividend is actually paid. This date is usually a week or two after the date of declaration. This fact is important for corporations whose shares are actively traded on the stock market. Investors whose names appear in the *shareholders' ledger* on the date of record will receive the dividend. This ledger is maintained outside of the company's accounting system. It lists the names and addresses of all shareholders at a point in time. Shares sold on the stock market after the date of record are sold *ex–dividend*, that is, without any right to the dividend. No journal entry needs to be made in the accounting records at this date.

Date of Payment

The dividend is paid on this date to investors whose names appear in the shareholders' ledger on the date of record. The payment date is usually several weeks after the date of record, in order to allow share transfers to be recorded in the shareholders' ledger to the date of record and dividend cheques to be prepared.

The following entry would be made in the general ledger of New World Corporation at the date of payment:

June 26, 2016	Dividends Payable	1,950	
	Cash		1,950
	To record payment of dividends on outstanding common shares.		

Preferred Shareholder Dividends

Preferred shares are offered to attract investors with lower tolerance for risk than common shareholders. Preferred shareholders are content with a generally smaller but more predictable share of a corporation's profits. For instance, preferred shareholders are usually entitled to dividends before any dividends are distributed to common shareholders. Also, most preferred shares specifically state what amount of dividends their holders can expect each year. Owners of '4% Preferred Shares' would be paid $4 each year for every $100 of preferred shares they hold. Owners of '$8 Preferred Shares' would be paid $8 per share held each year. These dividends are often paid even if the corporation experiences a net loss in a particular year.

Preferred shares may also have other dividend preferences, depending on what rights have been attached to preferred shares at the date of incorporation. Two additional preferences can be

- the accumulation of undeclared dividends from one year to the next — referred to as *cumulative dividends*.
- the participation of preferred shares with common shares in dividend distributions beyond the usual preferred dividends — referred to as a *participating* feature of preferred shares.

Cumulative Dividend Preferences

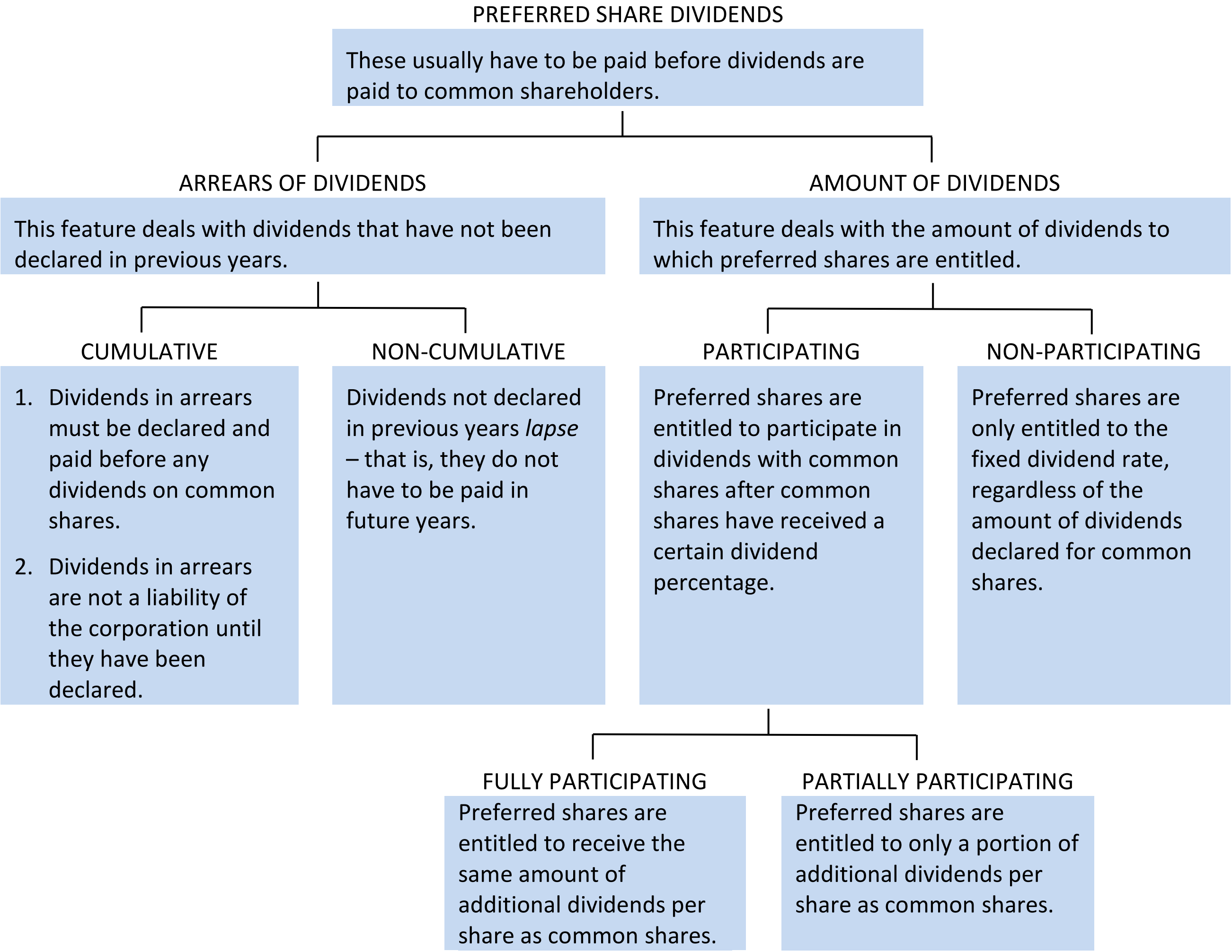
Cumulative preferred shares require that any unpaid dividends accumulate from year to year and are payable from future earnings when a dividend is eventually declared by a corporation. These accumulated dividends must be paid before any dividends are paid on common shares. The unpaid dividends are usually referred to as *dividends in arrears*. Dividends in arrears are not recorded as a liability on the balance sheet of the company until they have been declared by the board of directors. However, disclosure of dividends in arrears must be made in a note in the financial statements.

If a preferred share is **non–cumulative**, a dividend not declared by the board of directors in any one year is never paid to shareholders.

Participating Dividend Preferences

A **participating** feature is sometimes added to preferred shares to make them more attractive to investors. Under certain circumstances, this feature permits the preferred shares to receive a portion of the earnings of the corporation in excess of a stipulated rate. The extent of this participation can be *limited* (partially participating) or *unlimited* (fully participating). Non–participating preferred shares do not receive a share of additional dividends.

The relationship among these preferred share characteristics is shown in Figure 9-6 below:



PREFERRED SHARE DIVIDENDS

These usually have to be paid before dividends are paid to common shareholders.

ARREARS OF DIVIDENDS

This feature deals with dividends that have not been declared in previous years.

AMOUNT OF DIVIDENDS

This feature deals with the amount of dividends to which preferred shares are entitled.

CUMULATIVE

1. Dividends in arrears must be declared and paid before any dividends on common shares.
2. Dividends in arrears are not a liability of the corporation until they have been declared.

NON-CUMULATIVE

Dividends not declared in previous years *lapse* – that is, they do not have to be paid in future years.

PARTICIPATING

Preferred shares are entitled to participate in dividends with common shares after common shares have received a certain dividend percentage.

NON-PARTICIPATING

Preferred shares are only entitled to the fixed dividend rate, regardless of the amount of dividends declared for common shares.

FULLY PARTICIPATING

Preferred shares are entitled to receive the same amount of additional dividends per share as common shares.

PARTIALLY PARTICIPATING

Preferred shares are entitled to only a portion of additional dividends per share as common shares.

Figure 9–6 The relationships among dividend types

Assume that Bernard Williams Inc. declared dividends totalling $92,000 when the shareholders' equity section of its balance sheet disclosed the following information:

Shareholders' Equity	
Preferred Shares, $10 Nominal Value, $8	
Dividends, Cumulative, Non-participating	
Authorised—3,000 Shares	
Issued and Outstanding—2,000 Shares	$200,000
Common Shares, $1 Nominal Value	
Authorised—350,000 Shares	
Issued and Outstanding—300,000 Shares	300,000
	$500,000

A note to the balance sheet indicates that there are two years of preferred dividends in arrears. If a $92,000 cash dividend declared, the preferred shares are entitled to $16,000 dividends per year (2,000 shares x $8) whenever dividends are declared. Because these shares have a cumulative preference, they are also entitled to dividends in arrears. The dividend distribution would be calculated as:

Shareholder Preference to Dividends		*Dividend distribution*		
		To preferred	*To common*	*Balance*
	Total dividends declared			$92,000
1st preference	Arrears ($16,000 x 2 years)	$ 32,000	$ -0-	60,000
2nd preference	Current year – preferred	16,000	-0-	44,000
	Balance to common	-0-	44,000	-0-
	Total	$ 48,000	$ 44,000	

The cumulative preference has resulted in the payment to preferred shareholders of dividends unpaid in the previous two years; this amounts to $32,000. For the current year, preferred shareholders receive another $16,000 for a total of $48,000. Because the preferred shares are non-participating, the remainder of the $92,000 dividend ($44,000) is paid to common shareholders.

E. Book Value

The **book value** of a share is the amount of net assets represented by one share. When referring to common shares, book value represents the amount of net assets not claimed by creditors and preferred shareholders; when referring to preferred shares, book value represents the amount that preferred shareholders would receive if the corporation were liquidated.

This calculation is easy when only one class of shares exists in the corporation. Book value is determined by dividing total shareholders' equity by the number of shares outstanding:

$$\frac{\text{Shareholders' equity}}{\text{Number of shares outstanding}} = \text{Book value}$$

Some complications occur, however, when two or more classes of shares are outstanding. If both preferred and common shares are outstanding, the shareholders’ equity must be divided between both classes of shares. Preferred shares are allocated the amount that they would receive if the corporation were liquidated. The common shares receive the balance, if any remains.

The liquidation value of a preferred share is always printed on the share certificate. As noted in the previous section, some preferred shares are entitled to dividends in arrears. If so, this amount is added to the liquidation value of that class of shares.

Calculation of the Book Value of Shares

The calculation of the book value of preferred and common shares can be illustrated by using the following shareholders’ equity data:

Shareholders’ Equity

Preferred Shares, Stated Value $10	
Authorised — 5,000 Shares	
Issued and Outstanding — 1,000 Shares	$ 10,000
Common Shares, Stated Value $.33	
Authorised — 200,000 Shares	
Issued and Outstanding — 60,000 Shares	20,000
Retained Earnings	105,000
Total Shareholders’ Equity	$135,000

Note: There are $5,000 of dividends in arrears on the preferred shares. The liquidation value of preferred shares is $10,000.

Book value is calculated as follows:

Preferred shares		*Common shares*	
Dividends in arrears	$ 5,000	Total shareholders’ equity	$135,000
Plus: Liquidation value	10,000	*Less:* Preferred claims	15,000
Balance	$15,000	Balance	$120,000
Shares outstanding	1,000	Shares outstanding	60,000
Book value per share	$15	Book value per share	$2

Comparison of book value with market value gives an insight into investors’ evaluations of the corporation. For instance, if the book value of one common share of corporation A is $20 and its common shares are traded on a public stock exchange for $40 per share (market value), it is said to be trading for “two times book value”. If corporation B is trading for three times book value, investors are indicating that the future profit prospects for corporation B are higher than those for corporation A. They are willing to pay proportionately more for shares of corporation B than corporation A, relative to the underlying book values.

Some shares regularly sell for less than their book value on various stock exchanges. This does not necessarily mean they are a bargain investment. The market price of a share is related to such factors as general economic outlook and perceived potential of the company to generate earnings.

Appendix: Share Dividends

A **share dividend** is a dividend payable to shareholders in shares of a corporation, rather than in cash. In this way, the declaring corporation is able to retain cash in the business and reduce the need to finance its activities through borrowing.

Accounting for Share Dividends

Assume that the Sherbrooke Corporation declares a 10 per cent share dividend to common shareholders. The dividend is declared on December 15, 2011 payable to shareholders of record on December 20, 2011. The share dividends were issued January 10, 2012. At the time of the dividend declaration, the shareholders' equity of the corporation consisted of the following:

Shareholders' Equity

Common Shares, Stated Value $5	
Authorised — 20,000 Shares	
Issued and Outstanding — 5,000 Shares	$ 25,000
Retained Earnings	100,000
Total Shareholders' Equity	$125,000

At the date of dividend declaration, the common shares of the corporation were trading on the stock exchange at $4.

In this case, the share dividend is expressed as a percentage of the outstanding common shares. The dividend amounts to 500 shares (5,000 outstanding shares x 10%). This means that an individual investor owning 1,000 shares receives 100 new shares when the dividend is issued.

The market price of the shares is used to record a share dividend. This market price is usually the closing market price per share on the day preceding the declaration of the dividend. If the shares are not traded on a stock exchange, then a market value can be determined by expert appraisers. Since the shares are recorded at market value, the amount transferred from retained earnings to common shares is $2,000 (500 shares x $4 market value). This transfer is illustrated in Figure 9-7 below.

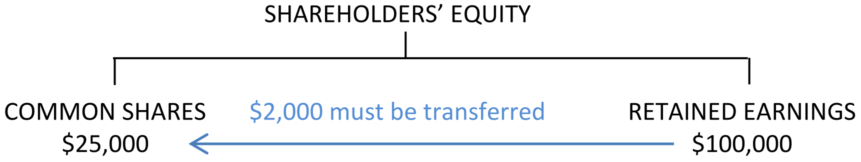
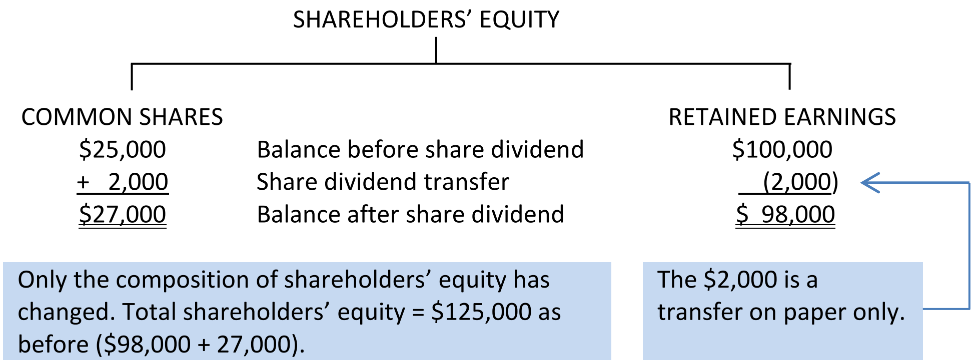


Figure 9–7 Transfer from retained earnings to common shares

The $2,000 transfer to common shares means that this amount becomes a part of stated capital and the assets represented by the $2,000 are no longer available for the payment of future cash dividends. After the transfer has been recorded, shareholders' equity appears as shown in Figure 9-8 below.



SHAREHOLDERS' EQUITY

COMMON SHARES		RETAINED EARNINGS
$25,000	Balance before share dividend	$100,000
+ 2,000	Share dividend transfer	(2,000)
$27,000	Balance after share dividend	$ 98,000

Only the composition of shareholders' equity has changed. Total shareholders' equity = $125,000 as before ($98,000 + 27,000).

The $2,000 is a transfer on paper only.

Figure 9–8 Shareholders' equity after dividend transfer

This transfer reduces retained earnings and increases common shares by the same $2,000 amount. Total shareholders' equity remains unchanged, however. This is different from the distribution of a cash dividend, which reduces both retained earnings and cash and results in a *lower* total shareholders' equity.

Two journal entries at different dates are required to record the share dividend. The original dividend declaration would be recorded as follows:

Dec. 15, 2011	Share Dividends Declared	2,000	
	Share Dividends to be Issued		2,000
	To record the declaration of a 10% common share dividend (5,000 x 10% x $4)		

The effect of this entry is to transfer $2,000 from retained earnings to share capital. No assets are paid by the corporation when the additional shares are issued as a shares dividend, and therefore *the total equity remains unchanged at* $125,000.

At the December 31 year-end of the corporation, the Share Dividend Declared account would be closed to the Retained Earnings account in the same way a Cash Dividend account is closed. The closing entry for a shares dividend would be:

Dec. 31, 2011	Retained Earnings	2,000	
	Share Dividends Declared		2,000
	To close the Share Dividends Declared account.		

If financial statements are prepared for the year ended December 31 – that is, between the declaration and payment of share dividends – the Share Dividends To Be Issued account is shown as an addition to share capital, as follows.

Shareholders' Equity

Common Shares, Stated Value $5		
Authorised — 20,000 Shares		
Issued and Outstanding — 5,000 Shares	$25,000	
Shares to be Issued as Dividends – 500 Shares	2,000	$ 27,000
Retained Earnings		98,000
Total Shareholders' Equity		$125,000

Assume that retained earnings of $100,000 include $20,000 of net income earned in the 2011 year. The statement of changes in shareholders' equity at December 31, 2011 would show:

	Common Shares			*Retained Earnings*	*Total Equity*
	Shares	*Shares to be Issued as Dividends*	*Total*		
Balance at Beginning of Year	$25,000		25,000	$80,000	$85,000
Net Income				20,000	20,000
Common Share Dividend Declared		2,000	2,000	(2,000)	-0-
Balance at End of Year	$25,000	2,000	27,000	$98,000	$125,000

When the shares are actually issued in the new year, the following entry would be made:

Jan. 20, 2012	Share Dividends to be Issued	2,000	
	Common Shares		2,000

The shareholders' equity section of the balance sheet would no longer show a separate category for Shares to be Issued as Dividends. The $2,000 would be combined with the Issued and Outstanding Shares amount of $25,000 for a total of $27,000.

Is There Any Change in the Investor's Percentage of Corporate Ownership?

Since a share dividend is issued to all shareholders of a particular class, each shareholder has a larger number of shares. However, ownership percentage of the company remains the same for each shareholder, as illustrated in the following example.

Assume that there are five shareholders in Sherbrooke Corporation, each of whom owns 1,000 shares before the share dividend. Each of these shareholders receives a 10 per cent share dividend, that is, 100 new shares. Corporation ownership before and after the share dividends is as follows:

	Corporate ownership			
	Before share dividend		*After share dividend*	
Shareholder	Shares	Per cent	Shares	Per cent
A	1,000	20%	1,100	20%
B	1,000	20%	1,100	20%
C	1,000	20%	1,100	20%
D	1,000	20%	1,100	20%
E	1,000	20%	1,100	20%
	5,000	100%	5,500	100%

Each shareholder has received 100 new shares but ownership percentage of the company remains at 20 per cent. Since total shareholders' equity does not change, the proportion owned by each is still $25,000 ($125,000 total equity x 20%).

ASSIGNMENT MATERIALS

Discussion Questions

1. What are some advantages of the corporate form of organisation?
2. What is meant by *limited liability* of a corporation?
3. What rights are attached to common shares? Where are these rights indicated?
4. Describe a typical incorporation process.
5. What is a board of directors and whom does it represent? Are the directors involved in the daily management of the entity?
6. Describe:
   a. two main classes of shares that can be issued by a corporation; and
   b. the different terms relating to the status of a corporation's shares.
7. In what ways can shares be "preferred"? In which ways are they similar to common shares? Different from common shares?
8. Describe the accounting treatment of reacquired shares.
9. Why do corporations sometimes opt for a share split?
10. Assume a 2-for-1 share split occurs. Explain
    a. the effect on the total number of issued and outstanding shares; and
    b. the effect on stated capital.
11. Identify the major components of the shareholders' equity section of a balance sheet. Why are these components distinguished?
12. How can retained earnings be said to be reinvested in a corporation?
13. What is the difference between restricted and unrestricted retained earnings? Why would some retained earnings be restricted? Prepare the journal entries used to make a restriction.
14. What are the main issues a board of directors considers when making a dividend declaration decision?
15. Even if a corporation is making a substantial net income each year, why might the board of directors decide to not pay any cash dividends?
16. Distinguish among the date of dividend declaration, the date of record, and the date of payment.
17. What is the difference in accounting between cash dividends and share dividends? Give a sample journal entry for each.
18. Explain the different dividend preferences that may be attached to preferred shares. Why would preferred shares have these preferences over common shares? Does it mean that purchasing preferred shares is better than purchasing common shares?
19. What are dividends in arrears? Are they a liability of the corporation?
20. What does the book value of shares represent? How is it calculated?
21. A corporate entity has both preferred and common classes of shares. How is the book value of common shares calculated in this case? What is meant by the liquidation value of preferred shares?
22. Of what value is the calculation of book value per share?
23. If the market price of a share is less than its book value; is it a bargain? Why or why not?
24. How does a share dividend differ from a share split?

25. Does a share dividend change an investor's percentage of corporate ownership? Explain, using an example.

Comprehension Problems

CP 9–1

Essential Financial Service Corp. was incorporated on January 1, 2011 to prepare business plans for small enterprises seeking bank financing.

View Solution

Required: Prepare journal entries to record the following transactions:

1. Received an incorporation charter authorising the issuance of an unlimited number of no par-value common shares and 10,000, 4% preferred shares;
2. Issued in exchange for incorporation costs incurred by shareholders 10,000 common shares at $1; and
3. Issued for cash 1,000 preferred shares at $3 each

CP 9–2

A tract of land valued at $50,000 has been given to a corporation in exchange for 1,000 preferred shares.

View Solution

Required:

1. Prepare the journal entry to record the transaction.
2. Where would the transaction be classified in the balance sheet?

CP 9–3

The shareholders' equity section of Gannon Oilfield Corporation's balance sheet at December 31, 2013 is shown below.

Preferred Shares	
Authorised—100 shares	
Issued and Outstanding—64 Shares	$3,456
Common Shares	
Authorised—2,000 Shares	
Issued and Outstanding—800 Shares	1,680
Retained Earnings	600
Total Shareholders' Equity	$5,736

View Solution

Required:

1. What is the average price received for each issued preferred share?
2. What is the average price received for each issued common share?
3. What is the total stated capital of the company?

CP 9–4

The general ledger accounts of Human Services Corp. have the following amounts recorded during December:

Cash	
30,000	5,000
15,000	8,000
7,000	6,000
4,000	

Land	
10,000	4,000

Building	
12,000	
8,000	

Incorp. Costs	
14,000	

Preferred Shares	
6,000	15,000
	14,000

Common Shares	
5,000	30,000
	22,000
	7,000

View Solution

Required: Reconstruct the transactions that occurred during December and prepare the journal entries to record these transactions, including descriptions. These transactions and related journal entries do not need to be listed in a particular order.

CP 9–5

Strada Controls Inc. has 100,000 common shares outstanding on January 1, 2011. On May 25, 2011, the board of directors declared a semi-annual cash dividend of $1 per share. The dividend will be paid on June 26, 2011 to shareholders of record on June 7, 2011.

View Solution

Required: Prepare journal entries for

1. The declaration of the dividend
2. The payment of the dividend.

CP 9–6

Acme Corporation has $100,000 of common shares outstanding and $200,000 of retained earnings at December 31, 2014. The board of directors passes a resolution at that date to restrict $80,000 of retained earnings for a plant expansion.

View Solution

Required:

1. Record the restriction in journal entry form.
2. Show the shareholders' equity section of the balance sheet and appropriate note disclosure at December 31, 2014.
3. Record the construction of the building when completed on June 30, 2015 for a cost of $90,000, paid by assumption of a bank loan.
4. Record the journal entry to record the lifting of the restriction on July 31, 2015

CP 9–7

Landers Flynn Inc. has 1,000, $5 cumulative preferred shares outstanding. Dividends were not paid last year. The corporation also has 5,000 common shares outstanding. Landers Flynn declared a $14,000 cash dividend to be paid in the current year.

View Solution

Required: Calculate the amount of dividends received by

1. The preferred shareholders
2. The common shareholders.

CP 9–8

The following information is extracted from the shareholders' equity section of the balance sheet of Gibson Clothing Inc. at December 31, 2015:

Preferred Shares, Stated Value $10, Non-cumulative	
Issued and Outstanding — 5,000 shares	$ 20,000
Common Shares, Stated Value $2	
Issued and Outstanding — 20,000 shares	40,000
Retained Earnings	150,000
Total Shareholders' Equity	$210,000

Additional information:

a. There are $2,000 of dividends in arrears on the preferred shares.
b. The liquidation value of the preferred shares is $25,000.

View Solution

Required: Calculate the book value of preferred and common shares.

CP 9–9

The shareholders' equity section of Pembina Valley Manufacturing Limited's balance sheet at December 31, 2016 is shown below.

Share Capital	
Preferred Shares, Non-cumulative	
Authorised — 500 shares	
Issued and Outstanding — 300 Shares	$ 300
Common Shares	
Authorised — 100 Shares	
Issued and Outstanding — 20 Shares	500
Total Share Capital	800
Retained Earnings	192
Total Shareholders' Equity	$992

Note: There are $30 of dividends in arrears on the preferred shares. The liquidation value of preferred shares is $300.

View Solution

Required:

1. Calculate the book value per share of
   a. the preferred shares; and
   b. the common shares.

2. Assume that the common shares were split 2 for 1 on January 2, 2017 and that there was no change in any other account at that time. Calculate the new book value of common shares immediately following the share split.

CP 9–10

The following note appeared on the balance sheet of Sabre Rigging Limited:

> As of December 31, 2012, dividends on the cumulative preferred shares were in arrears for three years to the extent of $15 per share or $15,000 in total.

View Solution

Required:

1. Does the amount of the arrears appear as a liability on the December 31, 2012 balance sheet? Explain your answer.
2. Why might the dividends be in arrears?
3. The comptroller of Sabre Rigging projects net income for the 2013 fiscal year of $35,000. When the company last paid dividends, the directors allocated 50 per cent of current year's net income for dividends. If dividends on preferred shares are resumed at the end of 2013 and the established policy of 50 per cent is continued, how much will be available for dividends to the common shareholders if the profit projection is realised?

CP 9–11 (Appendix)

Stetson Auto Inc. was incorporated on January 1, 2011 and commenced operations at that date. A $2,000 common share dividend was declared and paid on October 31, 2011. The following information was taken from the shareholders' equity section of the company's balance sheet at December 31, 2011:

Common Shares	
Issued and Outstanding—10,000 shares	$ 10,000
Restriction—Plant Addition	150,000
Revenues (total for 2011)	2,575,000
Expenses (total for 2011)	2,000,000
Cash Dividends Declared	23,000

View Solution

Required: Prepare the shareholders' equity section of Stetson Auto's balance sheet at December 31, 2011 and the statement of changes in shareholders' equity for the year then ended.

CP 9–12 (Appendix)

The following captions are sub–totals appearing in the shareholders' equity section of the balance sheet for Hudson Day Corporation:

a. Total share capital
b. Total retained earnings

View Solution

Required: For each event listed below, indicate, in the format provided, whether the amount of each subtotal is increased (↑) or decreased (↓). Indicate with an 'x' if there is no change to a particular subtotal. Consider each event to be unrelated to the others.

	Total Share Capital	*Retained Earnings*
1. Company is incorporated	X	X
2. Issued shares with a stated value of $1		
3. Split the common shares 2 for 1		
4. Recorded net income for the year		
5. Reacquired common shares previously outstanding		
6. Created a restriction on retained earnings		
7. Declared a share dividend		
8. Issued a share dividend		
9. Paid a cash dividend		

CP 9–13 (Appendix)

The shareholders' equity section of Lakeview Homes Corporation's balance sheet at December 31, 2013 is reproduced below:

Shareholders' Equity

Common Shares	
Authorised 10,000 shares	
Issued 5,000 shares	$ 20,000
Retained Earnings	100,000
Total Shareholders' Equity	$120,000

On January 15, 2014, Lakeview Homes declared a 10 per cent share dividend to holders of common shares. At this date, the common shares of the corporation were trading on the stock exchange at $10 each. The share dividend was issued February 15, 2014

View Solution

Required: Prepare the journal entries to record the share dividend.

CP 9–14 (Appendix)

Arrow Streaming Corporation has 10,000 common shares outstanding at January 1, 2013 with a stated value of $100,000. On April 1, Arrow Streaming declared a 10 per cent share dividend, payable on April 15 to shareholders of record on April 10. The market value of Arrow's shares on April 1 was $15. On June 1, the company declared a $2 cash dividend per share to common shareholders of record on June 10, and paid the dividend on June 30. Assume the year end of the corporation is December 31.

View Solution

Required: Prepare journal entries for the above transactions, including closing entries.

CP 9–15 (Appendix)

Blitz Power Tongs Inc. received a charter that authorised it to issue an unlimited number of common shares. The following transactions were completed during 2016:

Jan. 5 Issued 10 common shares for a total of $150 cash.
12 Exchanged 50 shares of common shares for assets listed at their fair values: Machinery — $100; Building — $100; Land — $50.
Feb. 28 Declared a 10% share dividend. Market value is $7 per share. net income to date is $60.
Mar. 15 Issued the share dividend.
Dec. 31 Closed the 2016 net income of $200 from the Income Summary account in the general ledger to the Retained Earnings account.
Dec. 31 Declared a $1 per share cash dividend.

View Solution

Required

1. Prepare journal entries for the 2016 transactions, including closing entries.
2. Prepare the shareholders' equity section of the balance sheet at
   a. January 31, 2016
   b. February 28, 2016
   c. December 31, 2016.

Problems

P 9–1

Crystal Clear Electronics Inc. was incorporated on January 1, 2015 and was authorised under its charter to issue the following shares — 20,000 non-cumulative, non-voting, 5% preferred shares and an unlimited number of no par-value, voting common shares.

Required:

1. Prepare journal entries to record the following 2015 transactions:
   a. Issued 3,000 preferred shares for $6 cash each on January 2
   b. Issued 2,000 common shares for $2 cash each on January 2
   c. Issued 5,000 preferred shares for $5 cash each on January 12
   d. Issued 1,000 common shares for $1 cash each on August 1
   e. Issued 500 preferred shares for land valued at $15,000 on December 15.
2. Prepare the shareholders' equity section of the balance sheet at December 31, 2015 and the related note to the financial statements.
3. On December 15, 2016, the common shares were split 2 for 1. Assuming no other transactions occurred during 2016, prepare the statement of changes in equity for the years ended December 31, 2015 and 2016.

P 9–2

Following is the shareholders' equity section of Critter Contracting Inc. shown before and after a share split on April 15, 2017.

Before split		**After split**	
Shareholders' Equity		*Shareholders' Equity*	
Common Shares		Common Shares	
Authorised — 5,000 Shares		Authorised— ? Shares	
Issued and Outstanding—		Issued and Outstanding —	
1,000 Shares	$100,000	? Shares	$?

On April 15, the board of directors authorised a 5 for 1 share split.

Required:

1. Complete the shareholders' equity section of the balance sheet after the split.
2. Record a memorandum indicating the new number of shares.
3. If the market value per share was $40 before the split, what would be the market value after the split? Why?

P 9–3

Relevant financial information for Gearing Gravel Limited at January 1, 2012 is as follows:

Share Capital	
5% Preferred Shares, Non-cumulative, Non-voting	
Authorised — 1,000 shares	$ 50,000
Issued and Outstanding — 10 Shares	
Common Shares, voting	
Authorised — Unlimited	
Issued and Outstanding — 200 Shares	10,000
Total Share Capital	60,000
Retained Earnings	100,000
Total Shareholders' Equity	$160,000

During the year, total cash dividends of $3,000 were declared. Net income for the year amounted to $20,000. 100 common shares were issued on February 28, 2012 for $5,000. 20 common shares were reacquired on December 31 for $1,000 and held as treasury shares.

Required: Prepare the statement of changes in equity for the year ended December 31, 2012 and the related note to the financial statements.

P 9–4

Required: For each event listed below, indicate, in the format provided, whether the amount of each sub–total is increased (↑) or decreased (↓). Indicate with an 'x' if there is no change to a particular subtotal. Consider each event to be unrelated to the others, unless otherwise indicated.

	Assets	*Liabilities*	*Shareholders' Equity*
1. Commons shares were issued for cash	↑	X	↓
2. Declared a cash dividend			
3. Common shares spit 3:1			
4. Recorded a restriction of retained earnings			
5. Calculated book value of common shares			
6. Paid cash dividend related to item 2 above			

P 9–5

At December 31, 2013, the shareholders' equity section of the balance sheet for the Apex Auto Corporation totalled $2,000,000. Following are the balances of various general ledger accounts at that date.

Preferred Shares, $.40, Cumulative	Issued 50,000 shares	$500,000
Common Shares	Issued 50,000 shares	750,000
Restriction for Plant Extension		150,000
Retained Earnings—Unrestricted		600,000

The following transactions occurred during the 2014.

Mar. 20 A preferred dividend of $0.20 per share was declared, payable April 1 to preferred shareholders of record on March 25.

Apr. 1 Payment of previously declared dividend on preferred shares was made.

June 15 The regular semi-annual dividend on common shares of $0.40 per share was declared, payable July 10 to common shareholders of record on July 1.

July 10 Payment of the previously-declared dividend on common shares was made.

Aug. 1 10,000 common shares were issued for $200,000 cash.

Nov. 15 The board of directors met and restricted an additional $75,000 for the plant extension.

Dec. 15 The regular semi-annual dividend of $0.40 per common share was declared payable December 31, 2014.

Dec. 31 A cash dividend totalling $25,000 was paid.

Required:

1. What amount of cash dividends would be distributed to common shareholders on December 31, 2014?
2. Prepare journal entries for the 2014 transactions. Ignore closing entries.
3. Prepare the statement of changes in equity for the year ended December 31, 2014 assuming net income for the year amounted to $165,000.

P 9–6

The following information relates to River Valley Produce Limited as at December 31, 2011:

Shareholders' Equity

Share Capital		
Preferred Shares, $8, No Par-Value, Non-voting		
Authorised — 1,000 shares	$15,000	
Issued and Outstanding — 150 Shares		
Common Shares, No Par-Value, Voting		
Authorised — 10,000 Shares	24,000	
Issued and Outstanding — 4,800 Shares		
Total Share Capital		$ 39,000
Retained Earnings		
Restricted for Plant Expansion	12,000	
Unrestricted	28,000	
Total Retained Earnings		40,000
Total Shareholders' Equity		$79,000

The following transactions occurred during 2012:

a. Reacquired 400 common shares at $10 each; held as treasury shares;
b. Split the common shares 2 for 1;
c. Issued an additional 200 common shares for $3 cash each;
d. The board authorised a further $5,000 of retained earnings to be restricted for plant expansion; and
e. Transferred net income of $19,500 from the Income Summary account in the general ledger to the Retained Earnings account.

Required:

1. Prepare journal entries for the 2012 transactions.
2. Prepare the statement of changes in equity for the year ended December 31, 2012.
3. What amount of is available for distribution to shareholders as of December 31, 2012?

P 9–7

The following is the shareholders’ equity section of the balance sheet of Tridon Construction Limited at December 31, 2015.

Shareholders’ Equity

Share Capital	
Common Shares, No Par-Value, Voting	
Authorised — 500 shares	
Issued and Outstanding — 300 Shares	$3,070
Retained Earnings	500
Total Shareholders’ Equity	$3,570

Required:

1. What is the stated value per common share? the book value per common share?
2. On December 31, the Tridon Construction common shares traded at $24. Why is the market value different from the book value of commons shares?

P 9–8 (Appendix)

The shareholders’ equity section of the balance sheet of TWR Contracting Inc. at December 31, 2017 showed the following amounts:

Shareholders’ Equity

Share Capital	
Preferred Shares, $.60, No Par-Value, Non-voting, Cumulative, Non-participating	$ 400
Issued and Outstanding — 40 Shares	
Common Shares, No Par-Value, Voting	2,000
Issued and Outstanding — 2,000 Shares	
Total Share Capital	2,400
Retained Earnings	900
Total Shareholders’ Equity	$3,300

The following transactions occurred during 2018:

Feb. 15	Declared the regular $0.30 per share semi-annual dividend on its preferred shares and a $0.05 per share dividend on the common shares to holders of record March 5, payable April 1
Apr. 1	Paid the dividends declared on February 15
May 1	Declared a 10 per cent share dividend to common shareholders of record May 15 to be issued June 15, 2016. The market value of the common shares at May 1 was $2 per share.
June 15	Paid the dividends declared on May 1
Aug. 15	Declared the regular semi–annual dividend on preferred shares and a dividend of $0.05 on the common shares to holders of record August 31, payable October 1
Oct. 1	Paid the dividends declared on August 15
Dec. 15	Declared a 10 per cent share dividend to common shareholders of record December 20 to be issued on January 15, 2019. The market value of the common shares at December 15 was $3 per share

Dec. 31 Net income for the year ended December 31, 2018 was $1,400.

Required:

1. Prepare journal entries to record the 2018 transactions, including closing entries. Show calculations. Descriptive narrative is not needed.
2. Prepare the statement of changes in equity for the year ended December 31, 2018.

Alternate Problems

AP 9–1

Parkland Dental Clinic Corporation was incorporated on May 1, 2013. The following transactions occurred during the month:

May 1 Issued 1,000 preferred shares for $3 cash each
2 Issued 2,000 common shares for $5 cash each
5 Issued 1,500 common shares for $2 cash each
10 Issued 1,000 preferred shares in exchange for land valued at $1,000
15 Issued 3,000 preferred shares for $2 cash each
21 Issued 5,000 common shares for $3 cash each
24 Repurchased 100 preferred shares at $2 each, held as treasury shares.

Assume that Parkland Dental Clinic was authorised to issue an unlimited number of 6%, non-cumulative, non-voting preferred shares with no par-value and an unlimited number of common, voting shares with no par-value.

View Solution

Required:

1. Prepare journal entries to record the May transactions.
2. Prepare the shareholders' equity section of the balance sheet at May 31, 2013 and the related note to the financial statement.
3. Prepare the statement of changes in equity for the one-month period ended May 31, 2013.

AP 9–2

Argo Software Inc. was incorporated on April 1, 2014. The following transactions occurred during April:

Apr. 1 Received a corporate charter authorising the issue of an unlimited number of no par-value, voting common shares
1 Issued 5,000 common shares for $10,000 cash
20 Issued 10,000 common shares for land on which a building will be constructed; the market value of the common shares was $3 each on this date
25 Issued 1,000 common shares for $4 cash each
29 Reacquired 1,000 common shares for $2,750 to be held as treasury shares
30 Closed net income of $5,000 from the Income Summary account in the general ledger to the Retained Earnings account
30 Declared a cash dividend of $.10 per common share, payable as of May 15.

View Solution

Required:

1. Prepare journal entries to record the April transactions.
2. Prepare the statement of changes in equity for the one-month period ended April 30, 2014.
3. Assume that on May 25 the common shares were split 2 for 1. How would the share split affect the common shares? Record your answer using the following schedule form.

	Number of shares outstanding	*Total value of common shares on balance sheet*	*Book value per share*	*Market price per share*
Before share split				$6
After share split				

AP 9–3

Relevant financial information for Dawson's General Store Limited at January 1, 2016 is as follows:

Shareholders' Equity

Share Capital	
Preferred Shares, Unlimited Number Authorised, Non-Voting, No Par-Value, Cumulative, Non-participating	
Issued and Outstanding — 1,000 Shares	$ 200,000
Common Shares, Unlimited Number Authorised, No Par-Value, Voting	
Issued and Outstanding — 400 Shares	700,000
Total Share Capital	900,000
Retained Earnings	1,000,000
Total Shareholders' Equity	$1,900,000

During the year, total cash dividends of $30,000 were declared. $100,000 preferred dividends were in arrears at January 1, 2016. Net income for the year amounted to $200,000. 1,000 common shares were issued on September 28, 2016 for $100,000. 200 preferred shares were reacquired on December 31 for $1,400 and held as treasury shares.

View Solution

Required: Prepare the statement of changes in equity for the year ended December 31, 2016 and the related note to the financial statements.

AP 9–4

The partial shareholders' equity section of the Enermax Machine Company Limited balance sheet at December 31, 2013 appears below.

Retained Earnings		
Restricted for Plant Expansion	$200	
Unrestricted	900	
Total Retained Earnings		$1,100

View Solution

Required:

1. Why do you think the directors established a restriction for plant expansion on retained earnings?
2. Assume that the plant expansion was completed by June 30, 2014 and that the new facilities were all paid for. What entry would be made to eliminate the restriction?

AP 9–5

On January 1, 2013, the Canwest Corporation began operations. It was authorised to issue 20,000 no par-value, voting common shares and 10,000 no par-value, cumulative, non-voting preferred shares. The dividend on each preferred share is $1 per year. The company issued 4,000 common shares for $120,000 on January 2, 2013. No preferred shares were issued in 2013. The retained earnings balance on December 31, 2013 was $145,000. During 2014 the following transactions occurred:

Feb. 15	Issued 1,000 common shares at $8 each
Mar. 1	Acquired land with an appraised market value of $40,000 in exchange for 1,500 preferred shares
Jun. 1	Declared a $1 cash dividend on outstanding common shares and the annual cash dividend on outstanding preferred shares payable July 1, 2014 to shareholders of record on June 25
July 1	Paid the June 1 dividend
Dec 15	Declared a $.40 cash dividend on each outstanding common share, payable January 15, 2015
Dec. 31	Net income for the year was $98,000.

View Solution

Required:

1. Prepare journal entries to record the 2014 transactions, including closing entries.
2. Prepare the shareholders' equity section of the balance sheet at December 31, 2014 and the related note to the financial statements.
3. Prepare the statement of changes in equity for the year ended December 31, 2014.

AP 9–6

Pretty Productions Ltd. had the following shareholders' equity at January 1, 2017:

Common Shares	
1,000 shares outstanding	$11,000
Retained Earnings	9,000
Total Shareholders' Equity	$20,000

Part A

The following transactions occurred during the year:

Jun. 1	Declared a cash dividend of $1 per share to common shareholders of record June 15, payable June 30
30	Paid the dividend declared June 1
Dec. 31	Net income for the year amounted to $5,000.

View Solution

Required:

1. Compute the book value per share at January 1, 2017.
2. Prepare journal entries to record the 2017 transactions and closing entries.
3. Prepare the statement of changes in equity for the year ended December 31, 2017.
4. Compute the stated value and book value per share at December 31, 2017.

Part B

The following transactions occurred during 2018:

Feb. 15	Declared a cash dividend of $1 per share to common shareholders of record March 1, payable March 15
Mar. 15	Paid the dividend declared February 15
June 30	Split the common shares 2:1. The new shares are to be issued July 23.
July 23	Issued the new common shares
Dec. 31	Net income for the year amounted to $8,000.

View Solution

Required:

5. Prepare journal entries to record the 2018 transactions, including closing entries.
6. Prepare the statement of changes in equity for the year ended December 31, 2018.
7. Calculate the book value per share at December 31, 2018.
8. Assume that the market value of one common share of Pretty Productions Ltd. was $72 on December 31, 2017 and $46.50 on December 31, 2018. Compare market value to book value at these two dates. How did investor's perceptions about the future profitability of the company change?

AP 9–7 (Appendix)

On December 31, 2014, relevant financial information of the First Financial Company was as follows:

Shareholders' Equity	
Share Capital	
$4 Preferred Shares, Cumulative, Participating, Non-voting, No Par-Value	
Authorised 5,000 Shares	
Issued and Outstanding — 200 Shares	$20,000
Common Shares, No Par-value	
Authorised — 2,000 Shares	
Issued and Outstanding — 100 Shares	1,000
Total Share Capital	21,000
Retained Earnings	5,450
Total Shareholders' Equity	$26,450

Preferred shareholders participate equally in cash dividends declared on common shares. During 2015, First Financial engaged in the following transactions:

Mar. 15	Declared the regular semi-annual $2 per share dividend on the preferred shares and a $0.50 per share dividend on the common shares
Apr. 30	Paid the dividends previously declared
Sept. 15	Declared a $600 dividend
Oct. 30	Paid the dividends previously declared
Dec. 15	Declared a 10 per cent common share dividend distributable on January 15 to shareholders of record January 10, 2016. The market value of the shares on December 15 was $18 per share.
Dec. 31	Transferred net income of $90,000 from the Income Summary account in the general ledger to the Retained Earnings account.
Dec. 31	The board authorised $10,000 of retained earnings to be restricted for plant expansion.

View Solution

Required:

1. Prepare journal entries to record the 2015 transactions, including closing entries.
2. Prepare the statement of changes in equity for the year ended December 31, 2015.

View Solution

AP 9–8 (Appendix)

Required: For each event listed below, indicate, in the format provided, whether the amount of each subtotal is increased (↑) or decreased (↓). Indicate with an 'x' if there is no change to a particular subtotal. Consider each event to be unrelated to the others, unless otherwise indicated.

	Assets	*Liabilities*	*Shareholders' Equity*
1. Declared a cash dividend	x	↑	↓
2. Paid the cash dividend in item 1			
3. Split common shares 2:1			
4. Declared a share dividend			
5. Paid a share dividend			
6. Redeemed preferred shares for cash			
7. Recorded a restriction on retained earnings			

CHAPTER TEN

Partnerships

A partnership is an alternate form of business organisation to the corporation. Although partnerships record asset and liability transactions in the same manner as corporations, equity transactions are recorded in a manner unique to partnerships. Some issues addressed in this chapter are:

1. What kind of entity is a partnership?
2. How do the characteristics of a partnership differ from those of a corporation?
3. How do partnership financial statements differ from those of a corporation?
4. How are partnership assets owned by partners?
5. What are the different methods used to divide partnership profits and losses?
6. What are alternate methods used for admission of new partners?
7. How is the withdrawal of a partner accounted for?
8. How is a partnership liquidated?

A. Partnership Characteristics

This chapter discusses the accounting treatment of partnership equity. A **partnership** combines the abilities and capital of any number of individuals who together own and operate a business. Although a partnership is a business entity, it is not a separate legal entity as is a corporation.

Partnerships also have a number of unique characteristics. As a result, accounting for partners' equity differs from accounting for shareholders' equity. These characteristics include limited life, unlimited liability, mutual agency, co–ownership of assets, and sharing of profits and losses.

Limited Life

The life of a partnership may be limited by a clause in the **partnership agreement** stipulating that the partnership will terminate after a particular period of time or completion of the partnership objective. More often, however, an existing partnership is dissolved when a new partner is admitted, or an existing partner withdraws or dies. Partner dissolution does not necessarily mean that normal operations are also dissolved; usually the same business continues under a new partnership agreement. Accounting for partnership capital therefore involves issues related to the formation and dissolution of partnerships and to the allocation of the profits and losses to the individual partners.

Unlimited Liability

A corporation is a separate legal entity and the liability of its owners is limited to amounts invested in its shares. They are not personally liable for the corporation's debts. On the other hand, each partner is personally liable for debts that the partnership cannot pay. In the event that a partner is unable to pay a proportionate share of partnership debts, the other partners can be called on to pay these. Having said this, it is possible to structure a partnership so that some of the partners have limited liability. However, at least one of the partners (called a *general partner*) usually must be personally responsible for all the debts of the partnership.

Mutual Agency

Unless otherwise stated in the partnership agreement, each partner is able to make decisions that are legally binding, not only on the partnership, but also on the other partners. This is known as **mutual agency**. The only exception involves activities that fall outside the normal activities of the partnership. For example, a partnership formed to sell used cars would not normally include the buying and selling of footwear; in this case, partners would not be legally bound to footwear contracts signed by only one of the partners.

Co–Ownership of Assets

Unless the partnership agreement specifies otherwise, all assets contributed to the partnership by individual partners are jointly owned by all partners. Each partner, therefore, has a claim against all partnership assets up to the amount of his/her capital balance. Therefore, partnership assets are often sold on liquidation to facilitate their distribution to partners in the form of cash.

Sharing of Profits and Losses

The partnership agreement usually stipulates the manner in which profits and losses will be shared. If no such provision is specified, then partners share all profits and losses equally. Accounting issues related to the division of profits and losses are discussed below.

Advantages of a Partnership

A partnership has several advantages over other forms of business organisations. It can be easily formed, without the legal process and costs involved in incorporation. A partnership is less subject to government supervision; there are usually fewer government regulations and less paper work regarding partnerships than corporations. Because a partnership is not a legal entity, it is not subject to corporate income tax; individual partners file personal income tax returns, which include their allocation of partnership profits. Since a partnership includes at least two individuals, it has access to more capital and expertise than does a proprietorship.

Disadvantages of a Partnership

Partners have to answer to other partners for their actions and each has mutual agency and unlimited liability. Therefore, individual partners are legally liable for the financial debt arising from actions of other partners. A partnership is dissolved on the death or withdrawal of a partner, although the business may continue with new partners. This arrangement is more cumbersome than the selling of shares in a corporation. Shares can usually be transferred easily among investors. Also, a corporation usually has access to a larger amount of capital, since shares can be issued to a wider range investors, particularly those who want to be involved with running the business. Corporate tax rates can be more favourable than personal tax rates.

Partnership Accounting

Before considering the differences in record keeping for incorporated and unincorporated businesses, we will examine the differences in the balance sheet reporting for each type of organisation. The example below shows the owners' equity section of the balance sheet for three businesses that have identical financial positions. Although the net assets are the same, the presentation of the equity section differs in each case.

Corporation

Shareholders' Equity	
Share Capital	$10,000
Retained Earnings	5,000
Total Shareholders' Equity	$15,000

Proprietorship

Jane Jones, Capital	$15,000

Partnership

Jane Jones, Capital	$7,500
Jack Brown, Capital	7,500
Total Partners' Equity	$15,000

As discussed before, shareholders' equity section of a corporation's balance sheet is divided into two categories – share capital and retained earnings. The first category represents the owner's investments in shares of the company. The second category is the accumulated earnings of the corporation less any dividends paid to owners from commencement of operations. On a corporate balance sheet, accumulated earnings are not attributed directly to the owners. The annual earnings of the corporation do not increase the value of individual shareholders' investments.

For a partnership, the owners' equity is shown as a single **capital account** for each owner. The capital account reflects the each partner's capital contributions to the business, the partner's share of accumulated earnings, and any distributions of assets to the particular partner, called *drawings*.

Business transactions for a partnership are recorded in the same manner as those for a corporation. Partner or owner withdrawals are recorded in a **drawings account**. Individual capital accounts and drawings accounts are maintained for each partner. The drawings account balance is closed to each partner's capital account at the end of the accounting time period.

Partnership Capital Accounts

Each partner has an individual account that is credited with capital contributions to the partnership. The following entry records a $5,000 cash investment by partner A.

Cash	5,000	
A, Capital		5,000
To record investment by A.		

If non–cash assets are contributed, then the appropriate asset account is debited. Partner withdrawals of assets from the partnership are recorded in each partner's drawings account. If partner A withdraws $1,000 cash, for example, the following entry is recorded:

A, Drawings	1,000	
Cash		1,000
To record drawings by A.		

At year end, each partner's drawings account is closed to his/her capital account. The following closing entry would close partner A's drawings account, assuming no further drawings have been made.

A, Capital	1,000	
A, Drawings		1,000
To close A's drawings account.		

The drawings account is closed directly to the capital account of each partner.

If a partner withdraws any asset, including cash for personal use, the drawings account is debited for the cost of the asset and the appropriate asset account is credited for the same amount. For example, if partner A takes a dress from the business with a cost of $20 and a selling price of $100, the journal entry will be:

A, Drawings	20	
Inventory		20

If an owner uses the business's funds to pay personal debts, the drawings account is again debited. For example, if partner B writes a cheque drawn on the partnerships' bank account for $35 to pay for his child's swimming lessons, the journal entry will be:

B, Drawings	35	
Cash		35

Proprietorship Accounting

A **proprietorship** is owned by one individual who usually also manages the operation. Like a partnership, it is not legally separate from the owner. Proprietorship and partnership accounting are similar. Investments in the business are recorded in the proprietor's capital account in the same way as in a partnership. Proprietor withdrawals from the business are also recorded as drawings; the drawings account balance is closed to the capital account at year end.

B. Division of Partnership Profits and Losses

After the net income for the fiscal year of a partnership is determined, each partner's share is calculated and the amount is added to the applicable capital account. Recall that individual revenue and expense accounts are closed to the Income Summary at the end of each fiscal year. The Income Summary is then closed to retained earnings in a corporation. In a partnership, the Income Summary is closed directly to each partner's capital account at the fiscal year end in accordance with an agreed-upon formula. For example, if a partnership earned $15,000 and the partnership agreement states that profits and losses are to be split evenly between partner A and partner B, the closing entry would be:

Income Summary	15,000	
A, Capital		7,500
B, Capital		7,500

If profits and losses are allocated according to a formula specified in the partnership agreement, the formula may consider three factors: a return to each partner for the amount of capital invested in the partnership, a payment to each partner for services rendered, and a further division of any remaining profit (or loss) according to a specified profit and loss sharing ratio.

Division Using a Fixed Ratio

The division of profits and losses according to a fixed ratio is appropriate when each partner makes an equal contribution to the business. Ideally, each partner would have an equal amount of capital invested in the partnership and would devote an equal amount of time and effort in the business. However, usually the amount of capital differs, and time and effort devoted to the business is unequal. The initial calculation of a fixed ratio inclusion in the partnership agreement considers these factors. Partners can agree to share profits in any manner – for example, in a fixed ratio, such as 3:2. A ratio of '3:2' means that 60 per cent (3/5) of the partnership income is allocated to partner A and 40 per cent (2/5) is allocated to Partner B. Assuming that A and B share profits in the ratio of 3:2, a $15,000 profit would be divided and recorded by the following entry:

Income Summary	15,000	
A, Capital (3/5 x 15,000)		9,000
B, Capital (2/5 x 15,000)		6,000
To record division of partnership profits.		

Partnership losses are allocated in the same manner. Assume that partners A and B share profits and losses at a fixed ration of 4:5. In this case, a $9,000 loss would be divided as follows:

A, Capital (4/9 x 9,000)	4,000	
B, Capital (5/9 x 9,000)	5,000	
Income Summary		9,000
To record division of partnership loss.		

Division Using Salary and Interest Allocations

Since the time and effort devoted by individual partners to the business is often unequal and the amount of capital balance varies among partners, other allocation method may be used. Profits and losses can be allocated by *interest on partners' capital balances* and *salaries to partners* to each partner, in accordance with individual contributions. Any remaining profits and losses can be divided through the profit and loss sharing ratio. It is important to understand that the salary and interest allocations are not deducted as expenses on the income statement; *salary* and *interest* used here refer only to individual factors used in dividing profits and losses among partners.

To illustrate: Before beginning their partnership, A and B agreed that 12 per cent interest would be allocated to their capital balances and that A deserved more compensation because of his valuable technical skills. Accordingly, allocation of profit was also to be based on salaries of $7,000 to A and $5,000 to B. They also agreed that any remaining profit and loss should be shared in the ratio of 3:2.

Assume A and B have each contributed $10,000 to the partnership, and that net income for the year is $15,000. The net income would be allocated as follows:

	A	*B*	*Total*
Amount of profit to be allocated to partners			$15,000
Salary allocation	7,000	5,000	(12,000)
Balance			3,000
Interest allocation:			
A: $10,000 x 12%	$ 1,200		
B: $10,000 x 12%		$ 1,200	(2,400)
Balance			600
Balance allocated in profit and loss sharing ratio:			
A: $600 x 3/5	360		
B: $600 x 2/5		240	(600)
Balance			–0–
Allocated to partners	$ 8,560	$ 6,440	

The following entry records this profit allocation between A and B:

Income Summary	15,000	
A, Capital		8,560
B, Capital		6,440

If the $15,000 partnership income had been inadequate to cover the salary and interest allocated to A and B, the difference would have been allocated in the profit and loss sharing ratio. Assuming that partnership net income had amounted to $9,000, the following calculation of amounts allocated to the partners would be made:

	A	*B*	*Total*
Amount of loss to be allocated to partners			($9,000)
Salary allocation	$ 7,000	$ 5,000	(12,000)
Balance			(3,000)
Interest allocation:			
A: $10,000 x 12%	1,200		
B: $10,000 x 12%		1,200	(2,400)
Balance			(5,400)
Balance allocated in profit and loss sharing ratio:			
A: ($5,400) x 3/5	(3,240)		
B: ($5,400) x 2/5		(2,160)	5,400
Balance			–0–
Allocated to partners	$ 4,960	$ 4,040	

The journal entry to allocate the loss would be:

Income Summary	9,000	
A, Capital		4,960
B, Capital		4,040

Partnership Financial Statements

The income statement of a partnership or proprietorship is similar to that of a corporation, except that there is no income taxes expense. Income taxes are paid personally by partners on all sources of income, including their amounts of partnership income allocated each year. A partnership income statement also does not record any salaries expense paid to partners. “Salaries” consist of the allocation of net income or loss each year to the respective partner, as described above.

A **statement of partners’ equity** replaces the statement of changes in equity used in corporate financial statements. This shows each partner’s contributions to the business, net income (or loss) allocations, and drawings during the period.

Assume that for the year ended December 31, 2013, partners A and B each had opening capital balances of $10,000, each contributed $5,000 to the partnership during the fiscal year. Net income for the year equalled $15,000, allocated as in the above example (A: $8,560; B: 6,400). Partner A withdrew $10,000 during the year; partner B withdrew $15,000. The statement of partners’ equity for A and B Partnership would appear as follows:

A and B Partnership
Statement of Partners’ Equity
For the Year Ended December 31, 2013

	A	*B*	*Total*
Opening Capital Balance	$ 5,000	$ 5,000	$10,000
Add: Investments during 2013	5,000	5,000	10,000
Net Income for the Year	8,560	6,440	15,000
	18,560	16,440	35,000
Less: Drawings	(10,000)	(15,000)	(25,000)
Ending Capital Balance	$ 8,560	$ 1,440	$10,000

The balance sheet of a partnership can show the equity of each partner if there are only a few. For instance, the partners’ equity section of A and B Partnership could appear as follows on the balance sheet:

Partners’ Equity

Partner A	$8,560
Partner B	1,440
Total Partners’ Equity	$10,000

If there are many partners, only a total capital amount is indicated, with details of each partner’s equity disclosed in the statement of partners’ equity.

C. Admission of a New Partner

The admission of a new partner results in the creation of a new partnership. Although the business of the former partnership can continue, the former partnership ceases to exist. Since the liability, agency, and profit sharing arrangements may be altered, a new partnership agreement is required.

Assume the following balance sheet information.

A and B Partnership
Balance Sheet
As at December 31, 2013

Assets		*Liabilities*		
Cash	$ 5,000	Accounts Payable		$ 7,000
Other Assets	22,000	*Partners' Equity*		
		Partner A	$10,000	
		Partner B	10,000	20,000
	$27,000			$27,000

Assume a new partner C wants to enter the A and B partnership. C can be admitted either by purchasing an existing partner's interest or by contributing assets to the partnership.

Purchase of an Existing Partner's Interest

Assume C is going to purchase B's interest in A and B Partnership, and B will leave. The purchase of an existing partner's interest in a partnership is a private transaction between the new partner and the applicable existing partner. The new partner C makes a payment to the existing partner B, who in turn transfers the partnership interest. This type of purchase does not affect the assets of the partnership. Only an entry recording the change in ownership is made in the partnership books. The following entry illustrates the recording of C's purchase of B's interest.

B, Capital	10,000	
C, Capital		10,000
To record transfer of B's partnership interest to C.		

The balance sheet of the partnership would show the following:

A and C Partnership
Balance Sheet
As at December 31, 2013

Assets		*Liabilities*		
Cash	$ 5,000	Accounts Payable		$ 7,000
Other Assets	22,000	*Partners' Equity*		
		Partner A	$10,000	
		Partner C	10,000	20,000
	$27,000			$27,000

The amount paid by C to B is not reflected in the partnership records. Assume now that C purchased only ½ of B's interest. In this case, only half of B's interest would be transferred to C by the following entry:

B, Capital	5,000	
C, Capital		5,000
To record transfer of half B's partnership interest to C.		

The balance sheet of the partnership would show the following:

Assets		*Liabilities*		
Cash	$ 5,000	Accounts Payable		$ 7,000
Other Assets	22,000	*Partners' Equity*		
		Partner A	$10,000	
		Partner B	5,000	
		Partner C	5,000	20,000
	$27,000			$27,000

Investment in the Partnership

Rather than purchase an existing partner's interest, the new partner could contribute cash or other assets in return for a partnership interest. This method differs from the purchase of an existing partner's interest; in this case, both the assets and equity of the partnership are increased. Assume that C contributes assets at their fair value of $10,000 (referred to as *other assets* for illustrative purposes) to the partnership for a one-third interest in the partnership capital after his investment. This investment is recorded as follows:

Other Assets	10,000	
C, Capital		10,000
To record C's investment in the partnership.		

Following the investment, the balance sheet would appear as follows:

Assets		*Liabilities*		
Cash	$ 5,000	Accounts Payable		$ 7,000
Other Assets		*Partners' Equity*		
($22,000 + 10,000)	32,000	Partner A	$10,000	
		Partner B	10,000	
		Partner C	10,000	30,000
	$37,000			$37,000

In some cases, C may receive more or less than a $10,000 capital balance because a *bonus* may be given either to the new partner or to the existing partners.

The partnership may want to add a new partner who can bring certain technical skills, management abilities, or some other desirable business strengths. To entice a desirable individual, a bonus may be offered in excess of the amount invested by the new partner. In this case, the existing partners allocate a portion of their capital to C.

Bonus to the New Partner

Assume instead that C invests assets at their fair value of $4,000 into the partnership for a one-third ownership interest. The new total capital amounts to $24,000 ($10,000 + 10,000 + 4,000); of this amount, $8,000 ($24,000 x 1/3) belongs to C. In this case, an equal amount of capital must be contributed by A and B to C to make up the difference between what C contributes and C’s capital balance. A bonus is used to accomplish this. Assuming that A and B share profits equally, the new partner’s entry is recorded as follows:

Other Assets	4,000	
A, Capital	2,000	
B, Capital	2,000	
C, Capital		8,000

The partnership balance sheet following the recording of C’s investment would appear as follows:

Assets		*Liabilities*		
Cash	$ 5,000	Accounts Payable		$ 7,000
Other Assets		*Partners’ Equity*		
($22,000 + 4,000)	26,000	Partner A	$8,000	
		Partner B	8,000	
		Partner C	8,000	24,000
	$31,000			$31,000

Bonus to Existing Partners

If the partnership business is particularly successful and profitable, the existing partners may require the new partner to pay them a bonus as an admission requirement. Assume that C invests assets at their fair value of $13,000 in the partnership for a one-third ownership interest. The new total capital amounts to $33,000 ($10,000 + 10,000 + 13,000); of this amount, $11,000 ($33,000 x 1/3) belongs to C.

The bonus to existing partners is recorded as follows:

Other Assets	13,000	
A, Capital		1,000
B, Capital		1,000
C, Capital		11,000

The $13,000 invested by C results in only an $11,000 capital balance for C. A and B receive a $1,000 increase in each of their capital balances as a result of C’s $13,000 investment in the partnership.

The partnership balance sheet, following the recording of C's investment, would appear as follows:

Assets		*Liabilities*		
Cash	$ 5,000	Accounts Payable		$ 7,000
Other Assets		*Partners' Equity*		
($22,000 + 13,000)	35,000	Partner A	$11,000	
		Partner B	11,000	
		Partner C	11,000	33,000
	$40,000			$40,000

D. Withdrawal of an Existing Partner

It is common for an existing partner to withdraw from a partnership. Settlement of the exiting partner's ownership interest is made in accordance with provisions of the partnership agreement.

The withdrawal of a partner can be accounted for as a sale to a new partner, as a sale to one or more of the existing partners, or through a payment of partnership assets to the withdrawing partner. The following balance sheet of A, B, and C Partnership will be used to illustrate the concepts in this section:

A, B, and C Partnership
Balance Sheet
As At December 31, 2013

Assets		*Liabilities*		
Cash	$ 5,000	Accounts Payable		$ 7,000
Other Assets	32,000	*Partners' Equity*		
		Partner A	$10,000	
		Partner B	10,000	
		Partner C	10,000	30,000
	$37,000			$37,000

Sale to a New Partner

This method is similar to the purchase of an existing partner's interest. Assume C sells a partnership interest to D. Payment for the ownership interest is a private transaction, though the existing partners must approve the new arrangement. There is no change in either the assets or the capital of the partnership as a result of this transaction. However, the following journal entry would be made:

C, Capital	10,000	
D, Capital		10,000
To record transfer of C's partnership interest to D.		

The balance sheet would show the following:

A, B, and D Partnership
Balance Sheet
As At December 31, 2013

Assets		*Liabilities*		
Cash	$ 5,000	Accounts Payable		$ 7,000
Other Assets	32,000	*Partners' Equity*		
		Partner A	$10,000	
		Partner B	10,000	
		Partner D	10,000	30,000
	$37,000			$37,000

Sale to the Remaining Partners

An alternate method is for the withdrawing partner to the ownership interest to the remaining partner(s). This transaction is also private. The assets and the total equity of the partnership are not altered. An entry is made to record the change in the partnership books. If C wants to withdraw, and A and B both purchase C's interest, the following entry would be recorded:

C, Capital	10,000	
A, Capital		5,000
B, Capital		5,000

To record transfer of C's partnership interest to A and B.

Although more or less than $10,000 may have been paid personally by A and B to C, the entry to transfer C's ownership is based on the capital balance of the partnership.

The balance sheet would show the following:

Assets		*Liabilities*		
Cash	$ 5,000	Accounts Payable		$ 7,000
Other Assets	32,000	*Partners' Equity*		
		Partner A	$15,000	
		Partner B	15,000	30,000
	$37,000			$37,000

Payment from Partnership Assets

A third method involves a payment to the withdrawing partner for the amount of her capital balance. Assuming the payment is made in cash, the following entry would be prepared:

C, Capital	10,000	
Cash		10,000

To record C's withdrawal from the partnership.

The balance sheet would now show:

Assets		*Liabilities*		
Other Assets	$ 32,000	Bank Overdraft	$5,000	
		Accounts Payable	7,000	$ 12,000
		Partners' Equity		
		Partner A	$10,000	
		Partner B	10,000	20,000
	$32,000			$32,000

Note that this transaction results in a $5,000 bank overdraft. The remaining partners will have to contribute more cash, or the partnership will have to sell of its assets for cash, or obtain a bank loan to cover the cash deficiency.

Often, the withdrawing partner may receive either more or less than the recorded capital balance. The difference can result from undervalued or overvalued partnership assets, anticipated future profitable operations in excess of normal returns to which the exiting partner is entitled, or to settle inter–personal conflicts among partners. As a result, the partners calculate an agreed amount that is due to C; the difference is treated as a bonus to either the withdrawing partner or the remaining partners. For instance, if C is paid $12,000, or $2,000 more than her capital balance, the capital balances of both A and B would each be reduced by $1,000.

C, Capital	10,000	
A, Capital	1,000	
B, Capital	1,000	
Cash		12,000

To record C's withdrawal from the partnership.

In this case, the two remaining partners are assumed to share the difference equally. C, therefore, receives a total of $12,000, represented by the $10,000 capital balance and a bonus of $2,000, which is paid equally by A and B.

If C is paid $3,000 less than his capital balance, the capital balances of both A and B would be increased by $1,500.

C, Capital	10,000	
A, Capital		1,500
B, Capital		1,500
Cash		7,000

To record C's withdrawal from the partnership.

C receives $7,000 in cash; the $3,000 difference, shared equally by A and B, increases their capital balances.

E. Liquidation of a Partnership

The **liquidation** of a partnership results in a termination of the partnership business. Its assets are sold, debts are paid, and any remaining cash or unsold assets are distributed to the partners in settlement of their capital balances. The amount of cash available to partners depends on the amount of proceeds from the sale of partnership assets after liabilities have been paid. The following partnership post–closing balance sheet at January 1, 2014 illustrates the accounting for the liquidation of A, B, and C Partnership.

Assets		*Liabilities*		
Cash	$ 5,000	Accounts Payable		$ 7,000
Other Assets	32,000	*Partners' Equity*		
		Partner A	$10,000	
		Partner B	10,000	
		Partner C	10,000	30,000
	$37,000			$37,000

For purposes of this section, profits and losses are assumed to be shared in a ratio of 5:3:2 (A: 50%; B: 30%; 20%).

Gains on Sale of Assets

Each partner's share of gains realised on the sale of assets is recorded as an increase in his/her capital account. If the other assets are sold for $42,000, the following entry is prepared to record the gain.

Cash	42,000	
Gain on Sale of Assets		10,000
Other Assets		32,000

To record the gain on sale of other assets.

The $10,000 gain is then divided among the partners in their 5:3:2 profit and loss sharing ratio:

Gain on Sale of Assets	10,000	
A, Capital		5,000
B, Capital		3,000
C, Capital		2,000

To record the division of the gain from sale of other assets.

The liabilities are then paid; the journal entry to record the payment follows.

Accounts Payable	7,000	
Cash		7,000

To record payment of liabilities.

At this point, the partnership balances would appear as:

Assets		*Partners' Equity*	
Cash	$40,000	Partner A	$15,000
		Partner B	13,000
		Partner C	12,000
	$40,000		$40,000

The following entry is prepared to record payment of the three capital account balances and complete the liquidation of the partnership:

A, Capital	15,000	
B, Capital	13,000	
C, Capital	12,000	
Cash		40,000
To record payment of capital accounts.		

Note that all capital account balances are zero following the distribution of cash.

Loss on Sale of Assets

In the case of a loss on sale of assets, losses resulting from the conversion of assets to cash are also allocated to partners in their profit and loss sharing ratio. The discussion that follows assumes the partners' capital balances are sufficient to absorb the applicable share of the loss.

Adequate Amount of Capital Balances

Assume that the sale of the $32,000 of other assets in the example given earlier realises only $22,000. The following entry records the sale:

Cash	22,000	
Loss on Sale of Assets	10,000	
Other Assets		32,000
To record loss on sale of assets.		

The $10,000 loss is then allocated to each partner in accordance with the 5:3:2 profit and loss sharing ratio.

A, Capital	5,000	
B, Capital	3,000	
C, Capital	2,000	
Loss on Sale of Assets		10,000
To record the division of loss from sale of assets.		

The payment of liabilities is then recorded.

Accounts Payable	7,000	
Cash		7,000
To record payment of accounts payable.		

The partnership balances are next calculated.

Assets		Partners' Equity	
Cash	$20,000	Partner A	$ 5,000
		Partner B	7,000
		Partner C	8,000
	$20,000		$20,000

The following entry records the distribution of cash to the partners:

A, Capital	5,000	
B, Capital	7,000	
C, Capital	8,000	
Cash		20,000
To record payment of capital accounts.		

Note that the balance in each capital account is again zero following the distribution of cash, and the liquidation is complete.

Inadequate Amount of Capital Balances

The sale of partnership assets may result in a debit balance in one partner's capital account following allocation of the loss. Assume that sale of the previous $32,000–worth of other assets realises only $8,000. The following entry records the sale:

Cash	8,000	
Loss on Sale of Assets	24,000	
Other Assets		32,000
To record loss on sale of assets.		

This $24,000 loss is next allocated to each partner in accordance with the 5:3:2 profit and loss sharing ratio.

A, Capital	12,000	
B, Capital	7,200	
C, Capital	4,800	
Loss on Sale of Assets		24,000
To record the division of loss from sale of assets.		

The payment of liabilities is then recorded.

Accounts Payable	7,000	
Cash		7 000
To record payment of accounts payable.		

The partnership balances now appear as follows:

Assets		Partners' Equity (Deficiency)	
Cash	$ 6,000	Partner A	$(2,000)
		Partner B	2,800
		Partner C	5,200
	$ 6,000		$ 6,000

A has a deficiency (debit balance) in his capital account. A would be expected to contribute $2,000 cash to the partnership to make up this debit balance. If A does not contribute this amount, then this $2,000 debit balance is allocated to the remaining partners in their agreed profit and loss sharing ratio, in this case 3:2. The following entry illustrates the allocation of A's debit balance to B and C.

B, Capital	1,200	
C, Capital	800	
A, Capital		2,000
To record allocation of A's debit balance.		

At this point, the partnership balances are:

Assets		*Partners' Equity*	
Cash	$ 6,000	Partner B	$ 1,600
		Partner C	4,400
	$ 6,000		$ 6,000

The distribution of cash to B and C would be recorded by the following entry, and the liquidation would be complete:

B, Capital	1,600	
C, Capital	4,400	
Cash		6,000
To record payment of capital accounts.		

Statement of Partnership Liquidation

A *statement of partnership liquidation* can be prepared to show the progress of the liquidation over a period of time. The prior information involving the sale of $32,000 of other assets for $8,000, allocation of loss to the partners, payment of liabilities, allocation of A's debit balance to B and C, and final distribution of cash, are summarised in the following statement.

A, B, and C
Statement of Partnership Liquidation
For the Month Ending January 31, 2014

		Other	*Accounts*		*Partners' Equity*	
	Cash	*Assets*	*Payable*	*A*	*B*	*C*
Opening balance	$ 5,000	$32,000	$ 7,000	$10,000	$10,000	$10,000
Sale of other assets	8,000	(32,000)				
Allocation of loss ($24,000)				(12,000)	(7,200)	(4,800)
Balances	13,000	$ –0–	7,000	(2,000)	2,800	5,200
Payment of liabilities	(7,000)		(7,000)			
Balances	6,000		$ –0–			
Allocation of A's debit				2,000		
balance					(1,200)	
B: 3/5 x $2,000						(800)
C: 2/5 x $2,000						
Balances				$ –0–	1,600	4,400
Distribution of cash	(6,000)				(1,600)	(4,400)
Balances	$ –0–				$ –0–	$ –0–

ASSIGNMENT MATERIALS

Discussion Questions

1. Define a partnership and briefly explain five characteristics.
2. What are the advantages and disadvantages of partnerships?
3. How does accounting for a partnership differ from that for a corporation?
4. How can partnership profits and losses be divided among partners?
5. Why are salary and interest bases used as a means to allocate profits and losses in a partnership?
6. How are partners’ capital balances disclosed in the balance sheet?
7. What is a partnership bonus? How is it calculated when a new partner is admitted?
8. Distinguish between the sale of a withdrawing partner’s interest to a new partner and sale of an interest to his/her existing partner(s).
9. Explain how a deficiency (debit balance) in one partner’s capital account is handled if that partner is unable to contribute additional assets to cover it.

Comprehension Problems

CP 10–1

You are given the following data for the partnership of B. White and C. Green.

B. White and C. Green Partnership
Trial Balance
December 31, 2014

Cash	$ 41,000	
Accounts Receivable	68,400	
Merchandise Inventory	27,000	
Accounts Payable		$ 45,800
B. White, Capital		30,000
B. White, Drawings	7,000	
C. Green, Capital		20,000
C. Green, Drawings	5,000	
Sales		322,000
Cost of Goods Sold	160,500	
Rent Expense	36,000	
Advertising Expense	27,200	
Delivery Expense	9,600	
Office Expense	12,800	
Utilities Expense	23,300	
Totals	$417,800	$417,800

Each partner contributed $10,000 capital during the year; the opening credit balance in each capital account was White $20,000 and Green $10,000. The partners share profits and losses equally.

View Solution

Required:

1. Prepare an income statement for the year.
2. Prepare a statement of partners' equity for the year in the following format:

Statement of Partners' Equity
For the Year Ended December 31, 2014

	White	*Green*	*Total*
Opening Balance	$	$	$
Add: Investments during 2014			
Net Income			
	$	$	$
Deduct: Drawings			
Ending Balance	$	$	$

3. Prepare a balance sheet at December 31, 2014.
4. Prepare closing entries at year end.

CP 10–2

Refer to CP 10-1.

View Solution

Required: Prepare the equivalent statement of partners' equity at December 31, 2014 assuming that the partnership is instead:

1. A proprietorship owned by B. White. (Combine C. Green balances and transactions with those of B. White.)
2. A corporation named BW and CG Ltd. with 100 common shares issued to each of B. White and C. Green for a stated value of $1 per share. Assume opening retained earnings equal $29,800 and that 20,000 common shares were issued during 2014 for a stated value of $1 per share.

CP 10-3

Refer to CP 10-1.

View Solution

Required: Prepare the journal entry to allocate net income to each of the partners assuming the following unrelated scenarios:

1. Net income is allocated in a fixed ratio of 5:3 (White: Green).
2. Net income is allocated by first paying each partner 10% interest on opening capital balances, then allocating salaries of $30,000 for White and $10,000 for Green, then splitting the remaining unallocated net income in a fixed ratio of 3:2 (White:Green).

CP 10-4

Assume the following information just prior to the admission of new partner **I**:

Assets		*Liabilities*		
Cash	$ 5,000	Accounts Payable		$ 8,000
Accounts Receivable	43,000	*Partners' Equity*		
		Partner G	$30,000	
		Partner H	10,000	40,000
	$48,000			$48,000

View Solution

Required: Prepare journal entries to record the following unrelated scenarios:

1. New partner I purchases partners G's partnership interest for $40,000.
2. New partner I receives a cash bonus of $2,000 and a one-tenth ownership share, allocated equally from the partnership interests of G and H.
3. New partner I contributes land with a fair value of $100,000. Relative ownership interests after this transaction are:

Partner	*Ownership Interest*
G	20%
H	5%
I	75%
	100%

CP 10-5

Assume the following information just prior to the withdrawal of Partner X:

Assets		*Liabilities*		
Cash	$20,000	Accounts Payable		$ 5,000
Inventory	50,000	*Partners' Equity*		
		Partner X	$10,000	
		Partner Y	20,000	
		Partner Z	35,000	65,000
	$70,000			$70,000

View Solution

Required: Prepare journal entries to record the following unrelated scenarios:

1. Partner X sells his interest to new partner T for $25,000.
2. Partner X sells his interest to partner Y for $30,000.
3. Partner X sells his interest and is paid a share of partnership net assets as follows

Cash	$ 5,000
Inventory	5,000
Accounts payable	(2,000)
	$ 8,000

Partner Y receives a 60% share of the partnership interest of X. Partner Z receives 40%.

CP 10–6

The following balance sheet is for the partnership of Able, Brown, and Crown at November 1, 2012.

Assets		*Liabilities*		
Cash	$ 20,000	Accounts Payable		$ 50,000
Other Assets	180,000	*Partners' Equity*		
		Able	$37,000	
		Brown	65,000	
		Crown	48,000	150,000
	$200,000			$200,000

The profit and loss sharing ratio is Able 40%; Brown: 40%, and Crown: 20%. The partnership is dissolved and liquidated during November by selling the other assets for $100,000 and paying off the creditors.

View Solution

Required:

1. Prepare a schedule of partnership liquidation for the month ending November 30, 2012. Assume any capital deficiency is absorbed by the other partners.
2. Prepare the journal entries to record the dissolution.

Problems

P 10–1

On January 1, 2013, Bog, Cog, and Fog had capital balances of $60,000, $100,000, and $20,000 respectively in their partnership. In 2013 the partnership reported net income of $40,000. None of the partners withdrew any assets in 2013. The partnership agreed to share profits and losses as follows:

a. A *monthly* salary allowance of $2,000, $2,500, and $4,000 to Bog, Cog and Fog respectively.
b. An annual interest allowance of 10 per cent to each partner based on her capital balance at the beginning of the year.
c. Any remaining balance to be shared in a 5:3:2 ratio (Bog:Cog:Fog).

Required:

1. Prepare a schedule to allocate the 2013 net income to partners.
2. Assume all the income statement accounts for 2013 have been closed to the income summary account. Prepare the entry to record the division of the 2013 net income.

P 10–2

Bo and Diddley have decided to establish a partnership. Bo contributes $50,000 in cash; Diddley contributes $100,000 cash. They are evaluating two plans for a profit and loss sharing agreement:

Plan A Bo to receive a salary of $15,000 per year, the balance to be divided between Bo and Diddley according to their opening capital balance ratios.

Plan B Bo to receive a salary of $12,000 per year; Bo and Diddley to receive 8 per cent interest per year each on their opening capital balances, and the balance of profit or loss to be split equally.

Required:

1. Calculate the division under each plan in the following schedule, assuming: (a) a profit of $60,000 per year, and (b) a loss of $30,000 per year.

Profit and loss sharing plan	*Division with profit of $60,000*		*Division with loss of $30,000*	
	Bo	Diddley	Bo	Diddley
Plan A:				
Salary				
Balance				
Total				
Plan B:				
Salary				
Interest				
Balance				
Total				

2. Comment on the advantages and disadvantages of each plan.

P 10–3

Good, Hood, and Food are partners, sharing profits equally. They decide to admit Mood for an equal partnership (25%). The balances of the partners' capital accounts are:

Good, Capital	$30,000
Hood, Capital	26,000
Food, Capital	19,000
	$75,000

Required: Prepare journal entries to record admission of Mood, using the bonus method:

1. Assuming the bonus is paid to the new partner; Mood invests $15,000 cash;.
2. Assuming the bonus is paid to existing partners; Mood invests $45,000 cash; the remaining partners benefit equally from the bonus.

P 10–4

The balance sheet of A, B, and C Partnership is shown below. The partnership has decided to liquidate. The general ledger shows the following balances on March 1, 2013:

Cash	$ 10,000
Other Assets	125,000
Accounts Payable	10,000
A, Capital	25,000
B, Capital	37,500
C, Capital	62,500

Proceeds from the sale of non-cash assets during March were $42,500.

Required:

1. Prepare a statement of partnership liquidation for the month ending March 31, 2013. Assume profits and losses are shared equally and that any capital deficiency is absorbed by the other partners.
2. Prepare the journal entries to record the dissolution.

Alternate Problems

AP 10–1

Partners A and B are subject to the following agreement for the sharing of profits/losses:

a. Annual salary allocations are allowed as follows: $12,000 to A, $14,000 to B.
b. Interest at 10 per cent is paid each year on original capital contributions of $100,000 from A, and $70,000 from B.
c. Any remainder is to be split in the ratio of 3:2 (A:B).

View Solution

Required: How much net income must be earned by the partnership in the fiscal year for A to be allocated a total of $47,000? (*Hint:* use a schedule of profit allocation.)

AP 10–2

Madge and Ryan have decided to open a business partnership. Madge is familiar with the business and is expected to spend a good deal of time running it. Ryan, on the other hand, will handle the financial duties of the partnership. The following plans for sharing profits and losses are being considered:

Plan A Salary, with balance of net income or net loss divided equally. Madge's salary: $10,000 per year; Ryan's salary: zero.

Plan B Salary, interest on investment and balance of net income or net loss split equally: Madge's salary: $10,000 per year, Ryan's salary: zero; both to receive 10 per cent per year interest on beginning investments. Beginning investments: Madge: $50,000, Ryan: $200,000.

View Solution

Required:

1. Calculate the division under each plan in the schedule below assuming (a) a profit for the year of $150,000, and (b) a loss of $25,000.

Profit and loss sharing plan	*Division with profit of $150,000*		*Division with loss of $25,000*	
	Madge	*Ryan*	*Madge*	*Ryan*
Plan A:				
Salary				
Balance				
Totals				
Plan B:				
Salary				
Interest				
Balance				
Totals				

2. Assume you are Ryan's financial advisor? What plan would you recommend?

AP 10–3

Cogsworth and Darwin are partners sharing profits and losses 60 per cent and 40 per cent, respectively. On July 1, their capital balances are as follows: Cogsworth $23,000, Darwin $18,600. Howard is admitted as a partner and invests $16,000.

View Solution

Required: Record the investment by Howard in journal entry form, assuming:

1. The new partner is given credit for the actual investment made.
2. The new partner is given a1/3 interest, a bonus being given to Howard according to the profit allocation formula.
3. The new partner is given a 1/4 interest, a bonus being given to the existing partners according to the profit allocation formula.

AP 10–4

A, B, C, and D share profits 40 per cent, 30 per cent, 20 per cent, and 10 per cent, respectively. Assume all partners are unable to contribute any amount to the partnership. The balance sheet at January 1, 2013 shows:

Assets		*Liabilities*		
Cash	$ 4,000	Accounts Payable		$ 20,000
Non-current Assets	54,000	*Partners' Equity*		
		A, Capital	4,000	
		B, Capital	9,600	
		C, Capital	18,400	
		D, Capital	6,000	38,000
	$58,000			$58,000

The partnership is liquidated during the month of January 2013; the non-current assets are sold for $26,000.

View Solution

Required: Prepare a statement of partnership liquidation for the month ending January 31, 2013. Assume any capital deficiency is paid by the other partners in proportion to the allocation formula.

Decision Problems

DP 10–1

Killibrew, Santos, and Terry were partners in KST Sports. Under the partnership agreement, each partner receives an interest allowance of 9 per cent of her opening capital balance and a salary allowance as follows: Killibrew - $20,000; Santos - $18,000; and Terry - $10,000. Terry, who manages the stores in the off season, receives a bonus of 20 per cent of the income in excess of $18,000 after partners' interest and salary allowances. The balance of net income or net loss is divided equally. The capital balances at the beginning of the year were: Killibrew - $120,000, Santos - $110,000, and Terry - $170,000.

Required:

1. Prepare the journal entry to divide net income of $144,000.
2. Prepare the journal entry to divide net loss of $6,000.

DP 10–2

Jones, Smith, and Scott is a partnership. The partners allocate net income and net losses in a 5:3:2 ratio (Jones: Smith: Scott). The post-closing trial balance for the partnership at June 30, 2013 shows the following:

	Book Value
Cash	$10,800
Accounts Receivable	19,400
Merchandise Inventory	23,800
Equipment	35,200
Accumulated Depreciation—Equipment	8,200
Accounts Payable	21,600
Income Summary	20,000
Jones, Capital	13,760
Smith, Capital	12,000
Scott, Capital	13,640

On July 1, 2013, JSS Corporation was established. It was authorised to issue an unlimited number of no par-value common shares and 500,000, 6%, cumulative preferred shares. On July 3, the partnership was dissolved. JSS Corporation acquired the cash, accounts receivable, and accounts payable from the partnership at their June 30 book values. Merchandise inventory was transferred for its fair value of $20,000. Equipment was transferred for its fair value of $50,000.

On July 1, JSS Corporation issued 100 commons shares to each of Jones, Smith and Scott for a stated value of $1 per share, which they paid in cash. On July 3, it issued notes payable to each of the three shareholders according to their proportion of the net assets of the partnership at book value on June 30, and no par-value, 6% cumulative preferred shares with a stated value of $10 per share to each of the three shareholders according to their proportions of the differences between fair values and book values of the partnership's net assets at that date.

Required:

1. Prepare a statement of partnership liquidation and journal entries to record the dissolution of the partnership at July 3, 2013.
2. Prepare journal entries to record the issue of common shares on July 1 and the acquisition of assets and liabilities in the records of JSS Corporation at July 3, 2013.
3. Record on the books of the new corporation the following transactions for the fiscal period ended June 30, 2014:

Jul. 3	2013	Jones and Smith each invested $500,000 additional cash in the corporation and were issued 10,000 common shares each.
Jul. 5	2013	An additional 5,000 common shares were issued to numerous individuals for $1,000,000 cash.
June 30	2014	JSS Corporation earned $400,000 income before income taxes, all in cash. The corporate income tax rate is 20%.
June 30	2014	JSS Corporation declared a $1 dividend per common share.

4. Prepare the statement of changes in equity for JSS Corporation at its first period ended June 30, 2014. Assume there are no other transactions.

CHAPTER ELEVEN

Debt Financing

A corporation often incurs long-term debt in order to finance its operations. This debt may take the form of a bond issue, a bank loan, or a finance lease. Some questions addressed in this chapter are:

1. What are the advantages of debt financing for common shareholders? the disadvantages?
2. What are bonds, and what rights are attached to bond certificates?
3. What are some bond characteristics?
4. How are bonds and related premiums or discounts recorded in the accounting records and disclosed on the balance sheet?
5. How is a loan payable similar to a bond issue? How is it different?
6. How are payments on a loan recorded and how is a loan payable presented on the balance sheet?
7. How is a finance lease similar to a loan payable? How is it different?
8. How are payments on a finance lease recorded and how is a finance lease presented on the balance sheet?
9. What is the effective interest method of amortisation, and how does it differ from the straight-line method?

A. The Decision to Issue Debt

Corporations generally acquire long-lived assets like property, plant, and equipment through the issue of shares or debt that is repayable over many years. Chapter 9 discussed how a corporation can raise funds by issuing shares. This chapter discusses corporate financing by means of issuing long-term debt. Types of long-term debt can be usefully classified according to their means of repayment.

1. **Bonds** pay *only interest* at regular intervals to investors. The original investment is repaid to bondholders when the bond *matures* (or comes due), usually often a number of years. Bonds are generally issued to many individual investors.
2. **Loans** and **finance leases** are repaid in equal payments on a regular basis. The payments represent both *interest and principal* paid to creditors. Such payments are said to be *blended*. That is, each payment contains repayment of a certain amount of the original amount of the loan, as well as interest on the remaining balance.

Each of these major types of long-term debt is discussed later in this chapter.

The Debt Financing Decision

Various methods of raising cash, by issuing common or preferred shares for instance, are also reviewed by management as alternatives to issuing debt. There are many factors influencing management in its choice between the issue of debts and the issue of share capital. One of the most important considerations is the potential effect of each of these financing methods on the present owners of the corporation, that is, the common shareholders.

Consider the example of Old World Corporation, which has 100,000 common shares outstanding, is a growth company, and is profitable. Assume Old World requires $30 million in cash to finance its seventh new plant. Management is currently reviewing three financing options:

1. Issue 12 per cent debt, due in three years
2. Issue 300,000 preferred shares (dividend $8 per share annually)
3. Issue an additional 200,000 common shares at $30 each.

Management estimates that erecting a new plant and placing it in operation should result in an income of $6 million before interest expenses if applicable and income taxes (assumed to be 50 per cent of net income and calculated after the deduction of interest expenses from income).

Management has prepared the following analysis to compare and evaluate each financing option. Study the details of this schedule and consider which plan is most attractive to the common shareholders.

	Plan 1: Issue Debt	*Plan 2:* Issue Preferred Shares	*Plan 3:* Issue Common Shares
Income before interest and income taxes	$ 6,000,000	$ 6,000,000	$ 6,000,000
Less: Interest expense ($30M x 12%)	(3,600,000)	-0-	-0-
Income before taxes	$ 2,400,000	$ 6,000,000	$ 6,000,000
Less: Income taxes at 50%	(1,200,000)	(3,000,000)	(3,000,000)
Net income	1,200,000	3,000,000	3,000,000
Less: Preferred dividends (300,000 x $8 per share)	-0-	(2,400,000)	-0-
Net income available to common shareholders	$ 1,200,000	$ 600,000	$ 3,000,000
Number of common shares outstanding	100,000	100,000	300,000
Earnings per common share	$ 12	$ 6	$ 10

Plan 1, the issue of debt, has several advantages for existing common shareholders.

Advantage 1: Earnings per Share

If the additional long-term financing were acquired through the issue of debt, the corporate earnings per share (EPS) on each common share would be $12. This EPS is greater than the EPS earned through financing with either preferred shares or additional common shares. On this basis alone, the issue of debt is more financially attractive to existing common shareholders.

Advantage 2: Control of the Corporation

Creditors have no vote in the affairs of the corporation. If additional common shares were issued, there might be a loss of corporate control by existing shareholders because ownership would be distributed over a larger number of shareholders, or concentrated in the hands of one or a few new owners. In the Old World case, issuing common shares would increase the number threefold from 100,000 to 300,000 shares.

Advantage 3: Income Taxes Expense

Interest expense paid on debt is deductible from income for income tax purposes. Dividend payments are distributions of retained earnings, which is after-tax income. Thus, dividends are not deductible again for tax purposes. With a 50 per cent income tax rate, the after-tax interest expense to the corporation is only six per cent (12% x 50%). The effective interest rate on preferred shares in this example is much higher, at 40% ($8/$20).

Debt Financing Disadvantages

There are also some disadvantages in long-term financing with debts that must be carefully reviewed by management and the board of directors. The most serious disadvantage is the possibility that the corporation might earn less than $6 million before interest expense and income taxes. The interest expense is a fixed amount. It must be paid to creditors every year, unlike dividends. If actual income before interest and income taxes were to decrease by only $400,000, net income under plan 1 would fall to $1,000,000. EPS would then be the same as that of plan 3 ($10 per common share).

Another disadvantage is the fact that debt must be repaid at maturity, whether or not the corporation is financially able to do so. Shares usually do not have to be repaid at a point in time.

Since the securities market and corporate net earnings remain uncertain, advanced mathematical formulae beyond the scope of this text are needed to precisely determine what form of financing is appropriate for a given situation.

Rights of Bondholders

As noted above, a **bond** is a debt instrument generally issued to many investors that requires future repayment of the original amount at a fixed date, as well as periodic interest payments during the intervening period. A contract called a **bond indenture** is prepared between the corporation and the future bondholders. It specifies the terms with which the corporation will comply, such as how much interest will be paid and when. Another of these terms may be a restriction on further borrowing by the corporation in the future. A **trustee** is appointed to be an intermediary between the corporation and the bondholder. The trustee administers the terms of the indenture.

Ownership of a bond certificate carries with it certain rights. These rights are printed on the actual certificate and vary among bond issues. The various characteristics applicable to bond issues are the subject of more advanced courses in finance and are not covered here. However, individual bondholders always acquire two rights.

The right to receive the face value of the bond at a specified date in the future, called the *maturity date*, and

The right to receive periodic interest payments, usually semi-annually, at a specified percent of the bond's face value.

Bond Authorisation

Every corporation is legally required to follow a well-defined sequence in authorising a bond issue. The bond issue is presented to the board of directors by management and must be approved by shareholders. Legal requirements must be followed and disclosure is required in the financial statements of the corporation.

Shareholder approval is an important step because bondholders are creditors with a prior claim on the assets of the corporation if liquidation occurs. Further, dividend distributions may be restricted during the life of the bonds. Affected shareholders usually need to approve this. These restrictions are usually reported to the reader of financial statements through note disclosure.

Recording the Bond Authorisation

Assume that Big Dog Carworks Ltd. decides to issue $30 million of 12% bonds to finance its expansion. The bonds are repayable three years from the date of issue, January 1, 2011. The amount of authorised bonds, their interest rate, and their maturity date can be shown in the accounts as follows:

GENERAL LEDGER
Bonds Payable—
Long-Term
(Due Jan. 1, 2014

Acct. No. 272

Date 2011	Description	F	Debit	Credit	DR. or CR.	Balance
Jan. 1	Authorised to issue $30,000,000					
	of 12%, 3-year bonds, due					
	January 1, 2014.					

Bonds in the Financial Statement

Each bond issue is disclosed separately in the financial statements because each issue may have different characteristics. The descriptive information disclosed to readers of financial statements includes the interest rate and maturity date of the bond issue. Also disclosed in a note are any restrictions imposed on the corporation's activities by the terms of the bond indenture and the assets pledged, if any.

Other Issues Related to the Bond Financing Decision

Cash Required in the Immediate and the Foreseeable Future

Most bond issues are sold in their entirety when market conditions are favourable. However, more bonds can be authorised in a particular bond issue than will be immediately sold. Authorised bonds, like authorised share capital, can be issued whenever cash is required.

Important Terms of the Bonds

The interest rate of the bonds, their maturity date, and other important provisions — such as convertibility into share capital and restrictions on future dividend distributions of the corporation — are also considered. The success of a bond issue often depends on the proper combination of these and other similar features.

Assets of the Corporation to Be Pledged

Whether long-lived assets like property, plant, and equipment are pledged as security is an important consideration for bondholders because it helps to safeguard their investments. It is important to the corporation because the pledging of all these assets may restrict future borrowings. The total amount of authorised bonds is usually a fraction of the pledged assets, for example, 50 per cent. The difference represents a margin of safety to bondholders. The value of these assets can shrink substantially but still permit reimbursement of bondholders should the company be unable to pay the bond interest or principal, and need to sell the pledged assets.

B. Bond Characteristics and Terminology

There are three main categories of bond terms. These are shown in Figure 11-1.

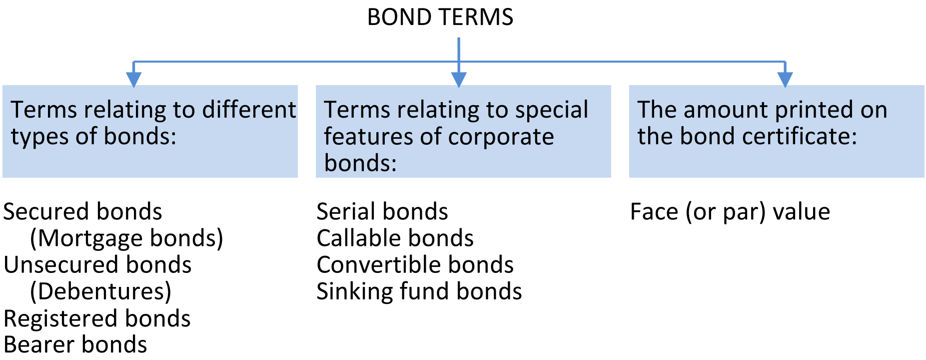


Figure 11-1 **Bond terms**

Terms Relating to Different Types of Bonds

Each corporation issuing bonds has unique financing needs and attempts to satisfy various borrowing situations and investor preferences. Many types of bonds have been created to meet these varying needs. Some of the common types are described below.

Bonds Can Be Secured or Unsecured

Secured bonds are backed by physical assets of the corporation. These are usually long-lived assets. When real property is legally pledged as security for the bonds, they are called **mortgage bonds**.

Unsecured bonds are commonly referred to as **debentures**. A debenture is a formal document stating that a company is liable to pay a specified amount with interest. The debt is not backed by any collateral. As such, debentures are usually only issued by large, well-established companies. Debenture holders are ordinary creditors of the corporation. These bonds usually command a higher interest rate because of the added risk for investors.

Bonds Can Be Registered or Bearer Bonds

Registered bonds require the name and address of the owner to be recorded by the corporation or its trustee. The title to **bearer bonds** passes on delivery of the bonds to new owners and is not tracked. Payment of interest is made when the bearer clips coupons attached to the bond and presents these for payment.

Terms Relating to Special Features of Bonds

Special features can be attached to bonds in order to make them more attractive to investors.

Varying Maturity Dates

When **serial bonds** are issued, the bonds have differing maturity dates, as indicated on the bond contract. Investors are able to choose bonds with a term that agrees with their investment plans. For example, in a $30 million serial bond issue, $10 million worth of the bonds may mature each year for three years.

The issue of bonds with a **call provision** permits the issuing corporation to redeem, or call, the bonds before their maturity date. The bond indenture usually indicates the price at which bonds are callable. Corporate bond issuers are thereby protected in the event that market interest rates decline below the bond contract interest rate. The higher interest rate bonds can be called to be replaced by bonds bearing a lower interest rate.

Conversion Privilege

Some bonds allow the bondholder to exchange bonds for a specified type and amount of the corporation's share capital. Bonds with this feature are called **convertible bonds**. This feature permits bondholders to enjoy the security of being creditors while having the option to become shareholders if the corporation is successful.

Sinking Fund Requirement

When **sinking fund bonds** are issued, the corporation is required to deposit funds at regular intervals with a trustee. This feature ensures the availability of adequate cash for the redemption of the bonds at maturity. The fund is called "sinking" because the transferred assets are tied up or "sunk," and cannot be used for any purpose other than the redemption of the bonds.

Restriction of Dividends

The corporation issuing bonds may be required to restrict its Retained Earnings, thereby limiting the amount of dividends that can be paid and protecting bondholders. The creation of such a restriction was discussed in an earlier chapter.

Investors consider the interest rates of bonds as well as the quality of the assets, if any, that are pledged as security. The other provisions in a bond contract are of limited or no value if the issuing corporation is in financial difficulties. A corporation in such difficulties may not be able to sell its bonds, regardless of the attractive provisions attached to them.

The Amount of Face (or Par) Value of the Bond

Each bond has an amount printed on the face of the bond certificate. This is called the **face value** of the bond; it is also commonly referred to as the **par-value** of the bond. When the cash received is the same as a bond's face value, the bond is said to be issued at *par.* A common face value of bonds is $1,000, although bonds of other denominations exist. A $30 million bond issue can be divided into 30,000 bonds, for example. This permits a large number of individuals and institutions to participate in corporate financing.

If a bond is sold at face value, the journal entry is straight forward:

Cash	1,000	
Bonds Payable, 8%		1,000
To record the issue of 8% bonds at par.		

A $1,000 bond is sold at a **premium** when it is sold for more than its face value. This usually results when the bond interest rate is higher than the market interest rate.

For instance, assume Big Dog Carworks Ltd. issues a bond on January 1, 2015 with a face value of $1,000, a maturity date of one year, and a stated interest rate of 8% per year, at a time when bonds with similar terms, features, and risk are earning only a 7% return. Potential investors will bid up the bond price on the bond market to the point at which the price paid will equal the interest and return of the original investment at the end of the year as if the bond actually yielded 7%. This works out to about $1,009 because an investor who buys the 8% bonds will receive $80 ($1,000 x 8%) interest plus the original $1,000 investment back at December 31, 2015, for a total of $1,080. The amount that would need to be invested at the market rate of 7% to return back $1,080 at the end of one year would be about $1,009 ($1,080/1.07). The price of the 8% bond will be bid up to this price.

The difference between the selling price of the bond ($1,009) and the face value ($1,000) is the *premium* of $9. The journal entry to record the sale of the bond on January 1, 2015 is:

Cash	1,000	
Premium on Bonds Payable		9
Bonds Payable, 8%		1,000
To record the issue of 8% bonds at a premium.		

Because the bonds mature in one year, the $9 amount is added to the value of the bonds and recorded in the current liabilities section of the balance sheet (assuming this amount is material) as follows:

Liabilities	
Current	
Bonds Payable, 8%	$1,000
Premium on Bonds	9
Carrying Amount	1,009

On December 31, 2015, the interest expense of $80 is paid, the bond matures, bondholders are repaid, and the premium is written off as a reduction of interest expense.

These three journal entries would be made:

Interest Expense	80	
Cash		80
To record interest on bonds.		

Bonds Payable, 8%	1,000	
Cash		1,000
To record retirement of 8% bonds.		

Premium on Bonds Payable	9	
Interest Expense		9
To record premium write-off on retired 8% bonds.		

Note that the interest expense recorded on the income statement would be $71 ($80 – 9)or about 7% (rounded). This is equal to the market rate of interest at the time of bond issue.

If the bond is sold for less than $1,000, then the bond has been sold at a **discount**. This usually results when the bond interest rate is lower than the market interest rate.

Assume the same $1,000, one-year, 8% bond is issued by BDCL. If similar bonds are earning a return of 9% at the date of issue, the selling price of the bond will fall on the market until the point at which the amount of interest to be paid at the end of 2015 ($80) plus the original $1,000 investment produces a return of 9% to the bonds' purchasers. This selling amount will be about $991 ($1,080/1.09). The difference between the face value of the bond ($1,000) and the selling price of the bond ($991) is $9. This is the *discount*.

The journal entry to record the transaction on January 1, 2015 is:

Cash	991	
Discount on Bonds Payable	9	
Bonds Payable, 8%		1,000
To record issue of 8% bonds at a discount.		

The $9 amount is a contra liability account and is *deducted* from to the value of the bonds recorded in the current liabilities section of the balance sheet as follows:

Liabilities	
Current	
Bonds Payable, 8%	$1,000
Discount on Bonds	(9)
Carrying Amount	991

These three journal entries would be made on December 31, 2015:

Interest Expense	80	
Cash		80
To record interest on 8% bonds.		

Bonds Payable	1,000	
Cash		1,000
To record retirement of 8% bonds.		

Interest Expense	9	
Discount on Bonds Payable		9
To write-off the discount on retired 8% bonds.		

The interest expense recorded on the income statement would be $89 ($80 + 9)or about 9% (rounded). This is equal to the market rate of interest at the time of bond issue.

These are simplified examples, and the amounts of bond premiums and discounts are insignificant. In reality, bonds may be outstanding for a number of years, and related premiums and discounts can be significant when millions of dollars of bonds are issued. These premiums and discounts are *amortised* over the same number of years as the related bonds are outstanding. Different amortisation methods are discussed later in this chapter.

C. The Bond Accounting Process

The mechanisms whereby the market establishes a price for a bond issue are complex. Some of the considerations include present value calculations. These are explained further in appendix 1.

In order to focus on the accounting process associated with bonds covered in this section, any applicable premiums or discounts will be provided, and a simplified method of amortising the bond premium or discount presented. Under GAAP, the *effective interest* method of amortising bond premiums and discounts must be used. This technique is discussed in appendix 2. In this section, assume the following three scenarios:

1. Big Dog Carworks Ltd. issues $100,000 of 3-year, 12% bonds on January 1, 2014. Market value is the same as face value ($100,000). The journal entry to record the sale on January 1, 2014 would be:

Cash	100,000	
Bonds Payable, 12%		100,000
To record sale of 12% bonds at par.		

2. BDCL's bonds are issued at a premium because the market rate of interest is 8% at the date of issue for similar bonds offered in the market. (The difference between the 12% rate on the BDCL bonds and the market rate of 8% is exaggerated for purposes of illustration. In reality, these differences are generally fractions of a per cent.) As a result, market value is $110,485. The premium is $10,485 ($110,845 – 100,000). The journal entry to record the sale on January 1, 2014 would be:

Cash	110,845	
Premium on Bonds Payable		10,485
Bonds Payable, 12%		100,000
To record sale of 12% bonds at a premium.		

3. BDCL's bonds are issued at a discount. Market value is $90,754 because the market rate of interest is 16%. The discount is $9,246 ($100,000 – 90,754). The journal entry to record the sale on January 1, 2014 would be:

Cash	90,754	
Discount on Bonds Payable	9,246	
Bonds Payable, 12%		100,000
To record sale of 12% bonds at a discount.		

Interest on a Bond

Interest begins to accumulate from the previous interest payment date of the bond and is usually paid semi-annually regardless of when the bond is actually sold. Interest paid to bondholders is *always* calculated based on the face value of the bond, regardless of whether the bonds are issued at par, at a premium, or at a discount. BDCL's $100,000 bond issue with an interest rate of 12 per cent pays $12,000 interest each year. This interest is usually paid semi-annually, that is, individual bondholders would receive $6,000 every six months.

As noted previously, any premium or discount is assumed to be amortised over the life of the bond in equal amounts. An entry is made at each point interest is paid. BDCL's bonds are issued for 3 years and interest will be paid twice each year, on June 30 and December 31. For our purposes, the premium or discount will be amortised on a straight-line basis over six periods, in the following amounts:

Premium: ($10,485/6)	$1,747 (rounded)
Discount ($9,246/6)	$1,541

The journal entries to record interest payments for the first year of BDCL's $100,000 bond issue, together with the appropriate amortisation entry, are recorded below.

	Payment of interest			*Amortisation of premium*			*Amortisation of discount*		
Jun. 30	Interest Expense	6,000		Bond Premium	1,747		Interest Expense	1,541	
2014	Cash		6,000	Interest Expense		1,747	Bond Discount		1,541
	To record payment of semi-annual bond interest.			To record amortisation of bond premium for six months.			To record amortisation of bond discount for six months.		

	Payment of interest			*Amortisation of premium*			*Amortisation of discount*		
Dec. 31	Interest Expense	6,000		Bond Premium	1,747		Interest Expense	1,541	
2014	Cash		6,000	Interest Expense		1,747	Bond Discount		1,541
	To record payment of semi-annual bond interest.			To record amortisation of bond premium for six months.			To record amortisation of bond discount for six months.		

Similar entries are made each June 30 and December 31 until the bonds are retired in three years. At maturity on December 31, 2016, the bonds are retired by the payment of cash to bondholders.

The usual entries would be made to record the payment of semi-annual interest and amortisation of the premium or discount, as well as this final entry:

Bonds Payable, 12%	100,000	
Cash		100,000
To record retirement of 12% bonds.		

The bonds payable would be recorded as non-current liabilities at December 31, 2014. The balance sheet presentation under each of the three scenarios would be:

Scenario 1

Non-current Liabilities	
Bonds Payable	$100,000

Scenario 2

Non-current Liabilities	
Bonds Payable	$100,000
Premium on Bonds Payable	6,991 [1]
Carrying Amount	106,991

Scenario 3

Non-current Liabilities	
Bonds Payable	$100,000
Discount on Bonds Payable	(6,164) [2]
Carrying Amount	93,836

[1] ($10,485 – 1,747 – 1,747) = 6,990

[2] ($9,246 - 1,541 - 1,541) = 6,164

Alternately, just carrying amounts could be shown on the balance sheet. If so, details about face value and unamortised premiums or discounts would be disclosed in a note to the financial statements along with other pertinent details like interest rate, maturity date, and bond indenture provisions. Changes to the market rate of interest after the date of issue do not affect the carrying amount of the bonds on the balance sheet. Under GAAP, however, these effects need to be disclosed in a note to the financial statements.

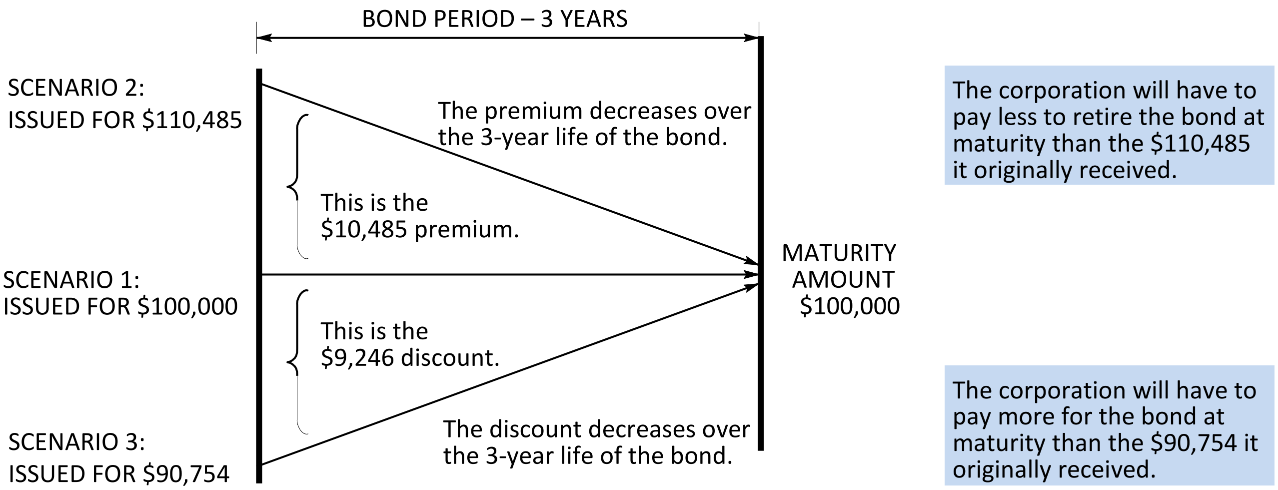
When bonds become payable within one year from the balance sheet date, they are classified as current liabilities. This would be done on the December 31, 2015 BDCL balance sheet, since the bonds mature on December 31, 2016.

Amortisation

The effect of amortising a premium is to reduce interest expense (note the credit to interest expense in the middle journal entry above). This is appropriate, because the market rate of interest was lower than the face value of the bonds actually issued in scenario 2 above (8% vs. 12%).

Amortising a discount increases interest expense (note the debit to interest expense in the right-hand entry above). This is also appropriate, because in scenario 3 the market rate of interest was higher than the face value of the bonds (16% vs. 12%).

The effect of amortising a premium or discount is to gradually change the carrying amount of the bonds to the retirement (face) value of the bonds. At retirement, carrying amount is equal to face value under each scenario, as shown in Figure 11-2 below.



The corporation will have to pay less to retire the bond at maturity than the $110,485 it originally received.

The corporation will have to pay more for the bond at maturity than the $90,754 it originally received.

Figure 11-2 Straight-line amortisation of bond premium or discount over the life of the bond issue

The combined effect on interest expense and carrying amount of issuing the bonds at a premium and amortising this premium over the life of the bonds is shown in Figure 11-3 below:

Issue of $100,000 Bonds Payable for $110,485

Amortisation Table

		A	B	C	D	E
Year	Six-Month Period Ending	Beginning Bond Carrying Amount	(C - D) Periodic Interest Expense	Cash Interest Paid	(C - B) Periodic Premium Amortisation	(A - D) Ending Bond Carrying Value
2014	Jun. 30	$110,485.00	$ 4,252.50	$ 6,000.00	$ 1,747.50	$108,737.50
	Dec. 31	108,737.50	4,252.50	6,000.00	1,747.50	106,990.00
2015	Jun. 30	106,999.00	4,252.50	6,000.00	1,747.50	105,242.50
	Dec. 31	105,242.50	4,252.50	6,000.00	1,747.50	103,495.00
2016	Jun. 30	103,495.00	4,252.50	6,000.00	1,747.50	101,747.50
	Dec. 31	101,747.50	4,252.50	6,000.00	1,747.50	100,000.00
			$25,515.00	$36,000.00	$10,485.00	

The interest expense on the income statement will be decreased by the amount of the premium amortisation.

Figure 11-3 Effect of straight-line amortisation of bond premium at each interest payment date

The similar combined effect of a discount is shown in Figure 11-4:

Issue of $100,000 Bonds Payable for $90,754
Amortisation Table

		A	B	C	D	E
Year	Six-Month Period Ending	Beginning Bond Carrying Amount	(C - D) Periodic Interest Expense	Cash Interest Paid	(C - B) Periodic Discount Amortisation	(A - D) Ending Bond Carrying Value
2014	Jun. 30	$90,754	$ 7,541	$ 6,000	$1,541	$ 92,295
	Dec. 31	92,295	7,541	6,000	1,541	93,836
2015	Jun. 30	93,836	7,541	6,000	1,541	95,377
	Dec. 31	95,377	7,541	6,000	1,541	96,918
2016	Jun.30	96,918	7,541	6,000	1,541	98,459
	Dec. 31	98,459	7,541	6,000	1,541	100,000
			$45,246	$36,000	$9,246	

The interest expense on the income statement will be increased by the amount of the discount amortisation.

Figure 11-4 **Effect of straight-line amortisation of bond discount at each interest payment date**

Therefore, in the case of bonds issued at a discount, the interest rate consists of the 12 per cent bond rate plus the amortised bond discount. The expense reported on the income statement is higher than the cash interest paid. Thus, whenever a corporation sells a bond for less than its face value, its total cost of borrowing is increased because of discount amortisation.

Bond Redemption

A bond issue can also be retired in whole, or in part, before its maturity date. As discussed above, there are several different possibilities:

1. The bonds can be repurchased on the open market if the purchase is financially advantageous to the issuer.
2. A **call provision** is sometimes included in a bond indenture permitting early redemption at a specified price, usually higher than face value. The issuer may decide to exercise this call provision if it is financially advantageous.
3. The bondholder may be able to exercise a **conversion provision** if one was provided for in the bond indenture; in this case, the bonds can be converted into specified shares at the option of the bondholder.

Whenever bonds are retired before their maturity date, the amount payable to bondholders is the face amount of the bonds or the amount required by the call provision. Any unamortised premium or discount must be removed from the accounts. The accounting required for BDCL's January 1, 2014 issue of $100,000, 12 per cent bonds has been illustrated. Suppose that ½, or $50,000 of face value bonds, are redeemed at 102 (that is, for $50,000 x 102% = $51,000) on December 31, 2014, when the account balances are as follows:

2014	Bonds Payable		Premium on Bonds	
Jan. 1		100,000		10,485
Jun. 30			1,747.50	
Dec. 31			1,747.50	
				6,990

Since $50,000 of the bonds are redeemed, only half of the $6,990 premium balance ($3,495) is applicable to the redeemed bonds.

The retirement by repurchase or by conversion would be recorded as follows (assuming the bonds will be converted into common shares):

Retirement by Repurchase

Bonds Payable	50,000	
Premium on Bonds	3,495	
Gain on Bond Retirement		2,495

In this case, retirement results in a gain; under different circumstances, a loss may result.

Retirement by Conversion

Bonds Payable	50,000	
Premium on Bonds	3,495	
Common Shares		53,495

In this case, the amount of common shares is calculated as the carrying amount of the bonds redeemed. No gain or loss is recorded.

The BDCL retirement occurred on an interest payment date, December 31, 2014. If the retirement had occurred between interest payment dates, accrued interest also would be paid to the bondholders (this will be covered below) and amortisation would be recorded in the issuer's books.

Sale of Bonds between Interest Dates

Not all bonds are issued on the date when interest begins to accumulate on the bond. For example, consider the sale of an additional $50,000 of 12% BDCL bonds on April 1, 2014. Interest began to accumulate on January 1 per the terms of the bond indenture and, regardless of the date on which the bonds were issued, a six-month interest payment is made to the bondholders on June 30. This $3,000 payment ($50,000 x 12% x 6/12 mos.) is owing to the bondholders even though the bond has been issued for only three months, from April 1 to June 30.

If the bond is sold between interest dates, the purchaser pays the accrued interest at the date of purchase to the issuer, since the purchaser will get the full six months of interest on June 30, having only held the bonds for three months. In this case, $1,500 of interest has accrued on the bond from January 1 to April 1 ($50,000 x 12% x 3/12 mos.). The purchases would pay $51,500.

The corporation records the bond issue as follows:

Cash	51,500	
Bond Interest Payable		1,500
Bond Payable		50,000
To record issue of bonds at April 1.		

The regular semi-annual interest payment on the $100,000 of issued bonds is then made on June 30. It is recorded as follows:

Bond Interest Expense	4,500	
Bond Interest Payable	1,500	
Cash ($100,000 x 12% x ½)		6,000
To record payment of interest on bonds issued on April 1.		

In this way, interest expense is recorded on $50,000 of the bonds for three months ($50,000 x 12% x 3/12 mos. = $1,500) and for the remaining $50,000 of bonds for six months ($50,000 x 12% x 6/12 mos. = $3,000), for a total of $4,500.

If the bond has interest payment dates that do not coincide with the year-end of the issuing corporation, an adjusting journal entry is required at year-end to record interest owing at that date. Assume a corporation issues $200,000, 6% bonds on October 1, 2012 and has a December 31 year-end. The following entry is made on December 31:

Bond Interest Expense	2,000	
Bond Interest Payable		2,000
To accrue interest on 6% bonds issued October 1.		
($200,000 x 6% x 2/12 mos.) = $2,000		

When the semi-annual payment is made on April 1 of the next year, this entry is made (assuming no reversing entry has been made after the year-end):

Bond Interest Expense	4,000	
Bond Interest Payable	2,000	
Cash		6,000
To record semi-annual interest payment on 6% bonds.		
($200,000 x 6% x ½) = $6,000)		

Amortising Premiums and Discounts on Bonds Sold Between Interest Dates

If bonds are sold between interest payment dates, it is also necessary to calculate the number of months remaining in the life of the bonds at the date the bonds are sold to record the amortisation of premiums or discounts. Recall our original example. $100,000 of 12% bonds were sold on January 1, 2014; in one scenario, a bond premium of $10,485 resulted; in the other scenario, a bond discount of $9,246 resulted. Now assume the bonds were issued on April 1 instead of January 1. The amortisation at June 30 would be calculated as follows:

Amortisation of Premium:		*Amortisation of Discount:*	
Premium is	$10,485(a)	Discount is	$9,246(a)
Months left are	33(b)	Months left are	33(b)
Months amortised	3(c)	Months amortised	3(c)
Calculation of amortisation April 1 to June 30:		*Calculation of amortisation April 1 to June 30:*	
(a/b) x c		(a/b) x c	
($10,485/33) x 3 mos. = $953 (rounded)		($9,246/33) x 3 = $840 (rounded)	
Every six months thereafter:		*Every six months thereafter:*	
($10,485/33) x 6 mos. = $1,906		*($9,246/33) x 6 mos. = $1,681*	

D. Loans Payable

As noted at the start of the chapter, a *loan* is another form of long-term debt that can be used by a corporation to finance its operations. Like bonds, loans can be *secured*, giving the lender the right to specified assets of the corporation if the debt cannot be repaid. For instance a mortgage is a loan secured by specified real estate of the company, usually land with buildings on it.

Unlike a bond, a loan is typically obtained from one lender such as a bank. Also, a loan is repaid in equal *blended* payments over a period time. These payments contain both interest payments and some repayment of principal. A loan also does not give rise to a premium or discount. It is obtained at the market rate of interest in place at the time.

Assume BDCL obtained a $100,000, 10% loan on January 1, 2011 from First Bank to acquire a piece of production equipment. When the loan proceeds are deposited into the bank account of BDCL, the company makes the following journal entry:

Cash	100,000	
Loan Payable – First Bank		100,000
To record 10% loan from First Bank.		

When the equipment is purchased (assumed here to be the same day), this journal entry is made:

Equipment	100,000	
Cash		100,000
To record purchase of production equipment.		

BDCL will depreciate this long-lived asset as usual over its estimated useful life, as discussed in a previous chapter. Interest is calculated on the unpaid principal of a loan. This balance decreases over the life of the loan because each payment contains part interest and part principal payments. In the example above, assume the $100,000 the loan is repayable in three annual blended payment of $40,211. While the payments remain the same each year, the amounts of interest paid decrease while the amount of principal repaid increases. Figure 11-5 illustrates this effect. Note particularly columns B, C, and D.

	A	*B*	*C*	*D*	*E*
	(Col. E)	*(A x 10%)*	*(D-B)*		*(A - C)*
Year Ended Dec. 31	*Beginning Loan Balance*	*Periodic Interest Expense*	*Reduction of Loan Payable*	*Total Loan Payment*	*Ending Loan Balance*
2011	$100,000	$10,000	$30,211	$40,211	$69,789
2012	69,789	6,979	33,232	40,211	36,557
2013	36,557	3,654	36,557	40,211	-0-
			$100,000		

Unlike bonds, interest expense decreases with each loan payment, and the unpaid loan balance decreases as well.

Figure 11-5 Effect of blended interest and principal payments

Figure 11-5 can also be used to construct the journal entries to record the loan payments at the end of each year:

Dec. 31, 2011	Interest Expense (col. B)	10,000	
	Loan Payable (col. C)	30,211	
	Cash		40,211
Dec. 31, 2012	Interest Expense	6,979	
	Loan Payable	33,232	
	Cash		40,211
Dec. 31, 2013	Interest Expense	3,654	
	Loan Payable	36,557	
	Cash		40,211

The amount in Fig. 11-5 can also be used to present the related information on the financial statements of BDCL at each year end. Recall that assets and liabilities need to be classified as current and non-current portions on the balance sheet. Current liabilities are amounts paid within one year of the balance sheet date. Part of the loan payable to First Bank will be paid in the upcoming year. Therefore, it needs to be classified as a current liability on the balance sheet even though the full amount of the loan outstanding is reported in a single general ledger account called Loan Payable – First Bank. The amount of the total loan outstanding at December 31, 2011, 2012, and 2013 and the current and non-current portions are shown in Figure 11-6:

A	*B*	*C*	*D*
Year ended Dec. 31	*Ending loan balance per general ledger (Fig. 11-5, Col. E)*	*Current portion (Fig. 11-5, col. C)*	*(B – C) Non-current portion*
2011	$69,788	$33,232	$36,557
2012	36,557	36,557	-0-
2013	-0-	-0-	-0-

Figure 11-6 Allocation of current and non-current portions of loan principal

Balance sheet presentation would be as follows at the end of 2011, 2012, and 2013:

	2011	*2012*	*2013*
Current Liabilities			
Current Portion of Borrowings	$33,232	$36,557	$ -0-
Non-current Liabilities			
Borrowings (Note X)	36,557	-0-	-0-

Details of the loan would be disclosed in a note to the financial statements. Only the *principal* amount of the loan is reported on the balance sheet. The *interest* expense portion is reported on the income statement as an expense. Because these payments are made at BDCL's year end (December 31), no interest payable is accrued or reported on the balance sheet in this example.

E. Finance Leases

Recall that a loan is a sum of money lent for interest. After obtaining a loan, a company often purchases long-lived assets from a third party with the cash proceeds. The loan in turn may be secured by the purchased assets to reduce the risk of non-repayment to the lender, and is repaid with interest over a period of time.

A *finance lease* is similar to a loan in that a series of cash payments are also made over a specified period of time. However, these are not quite the same as repayment of a bank loan. Instead of payments to the bank, the payments are made to a leasing company, called the *lessor*. The payments give the *lessee* (the company making the payments) the right to use a long-lived asset owned by the leasing company for a specified period of time. Unlike a short-term rental agreement, the terms of a finance lease are such that the amount of the payments are so large as a percentage of the value of the related long-lived asset and the period of time over which they are made is so long that the lessee in effect purchases the asset, even though legal title may not be transferred from the leasing company to the lessee.

The mechanics of recording a finance lease are much the same as that of a loan. The value of the finance lease is determined by calculating the amount of a loan that could be paid off, given the period of time, interest rate, and amount of payments stated in the lease agreement, and the fair value of the leased asset.

For instance, assume that on January 1, 2011 Big Dog Carworks Ltd. agrees to pay First Leasing Company annual payments of $40,211 on December 31 for the next three years for the use of a large truck that could be purchased elsewhere for $100,000. BDCL is responsible for insuring, maintaining, and repairing the truck, thought title to the truck remains with the leasing company.

Even though BDCL does not legally own the truck, the substance of the lease agreement is the same is if the company received a 10% loan from a bank and then purchased the truck from a third party (recall the example above). As a result, BDCL is required to record the finance lease as a liability and the truck as a long-lived asset on its balance sheet. When the lease agreement is signed on January 1, 2011 the following journal entry is made:

Truck	100,000	
Finance Lease		100,000
To record First Leasing Company lease and related truck purchase.		

As with a bank loan, the truck asset is depreciated over its estimated useful life.

To record the loan payments, the *implicit* rate of interest within the lease agreement is assumed to be 10%, given the amount and duration of the lease payments, and the fair value of the leased truck.

When each of the three payments is made on December 31 of 2011, 2012, and 2013, the same journal entry amounts are recorded as in the previous bank loan example:

Dec. 31, 2011	Interest Expense	10,000	
	Finance Lease	30,211	
	Cash		40,211
Dec. 31, 2012	Interest Expense	6,979	
	Finance Lease	33,232	
	Cash		40,211
Dec. 31, 2013	Interest Expense	3,654	
	Finance Lease	36,557	
	Cash		40,211

Balance sheet presentation of the finance lease liability would also be similar. The same current and non-current portions would be presented each year as in the bank loan example above, with a slight wording change to refer to the liability as a finance lease rather than a loan.

Appendix 1:Present Value Calculations

Interest is the time value of money. If you borrow $1 today for one year at 10 per cent interest, its future value in one year is $1.10 ($1 x 110% = $1.10). The increase of 10 cents results from the interest on $1 for the year. Conversely, if you are to pay $1.10 one year from today, the *present value* is $1 – the amount you would need to invest today at 10% to receive $1.10 in one year's time ($1.10/110% = $1). The exclusion of applicable interest in calculating present value is referred to as *discounting.*

If the above $1.10 amount at the end of the first year is invested for an additional year at 10 per cent interest, its future value would be $1.21 ($1.10 x 110%). This consists of the original $1 investment, $.10 interest earned in the first year, and $.11 interest earned during the second year. Note that the second year's interest is earned on both the original $1 and on the 10 cents interest earned during the first year. This increase provides an example of *compound interest* – interest earned on interest.

The following formula can be used to calculate this:

$$F = P \times (1+i)^n$$

where F = future value, P = present value, i = the interest rate, and n = number of periods.

Substituting the values of our example, the calculation would be, $F = \$1[(1 + .1)^2]$, or $1.21.

If the *future* value of today's $1 at 10 per cent interest compounded annually amounts to $1.21 at the end of 2 years, the *present* value of $1.21 to be paid in 2 years, discounted at 10 per cent, is $1. The formula to calculate this is just the inverse of the formula shown above, or

$$P = \frac{F}{(1 + i)^n}$$

Substituting the values of our example,

$$P = \frac{\$1.21}{(1 + .1)^2} = \$1$$

That is, the present value of $1.21 received two years in the future is $1. The present value is always less than the future value, since an amount received today can be invested to earn a return (interest) in the intervening period. Calculating the present value of amounts payable or receivable over several time periods is explained more thoroughly below.

Future Cash Flows

The following example illustrates how the prices of $100,000 of bonds issued by Big Dog Carworks Ltd. were derived. Recall the three scenarios:

1. Big Dog Carworks Ltd. issues $100,000 of 3-year, 12% bonds on January 1, 2014 when the market rate of interest is also 12%. Interest is paid semi annually.
2. BDCL's bonds are issued at a premium ($110,485) because the market rate of interest is 8% at the date of issue for similar bonds offered in the market.
3. BDCL's bonds are issued at a discount ($90,574). The market rate of interest is 16%.

There are two steps to calculate the present value of the bonds, because there are two types of future cash amounts that relate to the bond issue. The bond *principal* will be repaid at the end of three years, and *interest* payments will be received every six months for three years. The present value of each of these must be calculated and totalled to arrive at the present value of the bonds at the date of issue.

In the examples below, it will be shown that the resulting amount equals the issue price of the bonds in each scenario described above. First, the present value of the repayment of the bond principal at the end of three years for each of the three scenarios will be calculated.

Present Value of Bond Principal to be Repaid at End of Three Years

The present value of a single future amount — $100,000 in this case — can be calculated using table A below. Since semi-annual interest payments are made, the 6-month rate is used. This is half the annual rate, or 6% (12% x ½). The "6%" column below is therefore used, rather than the 12% column. Also, because there are 6 interest payment periods over the 3-year life of the bond, the "6 period" row is used instead of the "3 period" row. The intersection of this row and column is $.704961 (see amount in blue in the table). This represents the present value of $1 to be received six periods hence, assuming an interest rate of 6% per period.

Table A

Present Value (P) of $1

$$P = \frac{1}{1 + i^n}$$

Periods	4%	6%	8%	10%	12%	14%	16%
1	.961538	.943396	.925926	.909091	.892857	.877193	.862069
2	.924556	.889996	.857339	.826446	.797194	.769468	.743163
3	.888996	.839619	.793832	.751315	.711780	.674972	.640658
4	.854804	.792094	.735030	.683013	.635518	.592030	.552291
5	.821927	.747258	.680583	.620921	.567427	.519369	.476113
6	**.790315**	**.704961**	**.630170**	.564474	.506631	.455587	.410442
7	.759918	.665057	.583490	.513158	.452349	.399637	.353830
8	.730690	.627412	.540269	.466507	.403883	.350559	.305025
9	.702587	.591898	.500249	.424098	.360610	.307508	.262953
10	.675564	.558395	.463193	.385543	.321973	.269744	.226684
11	.649581	.526788	.428883	.350494	.287476	.236617	.195417
12	.624597	.496969	.397114	.318631	.256675	.207559	.168463
13	.600574	.468839	.367698	.289664	.229174	.182069	.145227
14	.577475	.442301	.340461	.263331	.204620	.159710	.125195
15	.555265	.417265	.315242	.239392	.182696	.140096	.107927
16	.533908	.393646	.291890	.217629	.163122	.122892	.093041
17	.513373	.371364	.270269	.197845	.145644	.107800	.080207
18	.493628	.350344	.250249	.179859	.130040	.094561	.069144
19	.474642	.330513	.231712	.163508	.116107	.082948	.059607
20	.456387	.311805	.214548	.148644	103667	.072762	.051385

Scenario 1: The Bond Contract Interest Rate (12%) Is the Same as the Market Interest Rate (12%)

The present value of $100,000 principal to be received three years from now is $100,000 x 0.704961 = $70,496.

Scenario 2: The Market Interest Rate Is 8 Per Cent (per Year)

Again, since semi-annual interest payments are made, the 6-month rate is half the annual rate. Therefore, the compounding rate this time is four per cent (8% x ½); there are 6 periods in this 3-year bond.

According to table A, the present value of $1 compounded at four per cent for 6 periods is 0.790315 (see bolded amount in 4% column). The present value of the principal amount of the bonds is therefore calculated as: $100,000 x 0.790315 = $79,032.

Scenario 3: The Market Interest Rate Is 16 Per Cent (per Year)

For these semi-annual interest payments, the 6-month rate is eight per cent (16% x ½); there are also 6 periods in this 3-year bond.

According to table A, the present value of $1 compounded at eight per cent for 6 periods is 0.630170 (see bolded amount in 8% column). The present value of the principal amount of the bonds is therefore calculated as: $100,000 x 0.630170 = $63,017.

Present Value of Six Interest Payments to be Made Semi-annually for Three years

The present value of the interest payments can be calculated using table B. This formula is just the sum of the present value of each of the six interest payments made at varying points over the three-year life of the bonds. In this instance, interest of $6,000 is paid semi-annually for 6 periods on the bonds. Since BDCL's payments are made semi-annually, the rate used is half the prevailing market rate of interest.

Table B

Present Value (P) of a Series of Payments of $1

$$P = \left[\frac{1 - \frac{1}{1 + i^{n}}}{i}\right]$$

Periods	4%	6%	8%	10%	12%	14%	16%
1	.961538	.943396	.925926	.909091	.892857	.877193	.862069
2	1.886095	1.833393	1.783265	1.735537	1.690051	1.646661	1.605232
3	2.775091	2.673012	2.577097	2.486852	2.401831	2.321632	2.245890
4	3.629895	3.465106	3.312127	3.169865	3.037349	2.913712	2.798181
5	4.451822	4.212364	3.992710	3.790787	3.604776	3.433081	3.274294
6	**5.242137**	**4.917324**	**4.622880**	4.355261	4.111407	3.888668	3.684736
7	6.002055	5.582381	5.206370	4.868419	4.563757	4.288305	4.038565
8	6.732745	6.209794	5.746639	5.334926	4.967640	4.638864	4.343591
9	7.435332	6.801692	6.246888	5.759024	5.328250	4.946372	4.606544
10	8.110896	7.360087	6.710081	6.144567	5.650223	5.216116	4.833227
11	8.760477	7.886875	7.138964	6.495061	5.937699	5.452733	5.028644
12	9.385074	8.383844	7.536078	6.813692	6.194374	5.660292	5.197107
13	9.985648	8.852683	7.903776	7.103356	6.423548	5.842362	5.342334
14	10.563123	9.294984	8.244237	7.366687	6.628168	6.002072	5.467529
15	11.118387	9.712249	8.559479	7.606080	6.810864	6.142168	5.575456
16	11.652296	10.105895	8.851369	7.823709	6.963986	6.265060	5.668497
17	12.165669	10.477260	9.121638	8.021553	6.119630	6.372859	5.748704
18	12.659297	10.827603	9.371887	8.201412	7.249670	6.467420	5.817848
19	13.133939	11.158116	9.603599	8.364920	7.365777	6.550369	5.877455
20	13.590326	11.469921	9.818147	8.513564	7.469444	6.623131	5.928841

Scenario 1: The Market Interest Rate Is 12 Per Cent (per Year)

According to table B, the sum of the present values of six regular payments of $1 compounded at six per cent (l2% x ½) for six periods is 4.917324 (see bolded amount in 6% column). The total present value of the six, $6,000 interest payments made over the three-year life of the BDCL bonds under scenario 1 is therefore $6,000 x 4.917324 = $29,504.

Scenario 2: The Market Interest Rate Is 8 Per Cent (per Year)

Again using table B, the sum of the present values of six regular interest payments of $1 compounded at four per cent (8% x ½) for 6 periods is 5.242137 (see bolded amount in 4% column). The total present value of the six, $6,000 interest payments made over the three-year life of the BDCL bonds under scenario 2 is therefore $6,000 x 5.242137 = $31,453.

Scenario 3: The Market Interest Rate Is 16 Per Cent (per Year)

The sum of the present values of six regular interest payments of $1 compounded at eight per cent (16% x ½) for 6 periods is 4.622880 according to table B. The total present value of the six, $6,000 interest payments made over the three-year life of the BDCL bonds under scenario 3 is therefore $6,000 x 4.622880 = $27,737.

Calculating the Total Present Value of the BDCL bonds

The total present value of the $100,000 BDCL bonds issued under each of the three scenarios is the sum of the present value of the principal and interest payments derived above.

Scenario 1: The Bond Contract Interest Rate (12%) Is the Same as the Market Interest Rate (12%)

In this case, the bonds are sold at face value. An investor is willing to pay face value because the present value of the future cash payments is $100,000 – the sum of the present value of the principal and interest payments of the bonds:

1.	The $100,000 bond face value is due at the end of six periods. The present value of this cash flow is calculated as $100,000 x 0.704961 (table A)	$70,496
2.	The semi-annual $6,000 interest is to be received for six periods in total. The present value of this cash flow is calculated as $6,000 x 4.917324 (table B)	29,504
	Total present value of these bonds is	$100,000

When the bond contract interest rate is the same as the market interest rate, the present value of all cash flows is the same as the bond's face value. In actual practice, however, the market interest rate may be different from the bond indenture interest rate because of the time that elapses between the creation of the indenture and the time the bonds are actually sold on the bond market. Scenarios 2 and 3 deal with this situation.

Scenario 2: The Bond Contract Interest Rate (12%) Is Greater than the Market Interest Rate (8%)

Here the bonds are sold at a premium. An investor is willing to pay more than face value because the present value of the future cash flow amounts to $110,485, calculated as follows:

1.	The $100,000 bond face value is due at the end of six periods. The present value of this cash flow is calculated as $100,000 x 0.790315 (table A)	$79,032
2.	The semi-annual $6,000 interest is to be received for six periods in total. The present value of this cash flow is calculated as $6,000 x 5.242137 (table B)	31,453
	Total present value of these bonds is	$110,485

Therefore, when the bond contract interest rate is greater than the market interest rate, the present value of principal and interest payments is greater than the face value of the bonds, other things being equal. This excess amount of $10,485 ($110,485 – 100,000) is the premium that was assumed in the original scenario 2 example.

Scenario 3: The Bond Contract Interest Rate (12%) Is Less than the Market Interest Rate (16%)

In this case, the bonds are sold at a discount. An investor will pay less than face value because the present value of future cash flow amounts to only $90,754.

1. The $100,000 bond face value is due at the end of six periods. The present value of this cash flow is calculated as $100,000 x 0.630170 (table A)	$63,017
2. The semi-annual $6,000 interest is to be received for six periods in total. The present value of this cash flow is calculated as $6,000 x 4.622880 (table B)	27,737
Total present value of these bonds is	$90,754

Therefore, when the bond contract interest rate is less than the market interest rate, the present value of all cash flows is less than the face value of the bonds. This difference, calculated as $9,246 ($100,000 - $90,754) in this example, is the discount used in the original scenario 3 discussed earlier in the chapter.

Appendix 2: The Effective Interest Method of Amortisation

As also discussed earlier, the bond premium or discount is amortised over the bond life remaining from the date of the bond's issue. The straight-line method allocates an equal amount of amortisation to each semi-annual interest period. The simplicity of this method makes it appropriate as an introduction to the bond accounting process.

However, GAAP requires the use of the *effective interest* amortisation method. Under this method, the amount of amortisation calculated differs from one period to another but produces a more appropriate rate of interest expense when it is recognised in the income statement.

The calculation is facilitated through the preparation of an amortisation table. To illustrate, assume that Big Dog Carworks Ltd. uses this method of amortisation and again issues 8%, three-year bonds with a face value of $100,000 on January 1, 2014. The issue price is $110,485.

Calculating Interest Expense and Premium Amortisation

The amortisation table shown in Figure 11-7 is prepared:

Issue of $100,000 Bonds Payable for $110,485
Amortisation Table
Using Market Interest Rate of 8%

		A	B	C	D	E
Year	*Six-month Period Ending*	*Beginning Bond Carrying Amount*	*Using 8% Market Rate to Calculate Six-Month Interest Expense* ([½ of 8% = 4%] x A)	*Actual Cash Interest Paid*	(B - C) *Periodic Premium Amortisation*	(A - D) *Ending Bond Carrying Amount*
2014	Jun. 30	$110,485	(4% x $110,485) = $4,419	$6,000	$1,581	$108,904
	Dec. 31	108,904	(4% x 108,904) = 4,356	6,000	1,644	107,260
2015	Jun.30	107,260	(4% x 107,260) = 4,290	6,000	1,710	105,550
	Dec. 31	105,550	(4% x 105,550) = 4,222	6,000	1,778	103,772
2016	Jun.30	103,772	(4% x 103,772) = 4,151	6,000	1,849	101,923
	Dec. 31	101,923	(4% x 101,923) = 4,077	6,000	1,923	100,000

Note the use of a constant interest rate under this method.

This amount is the interest expense for each 6-month period.

This amount is the amortisation for each 6-month period.

Figure 11-7 Effective interest method of bond amortisation

The calculation begins with the $110,485 issue amount in period 1 (January 1 to June 30, 2014); this amount is referred to as the *bond carrying amount.* The objective of this amortisation method is to reduce this carrying amount to the face value of $100,000 over the life of the bonds; the decrease is shown in column E of the table.

In this case, the market interest rate of eight per cent, commonly referred to as the *effective rate*, is expressed as an annual rate. Because BDCL makes semi-annual interest payments, the six-month rate is four per cent (half of the eight per cent annual rate), which is the rate used in column B each semi-annual period. (For convenience, all column B calculations are rounded to the nearest dollar.)

The calculation in column D provides the premium amortisation amount for each period. In period 1, for example, the difference between the $4,419 market rate interest expense (column B) and the $6,000 actual bond contract interest paid (column C) determines the premium amortisation of $1,581 (column B – column C). Columns E and A show the decreasing carrying amount of the bonds during their three-year life.

The advantage of the effective interest method is that it calculates interest expense at a constant four per cent each period. Interest expense (column B) decreases each period. From a theoretical point of view, it is preferable to show a financing interest expense that decreases (column B) as the amount of bonds outstanding decreases (column A), as this produces a constant rate of borrowing.

Recording Interest Payments and Premium Amortisation

Journal entries to record interest payments and amortisation of the premium are made every June 30 and December 31 in the same manner as for straight-line amortisation shown in section C. The actual interest paid to bondholders amounts to $6,000 each semi-annual period; the amount of premium amortisation for each period is taken from column D of the amortisation table. These are the entries for June 30, 2014.

	Payment of Interest:			*Amortisation of Premium:*		
Jun. 30	Interest Expense	6,000		Bond Premium	1,581	
	Cash		6,000	Interest Expense		1,581
	To record semi-annual bond interest.			To record amortisation of bond premium.		

The entries for each remaining period are similar; only the amounts used for premium amortisation differ, as shown in column D of the amortisation table. After the posting of the June 30 entries, the following balances result:

Balance Sheet Accounts				*Income Statement Account*	
Bonds Payable		Premium on Bonds		Bond Interest Expense	
	100,000		10,485	6,000	
		1,581			1,581
			8,904	4,419	

The bond carrying amount is $108,904 ($100,000 + $8,904) at June 30; this is the amount that appears in column E of the amortisation table.

$4,419 is the balance that was calculated in column B of the amortisation table.

Note that the effective interest rate based on the income statement interest expense and the opening bond carrying value shown on the balance sheet is 4% ($4,419/110,485, rounded).

Calculating Interest Expense and Discount Amortisation

The following amortisation table is prepared for the BDCL issue of $100,000 face value bonds at a discount for $90,754. The calculation begins with the $90,754 carrying amount in column A. The objective is to increase this carrying amount to the face value of $100,000 over the three-year life of the bond at a constant interest rate; this increase appears in column E.

The annual market interest rate in this case is 16 per cent. Half this rate — eight per cent — is used in the column B calculations, since interest payments are made semi-annually. (For convenience, all column B calculations are rounded to the nearest dollar.) The calculation in column D provides the amortisation amount. In period 1, for example, the difference between the $7,260 market rate interest expense (column B) and the $6,000 actual bond contract interest paid (column C) determines the discount amortisation of $1,260 (column B – column C).

Issue of $100,000 Bonds Payable for $90,754
Amortisation Table
Using Market Interest Rate of 16%

		A	B	C	D	E
Year	*Six-month Period Ending*	*Beginning Bond Carrying Amount*	*Using 8% Market Rate to Calculate Six-Month Interest Expense* ([½ of 16% = 8%] x A)	*Actual Cash Interest Paid*	(B - C) *Periodic Discount Amortisation*	(A .- D) *Ending Bond Carrying Amount*
2014	Jun.30	$90,754	(8% x $90,754) = $7,260	$6,000	$1,260	$ 92,014
	Dec. 31	92,014	(8% x 92,014) = 7,361	6,000	1,361	93,375
2015	Jun.30	93,375	(8% x 93,375) = 7,470	6,000	1,470	94,845
	Dec. 31	94,845	(8% x 94,845) = 7,588	6,000	1,588	96,433
2016	Jun. 30	96,433	(8% x 96,433) = 7,715	6,000	1,715	98,148
	Dec. 31	98,148	(8% x 98,148) = 7,852	6,000	1,852	100,000

Columns E and A show the increasing carrying amount of the bonds during their three-year life. The effective interest method calculates interest expense at a constant eight per cent of each period’s bond carrying amount. To achieve this, interest expense (column B) increases each period as the bond carrying amount increases.

Recording Interest Payments and Discount Amortisation

Journal entries to record interest payments and amortisation are made each June 30 and December 31 in the same manner as for the straight-line method (shown in section C). The actual interest paid to bondholders amounts to $6,000 each semi-annual period; the amount of discount amortisation is taken directly from column D of the amortisation table. These are the entries for period 1.

	Payment of Interest:			*Amortisation of Discount:*		
Jun. 30	Interest Expense	6,000		Interest Expense	1,260	
	Cash		6,000	Bond Discount		1,260
	To record semi-annual bond interest.			To record amortisation of bond discount.		

The entries for each remaining period are similar; only the amounts used for discount amortisation differ, as shown in column D of the amortisation table. After the posting of the June 30 entries, the following balances result:

Balance Sheet Accounts				*Income Statement Account*	
Bonds Payable		Discount on Bonds		Interest Expense	
	100,000	9,246		6,000	
			1,260	1,260	
		7,986		7,260	

The bond carrying amount is $92,014 ($100,000 – $7,986) at June 30; this is the amount in column E of the amortisation table.

$7,260 is the balance that was calculated in column B of the amortisation table.

Comparison of the Effective Interest Method with the Straight-Line Method

A comparison of the two amortisation methods can be made using the data applicable to the issue of BDCL's bonds at a discount; $100,000 face value bonds are issued for $90,754, resulting in a discount of $9,246 ($100,000 - $90,754). Under the straight-line method, this $9,246 discount is amortised in equal amounts over the 3-year life of the bonds. The discount is calculated for 6 -month periods, because amortisation is recorded at the time that semi-annual interest payments are made. To recap: the straight-line method amortisation is calculated as follows:

Discount	$9,246(a)
Number of 6 -month periods remaining	6(b)
Amortisation (a/b)	$1,541

As explained in section C of this chapter, amortisation of a discount increases interest expense. Therefore, the $1,541 is added to the $6,000 interest payment to calculate the $7,541 interest expense applicable to each 6 -month period. Under the straight-line method, the effective interest rate varies from period to period.

Under the effective interest method, the amortisation of the $9,246 discount each period varies, but the effective interest rate is a constant 4%. Note that the total interest expense of $45,246 for the three-year period is the same under both methods.

Effective Interest Method					Straight-Line Method		
Year	*Six-month Period Ending*	*Beginning Bond Carrying Amount (A)*	*Interest Expense Amount (B)*	*(B/A) %*	*Bond Carrying Amount*	*Interest Expense (B)*	*%*
2014	Jun. 30	$90,754	$ 7,260	8	$90,754	$ 7,541	8.3
	Dec. 31	92,014	7,361	8	92,295	7,541	8.2
2015	Jun. 30	93,375	7,470	8	93,836	7,541	87.
	Dec. 31	94,845	7,588	8	95,377	7,541	9.0
2016	Jun.30	96,433	7,715	8	96,918	7,541	7.8
	Dec. 31	98,148	7,852	8	98,459	7,541	7.7
			$45,246			$45,246	

Under this method, the interest percentage is constant.

Under this method, the interest percentage varies.

This comparison involved the issue of bonds at a discount. A similar comparison for bonds issued at a premium would indicate a similar difference in the calculation of a periodic financing charge. Under the straight-line method, however, the percentage of financing charge would increase in the case of a premium, rather than decrease as shown here.

ASSIGNMENT MATERIALS

Discussion Questions

1. What is a bond? a bond indenture? Why might a trustee by used to administer a bond indenture?
2. List and explain some bondholder rights.
3. What is the significance of shareholder approval before an issue of bonds?
4. How are different bond issues reported in the financial statements of a corporation?
5. Three main categories of bond terms are identified in this chapter. Identify these categories and list the major terms of each category.
6. What are three reasons why bonds might be redeemed before their maturity date?
7. Why would investors pay a premium for a corporate bond? Why would a corporation issue its bonds at a discount? Explain, using the relationship between the bond contract interest rate and the prevailing market interest rate.
8. How is an unamortised bond premium or discount disclosed in accordance with GAAP?
9. If the bond contract interest rate is greater than that required in the market on the date of issue, what is the effect on the selling price of the bond? Why?
10. What are two different methods used to amortise premiums and discounts? Explain.
11. How is the interest paid to bondholders calculated? How does this practice affect the sale of bonds between interest dates?
12. How is the amortisation of bond premium recorded in the books? the amortisation of bond discount?
13. How is a loan payable similar to a bond? How is it different?
14. How is a finance lease similar to a long-term loan from a bank? How is it different?
15. Distinguish between future value and present value. What is the time value of money? Why is it important?
16. How is the actual price of a bond determined? Give an example.
17. Explain how the amortisation under the effective interest method is calculated. Use an example.
18. From a theoretical point of view, why is the effective interest method of amortisation more acceptable than the straight-line method? Evaluate the usefulness of the effective interest method from a practical point of view.

Comprehension Problems

Note: Answer problems regarding present value calculations and the effective interest method of amortisation only if the appendices were studied in your course. Recall as well that "issuing a $100,000 bond at 105", for example, means that the bond is sold for $100,000 x 105% = $105,000.

CP 11-1

Bagan Corporation, a profitable growth company with 200,000 shares of common shares outstanding, is in need of approximately $40 million in new funds to finance required expansion. Currently, there are no other securities outstanding. Management has three options open:

a. Sell $40 million of 12-per cent bonds at face value
b. Sell 10% preferred shares: 400,000 shares at $100 per share (dividend $10 per share)
c. Sell another 200,000 common shares at $200 per share.

Operating income (before interest and income taxes) on completion of the expansion is expected to average $12 million per year; the income tax rate is 50 per cent.

View Solution

Required:

1. Complete the schedule below and calculate the earnings per common share.

	12% Bonds	*Preferred Shares*	*Common Shares*
Income before interest and income taxes	$12,000,000	$12,000,000	$12,000,000
Less: Interest expense			
Income before taxes			
Less: Income taxes at 50%			
Net income			
Less: Preferred dividends			
Net income available to common shareholders			
Number of common shares outstanding			
Earnings per common share			

2. Which financing option is most advantageous to the common shareholders? Why?

CP 11-2

View Solution

Required: Complete the following by responding either *premium* or *discount*.

1. If the market rate of interest is 15 per cent and the bond interest rate is 10 per cent, the bonds will sell at a _______________.
2. If a bond's interest rate is 10 per cent and the market rate of interest is 8 per cent, the bonds will sell at a _______________.
3. In computing the carrying amount of a bond, unamortised _______________ is subtracted from the face value of the bond.
4. In computing the carrying amount of a bond, unamortised _______________ is added to the face value of the bond.
5. If a bond sells at a _______________, an amount in excess of the face value of the bond is received on the date of issuance.
6. If a bond sells at a _______________, an amount less than the face value of the bond is received on the date of issuance.

CP 11-3

On January 1, 2011, the date of bond authorisation, Nevada Inc. issued a 3-year, 12-per cent bond with a face value of $100,000 at 94. Semi-annual interest is payable on June 30 and December 31.

View Solution

Required:

1. Prepare journal entries to record the following transactions:
   a. The issuance of the bonds
   b. The interest payment on June 30, 2011
   c. The amortisation of the discount on June 30, 2011 (use the straight-line method of amortisation).
2. Calculate the amount of interest paid in cash during 2011 and the amount of interest expense that will appear in the 2011 income statement.
3. Prepare a partial balance sheet at December 31, 2011 showing how the bonds payable and the discount on the bonds should be shown on the balance sheet.
4. Prepare the journal entry to record the retirement of the bonds on December 31, 2013.
5. Prepare the journal entry on January 1, 2012, assuming the bonds were called at 102.

CP 11-4

On January 1, 2013, the date of bond authorisation, Sydney Corp. issued 3-year, 12-per cent bonds with a face value of $200,000 at 112. Semi-annual interest is payable on June 30 and December 31.

View Solution

Required:

1. Prepare the journal entries to record the following transactions:
   a. The issuance of the bonds
   b. The interest payment on June 30, 2013
   c. The amortisation of the premium on June 30, 2013 (use the straight-line method of amortisation).
2. Calculate the amount of interest paid in cash during 2013 and the amount of interest expense that will appear in the 2013 income statement. Why are these amounts different?
3. Prepare a partial balance sheet at December 31, 2013 showing how the bonds payable and the premium on bonds should be shown on the balance sheet.
4. Prepare the journal entry on January 1, 2015 when the bonds were called at 106.

CP 11-5

On January 1, 2014, the date of bond authorisation, Paquette Inc. issued 3-year, 12-per cent bonds. Semi-annual interest is payable on June 30 and December 31. Hawley uses the straight-line method of amortisation. The following journal entry records the first payment of interest:

2014			
June 30	Interest Expense	17,000	
	Cash		16,500
	Discount on Bonds		500

View Solution

Required: Reconstruct the journal entry made to record the issuance of bonds on January 1, 2014.

CP 11-6

Gaudette Inc. issued 3-year, 12-per cent bonds on January 1, 2016, the date of bond authorisation. Semi-annual interest is payable on June 30 and December 31. Bryan uses the straight-line method of amortisation. The following journal entry records the payment of interest on December 31, 2016:

2016			
Dec. 31	Interest Expense	17,900	
	Premium on Bonds	100	
	Cash		18,000

View Solution

Required: Reconstruct the entry made to record the issuance of bonds on January 1, 2016.

CP 11-7

Leong Corporation was authorised to issue $500,000 face value bonds on January 1, 2011. The corporation issued $100,000 of face value bonds on that date. The bonds will mature on December 31, 2014. Interest is paid semi-annually on June 30 and December 31 each year. The bond interest rate per the terms of the indenture is 12% per year.

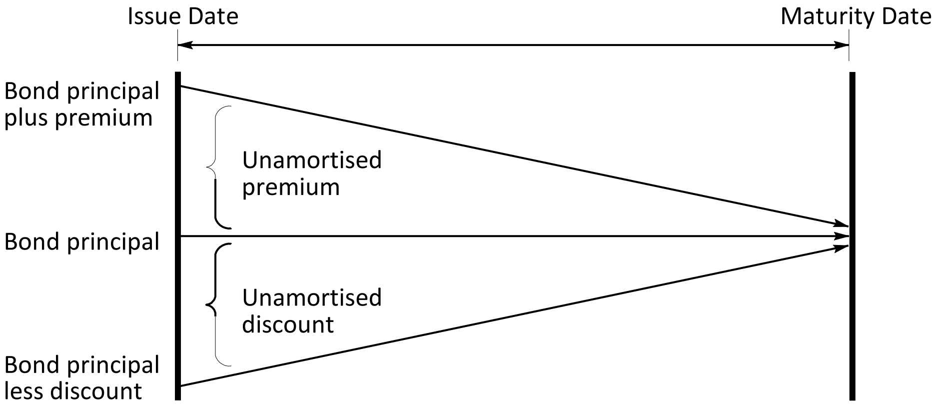
View Solution

Required: Answer the questions for each of the following cases.
Case A: The bonds were issued at face value.
Case B: The bonds were issued for $112,000.
Case C: The bonds were issued for $88,000.

1. How much cash does Leong receive for the bonds?
2. How much annual interest must the corporation pay? On what amount does the corporation pay?
3. Prepare the journal entry to record the sale of the bonds.
4. Record the entries applicable to interest and straight-line amortisation for June 30, 2011 and for December 31, 2011.

CP 11-8

The following diagram shows how the carrying amount of bonds payable changes over time for bonds issued at a premium, at par, and at a discount.



View Solution

Required:
1. Explain the change in carrying amount of the bonds, in terms of the difference between the periodic interest expense recorded on the corporation's income statement and the cash interest paid to investors.
2. Does the diagram illustrate the straight-line or effective interest method of bond premium and discount amortisation? How can you tell?

CP 11-9

Rosedale Corp. obtained a $50,000 loan from Second Capital Bank on January 1, 2014. It purchased a piece of heavy equipment for $48,000 on the same day. The loan bears interest at 6% per year on the unpaid balance and is repayable in three annual blended payments of $18,705 on December 31 each year.

View Solution

Required:

1. Prepare the journal entries to record the following transactions:
   a. Receipt of loan proceeds from the bank
   b. Purchase of the equipment.
2. Prepare the loan repayment schedule.
3. Prepare the journal entry to record the first loan payment.

CP 11-10

Day Corp. entered into a finance lease agreement with Night Leasing Ltd. on January 1, 2011. Day Corp. agreed to pay Night annual payments of $24,154 on December 31 for the next three years to lease a vehicle with a fair value of $80,000. The interest rate implicit in the lease agreement was 8%.

View Solution

Required:

1. Prepare the journal entries to record the assumption of the lease on January 1, 2011.
2. Prepare the lease repayment schedule.
3. Prepare the partial balance sheet of Day Corp. at December 31, 2011. Assume the first lease payment has been made.

CP 11-11 (Appendix)

Night Owl Distributors Ltd. was authorised to issue $500,000 of 12% bonds on January 1, 2011. On this date, the corporation issued $200,000 of bonds for $210,152. On this date, the market rate of interest was 10 per cent. Interest is paid semi-annually on June 30 and December 31.

View Solution

Required:

1. Calculate the amount of interest paid every interest payment date.
2. Complete the amortisation table below using the effective interest method of amortisation.

Issuance of $200,000 Bonds Payable for $210,152
Amortisation Table
Using Market Interest Rate of 10%

		A	B	C	D	E
Year	*Period Ending*	*Beginning Bond Carrying Amount*	*Using 10% Market Rate to Calculate Six-Month Interest Expense* ([½ of 10% = 5%] x A)	*Cash Interest Paid*	(B - C) *Periodic Premium Amortisation*	(A - D) *Ending Bond Carrying Amount*
2011	June. 30	$210,152	(5% x $210,152) = $10,507			
	Dec. 31		(5% x) =			
2012	June. 30		(5% x) =			
	Dec. 31		(5% x) =			
2013	June. 30		(5% x) =			
	Dec. 31		(5% x) =			

3. Using the following table, calculate the interest percentage under the effective interest method of amortisation for each six-month period.

		A	*B*	
Year	*Six-month Period Ending*	*Beginning Bond Carrying Amount*	*Using 10% Market Rate to Calculate Six-Month Interest Expense* ([½ of 10% = 5%] x A)	*Interest %*
2011	June. 30	$210,152	(5% x $210,152 =) $10,507	
	Dec. 31		(5% x =)	________
2012	June. 30		(5% x =)	
	Dec. 31		(5% x =)	________
2013	June. 30		(5% x =)	
	Dec. 31		(5% x =)	________

4. Comment on the interest percentage that results in each period. Do you think that this should remain constant from period to period? Why or why not?

Problems

P 11-1

The board of directors of Megalopolis Inc. has approved management's recommendation to expand the production facilities. The firm currently manufactures only heavy machinery, but plans are being developed for diversifying the corporation's activities through the production of smaller and more versatile equipment. The directors are considering the following financing methods raise $2 million of additional capital:

a. Sell $2 million of 12 per cent bonds at face value
b. Sell $8 preferred shares: 20,000 shares at $100 a share (no other preferred shares are outstanding)
c. Sell another 50,000 shares of common shares at $40 a share (currently 40,000 common shares are outstanding).

Income before interest and income taxes is expected to average $1,000,000 per year following the expansion; the income tax rate is 50 per cent.

Required:

1. Calculate the earnings per common share for each alternative.
2. As representatives of common shareholders, which financing method most likely meets the board of directors' needs?
3. What other factors should the board of directors consider?

P 11-2

Round Corporation was authorised to issue $300,000 of bonds. On January 1, 2011, the corporation issued $150,000 of bonds for $147,000. Details of the bond indenture are as follows:

Date of Authorisation	*Term*	*Interest Rate*	*Interest Payment Dates*
January 1, 2011	3 years	12%	Semi-annually on June 30 and December 31

Required:

1. Calculate
    a. The amount of interest paid every interest payment date
    b. The amount of amortisation to be recorded at each interest payment date (use the straight-line method of amortisation).
2. Calculate actual interest expense for each six-month period.
3. Prepare the journal entries to record the interest and amortisation at June 30, 2011.
4. Prepare a partial balance sheet showing the bond liability and discount on December 31, 2011 and 2012.

P 11-3

Consider the following information:

2011	
Jun. 1	Zenith Manufacturing Company Limited received authorisation to issue $8,000,000 3-year, 12-per cent bonds. The interest is to be paid semi-annually June 1 and December 1 of each year.
Jun. 1	Issued $4,000,000 of bonds for $4,142,800 cash.
2012	
Sept 1	Issued another $4,000,000 of bonds at 97.76 plus accrued interest.

The year-end of Zenith is December 31.

Required: Prepare the journal entries to record:

1. The issue of the bonds on June 1, 2011;
2. The payment of bond interest expense on December 1, 2011;
3. The accrual of bond interest expense and recording of amortisation at year-end on December 31, 2011;
4. The payment of bond interest expense on June 1, 2012. (Assume the Dec. 31, 2011 journal entry *has not* been reversed.);
5. The issue of bonds on September 1, 2012; and
6. The final interest payment, premium and discount amortisation, and retirement of the bonds at maturity, June 1, 2014. (Assume the Dec. 31, 2013 journal entry *has not* been reversed.)

P 11-4

On the date of bond authorisation, Esther Corporation issued $100,000 of callable bonds. Bond indenture information included the following:

Date of Authorisation	*Term*	*Interest Rate*	*Interest Payment Dates*
January 1, 2011	3 years	12%	Semi-annually on June 30 and December 31

Required: Consider these three cases. Case A: the bonds are issued at face value. Case B: the bonds are issued for $103,000. Case C: the bonds are issued for $94,000. For each case:

1. Calculate
   a. The amount of interest paid every interest payment date
   b. The amount of amortisation to be recorded at each interest payment date as applicable (Use the straight-line method of amortisation.)
2. Prepare journal entries to record
   a. The issue of bonds on January 1, 2011
   b. The payment of interest on June 30, 2011
   c. The amortisation on June 30, 2011
   d. The payment of interest on December 31, 2011
   e. The amortisation on December 31, 2011
   f. The payment of interest on December 31, 2013
   g. The amortisation on December 31, 2013
   h. The redemption of the bonds at maturity, January 1, 2014.

3. Calculate the amount of interest expense shown in the income statement at December 31, 2011. Is this amount the same as cash interest paid by Esther? Why or why not?
4. Assume now that on December 31, 2012, the corporation exercised a call feature included in the bond indenture and retired $50,000 of face value bonds issued January 1, 2011. The bonds were called at 102. Prepare the December 31, 2012 journal entry to record the exercise of the call option. Assume interest has been paid and the discount or premium amortised for the period ended December 31, 2012.

P 11-5

Otter Products Inc. was authorised to issue $1,000,000 of bonds. On January 1, 2011, Otter issued $300,000 of bonds for $272,263. Terms of the bond indenture included the following:

Date of Authorisation	*Term*	*Interest Rate*	*Interest Payment Dates*
January 1, 2011	3 years	12%	Semi-annually on June 30 and December 31

Required:

1. Calculate
   a. The amount of interest paid every interest payment date
   b. The amount of amortisation to be recorded at each interest payment date (use the straight-line method).
2. Prepare an amortisation table showing interest expense, and beginning and ending bond carrying amounts at the end of each period over the three years. Use the following format:

Issue of $300,000 Bonds Payable for $272,263
Amortisation Table
(straight-line)

		A	B	C	D	E
Year	*Six Month Period Ending*	*Beginning Bond Carrying Amount*	*(C + D) Periodic Interest Expense*	*Actual Cash Interest Paid*	*Periodic Discount Amort.*	*(A + D) Ending Bond Carrying Amount*
2011	Jun. 30					
	Dec. 31					
2012	Jun. 30					
	Dec. 31					
2013	Jun. 30					
	Dec. 31					

3. Calculate the actual interest rate under the straight-line method of amortisation for each six-month period. Round all percentage calculations to one decimal place. Use the following format:

Calculation of Actual Interest Rate

		A	*B*	
Year	*Six Month Period Ending*	*Bond Carrying Amount*	*Six-month Interest Expense*	*% (B/A)*
2011	Jun. 30			
	Dec. 31			
2012	Jun. 30			
	Dec. 31			
2013	Jun. 30			
	Dec. 31			

4. Comment on the interest rate that results in each period.
5. Prepare a partial balance sheet at December 31, 2011 and 2012.

P 11-6

Selected accounts from three trial balances of the Lake Corporation at December 31 are presented below:

	Adjusted		*Unadjusted*
	2011	*2012*	*2013*
Debits			
Interest Expense	$22,100	$44,200	$43,800
Credits			
9% Bonds Payable	500,000	500,000	500,000
Premium on Bonds	23,600	21,200	20,000

The 9% bonds were authorised on July 1, 2011. Interest is paid semi-annually on June 30 and December 31. The bonds were issued on November 1, 2011. Any premium or discount is amortised on a straight-line basis, and amortisation is recorded each time the interest expense is recorded.

Required:

1. Compute the following:
   a. original issue price as of November 1, 2011
   b. maturity date
2. Reconstruct the journal entry to record the issuance of the bonds on November 1, 2011.
3. Prepare any required adjusting entries as of December 31, 2013.
4. Calculate the carrying value of the bonds on December 31, 2013.

P 11-7

A 3-year $1,000,000, 10 per cent bond issue was authorised for Mega Corporation on April 1, 2011. Interest is payable on March 31 and September 30. The year-end of the Corporation is December 31.

Required: Consider the following independent cases:

1. The Mega Corporation issued the bonds on April 1, 2011 at 97. Prepare the journal entries required on April 1, 2011, September 30, 2011, and December 31, 2011. Assume straight-line amortisation.
2. The bonds are issued at 106 on April 1, 2011. Prepare the journal entries to record the sale of the bonds on April 1, 2011 and entries required on September 30, 2011 and December 31, 2011.
3. The bonds are not issued until December 1, 2012 at 103 plus accrued interest. Prepare the journal entries on December 1, 2012 and December 31, 2012 (year-end). Assume straight-line amortisation.

P 11-8

Zinc Corp. obtained a $100,000 loan from First Capital Bank on December 31, 2011. It purchased a piece of heavy equipment for $95,000 on January 2, 2012. The loan bears interest at 8% per year on the unpaid balance and is repayable in three annual blended payments of $30,192 on December 31 each year, starting in 2012.

Required:

1. Prepare the journal entries to record the following transactions:
   a. Receipt of loan proceeds from the bank
   b. Purchase of the equipment.
2. Prepare the loan repayment schedule in the following format:

Zinc Corp.
Loan Repayment Schedule

	A	*B*	*C*	*D*	*E*
			(D – B)		*(A – C)*
Year Ended Dec. 31	*Beginning Loan Balance*	*Interest Expense*	*Reduction of Loan Payable*	*Total Loan Payment*	*Ending Loan Balance*
2012					
2013					
2014					
2015					

3. Prepare the journal entry to record the last loan payment.
4. Prepare a partial balance sheet showing the loan liability at December 31, 2013

P 11-9

East Corp. entered into a finance lease agreement with West Leasing Ltd. on April 1, 2011. East Corp. agreed to pay West an initial payment of $10,000 on that date and annual payments of $71,081 on March 31 for the next three years to lease a piece of equipment with a fair value of $200,000. The interest rate implicit in the lease agreement was 6%.

Required:

1. Prepare the journal entry to record the purchase of the equipment and assumption of the lease on April 1, 2011.
2. Prepare the lease repayment schedule as follows:

West Corp.
Lease Repayment Schedule

	A	*B*	*C*	*D*	*E*
Year Ended Dec. 31	*Beginning Lease Balance*	*(A x 6%) Interest Expense*	*(D – B) Reduction of Finance Lease*	*Total Lease Payment*	*(A – C) Ending Lease Balance*
2012					
2013					
2014					

3. Prepare the partial balance sheet of East Corp. at December 31, 2013 showing the finance lease balance assuming the December 31 least payment has been made.

P 11-10 (Appendices)

On January 1, 2011, Pete's Planes Inc. was authorised to issue 5-year, $500,000, 12% bonds. Interest was payable on June 30 and December 31. All the bonds were issued on January 1, 2011.

Required: Answer the questions for each of these independent cases.
Case A: the bonds were issued when the market rate of interest was 12 per cent.
Case B: the bonds were issued when the market rate of interest was 16 per cent
Case C: the bonds were issued when the market rate of interest was 8 per cent

1. Calculate
   a. the amount of each semi-annual cash interest payment on the issued bonds;
   b. the issue price of the bonds, consisting of the present value of the bond face value and the present value of the 10 semi-annual interest payments to be made during the 5-year period (for convenience, round all calculations to the nearest dollar);
   c. the amount of amortisation applicable to each interest payment date up to and including December 31, 2013; and
   d. the carrying amount of the bonds at December 31, 2013.
2. Prepare journal entries to record the 2013 transactions.

P 11-11 (Appendix)

Beacon Products Inc. was authorised to issue $1,000,000 of bonds as follows:

Date of Authorisation	*Term*	*Interest Rate*	*Interest Payment Dates*
January 1, 2011	3 years	12%	Semi-annually on June 30 and December 31

On January 1, 2011, Beacon issued $300,000 of bonds for $272,263. On this date, the market rate of interest was 16 per cent.

Required:

1. Calculate the amount of cash received from the bond issue on January 1, 2011.
2. Prepare an amortisation table. Use the effective interest method of amortisation.
3. Calculate the effective interest rate for each six-month period.
4. Comment on the results in each period. Do you think the results are appropriate? Why or why not?

Alternate Problems

AP 11-1

The financing structure of Warner Corp. is currently as follows:

Current Liabilities	$200,000
Bond Payable	-0-
Preferred Shares — $8 dividend per share	-0-
Common Shares — 50,000 shares outstanding	500,000
Retained Earnings	300,000

Management is considering a plant expansion costing $1,000,000. Several different factors have been considered in a selection of a financing method; the effect of alternative financing methods on earnings per common share remains to be analysed. The following financing methods are being considered:

a. Sell $1 million of 12-per cent bonds at face value
b. Sell another 10,000 common shares at $100 per share.
c. Sell 10,000 shares of preferred shares at $100.

Warner is a profitable growth company and income before interest and income taxes is expected to average $200,000 per year; the income tax rate is 40 per cent.

View Solution

Required:

1. Prepare a schedule to compare the effect on earnings per common share of each of the financing options.
2. Based on earnings per common share, which method is financially advantageous to common shareholders?
3. What other factors should be considered before a final decision is made?

AP 11-2

Tron Corp. was authorised to issue $500,000 of face value bonds, as follows:

Date of Authorisation	*Term*	*Interest Rate*	*Interest Payment Dates*
January 1, 2014	3 years	12%	Semi-annually on June 30 and December 31

The corporation issued $250,000 of bonds on January 1, 2014

View Solution

Required: Answer the questions for each of these independent cases.
Case A: the bonds are issued at face value.
Case B: the bonds are issued for $256,000.
Case C: the bonds are issued for $242,800.

1. Calculate
   a. The amount of interest paid on the issued bonds every interest payment date
   b. The amount of amortisation, if any, applicable to each interest payment date (use the straight-line method of amortisation).
2. Prepare journal entries to record
   a. The issue of the bonds
   b. The payment of interest and recording of amortisation, if any, on June 30, 2014.
   c. The payment of interest and recording of amortisation, if any, on December 31, 2014.
3. Calculate the amount of interest expense shown in the income statement at December 31, 2014. Is this amount the same as cash paid by Tron in 2014? Why or why not?
4. On December 31, 2014, the corporation exercised a call feature included in the bond indenture and retired the $250,000 of face value bonds issued January 1, 2014. The bonds were called at 103. Prepare the December 31 journal entry to record the exercise of the call option. Assume interest and amortisation journal entries have been recorded.

AP 11-3

The Broker Company Limited arranged to sell $2,000,000 of its to finance a substantial increase in capacity. The following data are available:

2011

July 2	Broker Incorporated received authorisation for an issue of $2 million, 10-year, 12 per cent bonds. Interest is payable semi-annually: January 2 and July 2. (Broker closes its books December 31 of each year.)
Aug. 1	Broker issued $1,000,000 of bonds for $1,045,700 cash plus accrued interest.

2012

Mar. 1	Broker issued the remaining $1,000,000 face value of the bonds for 97.76 plus accrued interest.
July 2	Broker recorded the necessary entry related to the bond issue.

View Solution

Required:

1. Record all necessary entries for the period July 2, 2011 to July 2, 2012 inclusive, including December 31, 2011, the year-end of the company.

2. Calculate the balance of the Bond Premium account in the general ledger at December 31, 2011.
3. Prepare the long-term liability section of Broker's balance sheet for December 31, 2011.
4. If the market interest rate is 18 per cent at December 31, 2011, what would be the effect on the market value of Broker's bonds?
5. How much cash interest was paid to bondholders in 2012? How much interest expense was reported on the income statement for the year ended December 31, 2012? Why the difference? (Show calculations.)

AP 11-4

On January 2, 2011, Jamaica Company Ltd. issued $2,000,000, 3-year, 12 per cent bonds at 97. Interest on the bonds is payable semi-annually on June 30 and December 31. Jamaica's year-end is December 31.

View Solution

Required:

1. Prepare all journal entries necessary on the following dates:
   a. January 2, 2011
   b. June 30, 2011
   c. December 31, 2011
   d. January 2, 2014.
2. Calculate the amount of interest paid in cash in 2011.
3. Calculate the interest expense reported on the 2011 income statement.
4. What is the balance of the Discount on Bonds account in the general ledger at December 31, 2011?

AP 11-5

Providence Inc. was authorised to issue $500,000 of face value bonds as follows:

Date of Authorisation	*Term*	*Interest Rate*	*Interest Payment Dates*
January 1, 2011	3 years	12%	Semi-annually on June 30 and December 31

On January 1, 2011, the corporation issued $200,000 of face value bonds for $212,000.

View Solution

Required:

1. Calculate
   a. The amount of interest paid every interest payment date
   b. The amount of amortisation to be recorded at each interest payment date (use the straight-line method of amortisation).
2. Prepare a schedule to show the effect of premium amortisation on interest expense and bond carrying amount at each interest payment date. Assume amortisation is recorded each time interest expense is recorded.
3. Prepare the journal entries to record the interest and amortisation at June 30, 2011.
4. Prepare a partial balance sheet, showing the liability on December 31, 2011 and 2012.

AP 11-6

Selected accounts from the trial balances of Mountbatten Corp. at December 31 are presented below:

	Adjusted		*Unadjusted*
	2011	*2012*	*2013*
Debits			
Interest Expense	$39,750	$79,500	$59,625
Discount on Bonds	51,000	39,000	30,000
Credits			
Bond Interest Payable	16,875	16,875	-0-
9% Bonds Payable	750,000	750,000	750,000

The bonds were authorised on April 1, 2011 but not issued until July 1, 2011. Interest is paid semi-annually on April 1 and October 1. Straight-line amortisation is used.

View Solution

Required:

1. Compute the following:
   a. original issue price as of July 1, 2011
   b. maturity date
2. Reconstruct the journal entry to record the issuance of the bonds on July 1, 2011.
3. Prepare any required adjusting entries as of December 31, 2013. Assume that straight-line amortisation is recorded at year-end and also each time interest is paid.

AP 11-7

Wheaton Wholesalers Ltd. was authorised to issue $500,000 of face value bonds, as follows:

Date of Authorisation	*Term*	*Interest Rate*	*Interest Payment Dates*
January 1, 2011	3 years	12%	Semi-annually on June 30 and December 31

On January 1, 2011, the corporation issued $200,000 of face value bonds for $210,152.

View Solution

Required:

1. Calculate
   a. The amount of interest paid every interest payment date.
   b. The amount of amortisation to be recorded at each interest payment date (use the straight-line method of amortisation).
2. Prepare an amortisation table showing beginning and ending bond carrying amounts over the three years.
3. Calculate the actual interest rate under the straight-line method of amortisation for each six-month period.
4. Comment on the interest rate that results in each period. Do you think that this should vary from period to period? Why or why not?

AP 11-8

Copper Corp. obtained a $500,000 loan from Last Chance Bank on January 1, 2011. It purchased a piece of heavy equipment for $450,000 on January 2, 2011 and some accounts payable with the balance on the same day. The loan bears interest at 4% per year on the unpaid balance and is repayable in three annual blended payments of $187,381 on December 31 each year, starting in 2012 (that is, no payments are required until two years after receiving the loan). Assume interest accrues in the meantime.

View Solution

Required:

1. Prepare the journal entries to record the following transactions:
   a. Receipt of loan proceeds from the bank
   b. Purchase of the equipment and payment of the accounts payable.
2. Prepare the loan repayment schedule.
3. Prepare the journal entry to record the first loan payment.
4. Prepare a partial balance sheet showing the loan liability at December 31, 2011.

AP 11-9

North Corp. entered into a finance lease agreement with South Leasing Ltd. on April 1, 2011. North Corp. agreed to pay South an initial payment of $20,000 on that date and annual payments of $33,308 for the next three years commencing on March 31, 2012, to lease a piece of equipment with a fair value of $100,000. The interest rate implicit in the lease agreement was 12%.

View Solution

Required:

1. Prepare the journal entries to record April 1, 2011 transactions.
2. Prepare the lease repayment schedule.
3. Prepare the partial balance sheet of North Corp. at December 31, 2013 showing the finance lease balance assuming the December 31 lease payment has been made.

AP 11-10 (Appendices)

Cathy's Copper Products Inc. was authorised to issue $1,000,000 of face value bonds.

Date of Authorisation	*Term*	*Interest Rate*	*Interest Payment Dates*
January 1, 2017	3 years	12%	Semi-annually on June 30 and December 31

The following transactions occurred during 2017.

Jan. 1	Issued $100,000 of bonds
June 30	Paid the semi-annual interest on the issued bonds and made an entry to record straight-line amortisation
Dec. 31	Paid the semi-annual interest on the issued bonds and made an entry to record amortisation.

View Solution

Required: Answer the questions for each of these cases.

Case A: the bonds were issued when the market rate of interest was 12 per cent.
Case B: the bonds were issued when the market rate of interest was 16 per cent.
Case C: the bonds were issued when the market rate of interest was 8 per cent.

1. Calculate
   a. the amount of each semi-annual interest payment on the issued bonds;
   b. the present value of the bonds; and
   c. the amount of amortisation applicable to each interest payment date (use the effective interest method of amortisation.
2. Prepare journal entries to record the 2017 transactions.

CHAPTER TWELVE

Financial Statements Analysis

Financial statements report information at regular intervals for analysis by shareholders, creditors, and other interested parties. Although shareholders actually own the entity, they alone do not finance it; creditors finance some of its activities and, together with shareholders, form the entity's financial structure. In order for creditors and investors to assess the wisdom of investing in or lending to a particular corporation, financial evaluation tools are needed. Some of these tools are discussed in this chapter.

Financial statements can be analysed to evaluate a corporation's liquidity, profitability, and financial structure compared to prior years and other similar companies. This chapter will help you answer such questions as:

1. What is meant by *liquidity?*
2. What are some ratios commonly used to evaluate liquidity?
3. What is a company's revenue operating cycle and how is it measured?
4. How can the profitability of a corporation be evaluated?
5. How is the amount of shareholder claims against a corporation's assets compared to the amount of creditor claims?
6. What are the relative advantages of short-term and long-term debt?
7. What are some measures used to evaluate the future financial prospects of a company for investors?
8. What is a *horizontal analysis?* How does it differ from a *vertical analysis?*
9. What is the Scott formula?

A. Introduction to Ratio Analysis

A primary means to evaluate financial statements is **ratio analysis**. A *ratio* is a relationship between two numbers of the same kind. If one has two apples and three oranges, the ratio of the number of oranges to the number of apples is 2:3 (read "two to three"). A *financial ratio* is a measure of the relative magnitude of two selected numerical values taken from a company's financial statements. For instance, the gross profit ratio, studied in an earlier chapter, expresses the numerical relationship between gross profit to sales. If a company has a gross profit ratio of .25:1, this means that for every $1 of sales, the company earns on average $.25 to cover expenses other than cost of goods sold. Another way of stating this is to say that the gross profit ratio is 25%.[1]

Financial ratios are effective tools for measuring the financial performance of a company because they provide a common basis for evaluation – for instance, the amount of gross profit generated by each dollar of sales for different companies. Numbers that appear on financial statements need to be evaluated in context. It is their relationship to other numbers and the relative changes of these numbers that provide some insight into the financial health of a business. Ratio analysis alone will not provide a definitive financial evaluation. One of the main purposes of ratio analysis is to pinpoint areas that require further analysis and investigation. It is used as one analytic tool, which, when combined with informed judgement, offers insight into the financial performance of a corporation.

For example, one corporation may be quite diversified and have a completely different product mix than another company even though both operate in the same broad industry. To determine how well one company is doing relative to others, or to ascertain whether key indicators are changing, ratios are often compared to *industry averages*. To determine trends in one company's performance, ratios are often compared to past years' ratios of the same company.

To perform a comprehensive analysis, qualitative information about the company as well as ratios should be considered. For example, although a business may have sold hundreds of refrigerators last year and all of the key financial indicators suggest growth, qualitative information like trade publications and consumer reports may indicate that the trend will be towards refrigerators using significantly different technologies in the next few years. If the company does not have the capacity or necessary equipment to produce these new appliances, the present positive financial indicators may not accurately reflect the likely future financial performance of the company.

An examination of these qualitative factors provides valuable insights and contributes to the comprehensive analysis of a company. An important source of qualitative information is also found in the notes to the financial statements, which are an integral part of the company's financial statements.

A complete set of financial statements of Big Dog Carworks Ltd. for the years ended 2015 and 2016 was provided in an earlier chapter. In this chapter, financial ratios will be used to provide further insights into the financial performance of BDCL. The ratios will focus on financial information contained primarily within the income

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[1] Any ratio in the form X:1 can be recast as a percentage by multiplying both the numerator and denominator by 100. In the example here, a .25:1 ratio would equal 25% [(.25 x 100)/(1 x 100) = 25/100 = 25%]

statement, statement of changes in equity, and balance sheet of BDCL for the subsequent three years of its operations – 2017, 2018, and 2019. This information is shown below. Note that figures are now rounded and reported in thousands of dollars on the statements (000s). Certain expense categories have also been combined.

Big Dog Carworks Ltd.
Balance Sheet
At December 31
($000s)

	2019	2018	2017
Assets			
Current			
Cash	$ 20	$ 30	$ 50
Marketable Securities	36	31	37
Accounts Receivable	544	420	257
Inventories	833	503	361
	1,433	984	705
Property, Plant, and Equipment, at carrying amount	1,053	1,128	712
Total Assets	$2,486	$2,112	$1,417
Liabilities			
Current			
Borrowings	$ 825	$ 570	$ 100
Accounts Payable	382	295	219
Income Taxes Payable	48	52	50
	1,255	917	369
Shareholders' Equity			
Share Capital	1,063	1,063	963
Retained Earnings	168	132	85
	1,231	1,195	1,048
Total Liabilities and Shareholders' Equity	$2,486	$2,112	$1,417

Figure 12–1 BDCL financial statements

Big Dog Carworks Ltd.
Income Statement
For the Year Ended December 31
($000s)

	2019	*2018*	*2017*
Sales (net)	$3,200	$2,800	$2,340
Cost of Goods Sold	2,500	2,150	1,800
Gross Profit	700	650	540
Operating Expenses			
Selling, General, and Administration	212	183	154
Employee Benefits	113	100	119
Depreciation	75	84	63
	400	376	336
Income from Operations	300	274	204
Financing Costs			
Interest	89	61	-0-
Income Before Income Taxes	211	213	204
Income Taxes	95	96	92
Net Income	$ 116	$ 117	$ 112

Big Dog Carworks Ltd.
Statement of Changes in Equity
For the Year Ended December 31
($000s)

	2019			*2018*	*2017*
	Share Capital	*Retained Earnings*	*Total Equity*	*Total Equity*	*Total Equity*
Opening Balance	$1,063	$132	$1,195	$1,148	$ 43
Common Shares Issued					953
Net Income		116	116	117	112
Dividends Declared		(80)	(80)	(70)	(60)
Ending Balance	$1,063	$168	$1,231	$1,195	$1,048

Figure 12–1 BDCL financial statements (continued)

Assume that 100,000 common shares are outstanding at the end of 2017, 2018, and 2019.

There are four major types of financial ratios covered below – *liquidity ratios* that measure the ability of a corporation to satisfy demands for cash as they arise in the near-term (such as payment of current liabilities); *profitability ratios* that measure various levels of return on sales, total assets employed, and shareholder investment; *leverage ratios* that measure the financial structure of a corporation, its amount of relative debt, and its ability to cover interest expense; and *market ratios* that measure financial returns to shareholders, and perceptions of the stock market about the corporation's value.

Initial insights into the financial performance of BDCL can be derived from an analysis of relative amounts of current and non-current debt. This follows.

Current (Short-Term) versus Non-current (Long-Term) Debt

Both short-term and long-term financing strategies have their advantages. The advantage of some short-term debt (repayable within one year of the balance sheet date) is that it often does not require interest payments to creditors. For example, accounts payable may not require payment of interest if they are paid within the first 30 days they are outstanding. Short-term debt also has its disadvantages: payment is required within at least one year, and often sooner. Interest rates on short-term debt are often higher than that of long-term debt. An increase in the proportion of short-term debt is more risky because it has to be renewed and therefore renegotiated more frequently.

Long-term debt's advantages are that payment may be made over an extended period of time. Risk may be somewhat reduced through the use of a formal contractual agreement often lacking with short-term debt. The disadvantages of long-term debt are that interest payments are required to be made at specified times and that the amounts owing may be secured by assets of the company.

Analysing Big Dog's Financial Structure

As a general rule, long-term financing should be used to finance long-term assets. Note that in BDCL's case, capital assets amount to $1,053,000 at December 31, 2019 yet it has no long-term liabilities. This is unusual. An analysis of the company's balance sheet reveals the following:

		(000s)	
	2019	*2018*	*2017*
Current Liabilities	$1,255	$917	$369
Non-current Liabilities	-0-	-0-	-0-

2019 information indicates that BDCL management relies solely on short-term creditor financing, part of which is $382,000 of accounts payable that may bear no interest and $825,000 of borrowings that also need to be repaid within one year. The risk management has assumed is that they need to replace existing liabilities as they come due with new liabilities. If creditors become unwilling to do this, the ability of BDCL to pay its short-term creditors may be compromised. The company may experience a **liquidity** crisis – the ability of a company to pay its current liabilities as they come due. The ratios used to evaluate liquidity of a corporation are discussed below.

B. Liquidity Ratios: Analysing Short-term Cash Needs

Even though a company may be earning net income each year (as in BDCL's case), it may still be unable to pay its current liabilities as needed because of a shortage of cash. This can trigger various problems:

Current Liabilities:
Creditors can refuse to provide any further goods or services on account.
Creditors can sue for payment.
Creditors can put the company into receivership or bankruptcy.

Non-current Liabilities
Long-term creditors can refuse to lend additional cash.
Creditors can demand repayment of their long-term debts under some circumstances.

Shareholders' equity
Shareholders may be unwilling to invest in additional share capital of the company.
Shareholders risk the loss of their investments if the company declares bankruptcy.

There are several ways to analyse liquidity of a company.

Working Capital

The calculation of **working capital** is a starting point. Working capital is the difference between a company's current assets and current liabilities at a point in time. BDCL's working capital calculation is as follows:

	(000s)		
	2019	*2018*	*2017*
Current Assets			
Cash	$ 20	$ 30	$ 50
Marketable Securities	36	31	37
Accounts Receivable	544	420	257
Inventories	833	503	361
Total Current Assets (a)	1,433	984	705
Current Liabilities			
Borrowings	825	570	-0-
Accounts Payable	382	295	219
Income Taxes Payable	48	52	50
Total Current Liabilities (b)	1,255	917	269
Net Working Capital (a-b)	$ 178	$ 67	$436

In the above schedule, working capital amounts to $178,000 at December 31, 2019. Between 2017 and 2019, working capital has decreased by $258,000 ($436,000 – 178,000). BDCL is becoming less liquid, though its liquidity position has improved since 2018 when it was only $67,000.

Besides calculating an absolute amount of working capital, ratio analysis can also be used. The advantage of a ratio is that it is usually easier to interpret.

Current Ratio

Is BDCL able to repay short-term creditors? The **current ratio** can help answer this question. It expresses working capital as proportion of current assets to current liabilities. The relevant BDCL financial data required to calculate this ratio is taken from the balance sheet, as follow:

		(000s)		
		2019	*2018*	*2017*
Current Assets	(a)	$1,433	$ 984	$ 705
Current Liabilities	(b)	1,255	917	269
Current Ratio	(a/b)	1.14:1	1.07:1	2.62:1

This ratio indicates how many current asset dollars are available to pay current liabilities at a point in time. The expression “1.14:1” is read, “1.14 to 1”. In this case it means that at December 31, 2019, $1.14 of current assets exists to pay each $1 of current liabilities. This ratio is difficult to interpret in isolation. There are two types of additional information that could help. First, what is the trend within BDCL over the last three years? The ratio declined steeply between 2017 and 2018 (from 2.62 to 1.07), then recovered slightly between the end of 2018 and 2019 (from 1.07 to 1.14). The overall decline seems to be a cause for concern, as it indicates that BDCL now has far fewer current assets to satisfy current liabilities as they become due.

A second interpretation aid would be to compare the current ratio calculations of a similar company or that of BDCL’s industry as a whole. There are various trade publications and business analysts’ websites that assemble financial ratio information for a wide range of industries.

Some analysts consider that a corporation should maintain a 2:1 current ratio, depending on the industry in which the firm operates. The reasoning is that, if there were $2 of current assets to pay each $1 of current liabilities, the company should still be able to pay its current liabilities as they become due, even in the event of a business downturn. However, it is recognised that no one current ratio is applicable to all entities; other factors — such as the composition of current assets — must also be considered to arrive at an acceptable ratio. This is illustrated below.

Composition of Specific Items in Current Assets

In the following example, corporation A and corporation B both have a 2:1 current ratio. Are the companies equally able to repay their short-term creditors?

	Corp. A	*Corp. B*
Current Assets		
Cash	$ 1,000	$10,000
Accounts Receivable	2,000	20,000
Inventories	37,000	10,000
Total Current Assets	$40,000	$40,000
Current Liabilities	$20,000	$20,000
Current Ratio	2:1	2:1

The companies have the same dollar amounts of current assets and current liabilities. On closer inspection, though, they have different short-term debt paying abilities. Overall, corporation B has more liquid current assets than corporation A because it has relatively less capital tied up in inventory ($10,000 vs. $37,000) and more in cash and accounts receivable. Corporation A would have to sell inventory, likely at a lower-than-normal gross profit, if it needed more cash to pay short-term creditors relatively quickly. As a result, corporation B is in a better position to repay short-term creditors.

Since the current ratio doesn't consider the components of current assets, it is only a rough indicator of the ability of a company to pay its debts as they become due. This weakness is partly remedied by another ratio discussed below.

Acid-Test Ratio

A more severe test of liquidly is provided by the so-called **acid-test ratio**; often called the *quick ratio*. This provides a more severe test of a company's ability to meet the immediate demands of creditors. To calculate this ratio, current assets are broken down into *quick* current assets and *non-quick* current assets.

Quick Current Assets

Cash Marketable Securities Accounts Receivable	These current assets are considered to be readily convertible into cash.

Non-quick Current Assets

Inventories Prepaid Expenses	Cash cannot be obtained either at all or easily from these current assets.

Inventory and prepaid expenses either cannot be converted into cash (cash related to prepaid expenses has already been paid out), or converted to cash in a short period of time in the case of inventory. Therefore, they are excluded in the calculation of this ratio. The acid-test ratio is derived by dividing the total of quick current assets by current liabilities. The relevant BDCL financial data required to calculate this ratio follows:

		(000s)		
		2019	*2018*	*2017*
Cash		$ 20	$ 30	$ 50
Marketable securities		36	31	37
Accounts receivable		544	420	257
Quick current assets	(a)	$ 600	$481	$344
Current liabilities	(b)	$1,255	$917	$269
Acid-test ratio	(a/b)	0.48:1	0.52:1	1.28:1

This ratio indicates how many quick asset dollars (cash, marketable securities, and accounts receivable) exist to pay each dollar of current liabilities. What is an adequate acid-test ratio? It is generally considered that a 1:1 acid test ratio is adequate to ensure that a firm will be able to pay its current obligations. However, this is a fairly arbitrary guideline and is not reliable in all situations. A lower ratio than 1:1 can often be found in successful companies. However, BDCL's trend is worrisome.

As can be seen, only $0.48 of quick assets is available to pay each $1 of current liabilities in 2019. This amount appears clearly inadequate; $0.52 in 2018 also seems too low. The 2017 ratio of $1.28 seems reasonable. Of particular concern to financial analysts would be the declining trend of the acid-test ratio over the three years.

Additional analysis can also be performed to determine the source of liquidity issues. These are discussed next.

Accounts Receivable Collection Period

Liquidity is affected by management decisions related to trade accounts receivable. Lax collection of receivables can result in a shortage of cash to pay current obligations. The effectiveness of management decisions relating to receivables is analysed by an additional calculation.

The calculation of the **accounts receivable collection period** establishes the average number of days needed to collect an amount due to the company. It indicates the efficiency of collection procedures when the collection period is compared with the firm's sales terms (in BDCL's case, *net 30* – amounts are due with 30 days of invoice date).[2]

To calculate this ratio, average accounts receivable are divided by the net credit sales and the result is multiplied by 365 days. We will assume that all of BDCL's sales are on credit. The BDCL financial information required to make the calculation is shown below (the 2017 calculation cannot be made because 2016 Accounts Receivable amount is not available):

		(000s)	
		2019	*2018*
Net credit sales	(a)	$3,200	$2,800
Average accounts receivable			
[(Opening balance + closing balance)/2]	(b)	$ 482[1]	$ 338[2]
Average collection period			
[(b/a) x 365 days]		55 days	44 days

[1] ($420 + 544)/2 = $482
[2.] ($257 + 420)/2 = $338

When Big Dog's 30-day sales terms are compared to the 55-day collection period, it is obvious that an average 25 days of sales (55 days – 30 days) have gone uncollected beyond the regular credit period in 2019. Moreover, the collection period is increasing compared to 2018. Therefore, some over-extension of credit and possibly ineffective collection procedures are indicated by this ratio. Quicker collection would improve BDCL's cash position. It may be that older or uncollectible amounts are buried in the total amount of receivables.

Whether the increase in collection period is good or bad depends on several factors. For instance, more liberal credit terms may generate more sales (and therefore profits). The root causes of the change in the ratio need to be investigated. However, the calculation does provide an indication of the change in effectiveness of credit and collection procedures between 2018 and 2019.

Number of Days of Sales in Inventory

The acid-test ratio can also highlight inventory management issues, since an over-investment in inventory can reduce the amount of cash available to pay current

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[2] Average balance sheet amounts are used when income statement amounts are compared to balance sheet amounts in a ratio. This is because the income statement item is realized over a fiscal year, while balance sheet amounts are recorded at points in time at the end of each fiscal year. Averaging opening and ending balance sheet amounts is an attempt to match numerators and denominators to an approximate midpoint in the fiscal year.

liabilities. The effectiveness of management decisions relating to inventory can be further analysed by calculating the number od days of ales that can be serviced by existing inventory levels.

The **number of days of sales in inventory** is calculated by dividing average inventory by the cost of goods sold and multiplying the result by 365 days. The relevant BDCL financial data for 2018 and 2019 required to calculate this ratio are shown below.

		(000s)	
		2019	*2018*
Cost of goods sold		\$2,500	\$2,150
Average inventory [(opening balance + closing balance)/2]	(a)	\$ 668 [1]	\$432[2]
Cost of goods sold	(b)	365	365
Number of days sales in inventory [(b/a) x 365 days]		98 days	73 days

[1] (\$503 + 833)/2 = \$668

[2] (\$361 + 503)/2 = \$432

The calculation indicates that BDCL is investing relatively more in inventory in 2019 than in 2018. There are 98 days of sales in inventory in 2019. This indicates that BDCL can handle approximately 3 months of sales with its existing inventory. In 2018, this figure was only 73 days. This increase may warrant investigation into its causes.

A declining number of days of sales in inventory is usually a sign of good inventory management because it indicates that the average amount of assets tied up in inventory is lessening. With lower inventory levels, inventory-related expenses such as rent and insurance are lower because less storage space is often required. It should be noted, however, lower relative inventory levels can have negative consequences. Items that customers want to purchase may not be in stock. Sales can be lost as a result.

Increasing days of sales in inventory is usually a sign of poor inventory management because an excessive investment in inventory ties up cash that could be used for other purposes. Furthermore, it may indicate that inventory is becoming obsolete (consider clothing) or deteriorating (consider groceries). Such inventories may become unsalable. However, the possible positive aspect of more days of sales in inventory is that there can be shorter delivery time to customers if more items are in stock.

Whether Big Dog’s increasing days of sales in inventory is positive or negative depends on management’s objectives. Is management increasing inventory to provide for increased sales in the next year, or is inventory being poorly managed? Assume that further enquiries of management reveals the following information:

Questions:	*Facts or Projections*
1. Is the number of days of sales in inventory increasing because of inadequate sales volume?	1. Sales volume is rapidly increasing.
2. Is excessive inventory being purchased?	2. Sales are expected to increase in the next year. Therefore, the 2019 growth in inventory may be needed to meet demand in the upcoming year.
3. Are slow-moving items responsible for the increasing number of days of sales in inventory?	3. Big Dog sells vehicle lines that are anticipated to remain in demand.

Based on this analysis, it appears that the increased number of days of sales in inventory can be explained in relation to Big Dog's anticipated increase in sales in the upcoming year. This decision does create some problems, however, most notably the deterioration in the current and acid-test ratios.

The Revenue Operating Cycle

As discussed previously, most businesses exhibit a **revenue operating cycle**. Inventory is purchased, an account receivable occurs when a sale is made, and cash is generated when the receivable is collected. More inventory is then purchased for cash. This cycle is illustrated in Figure 12-2.

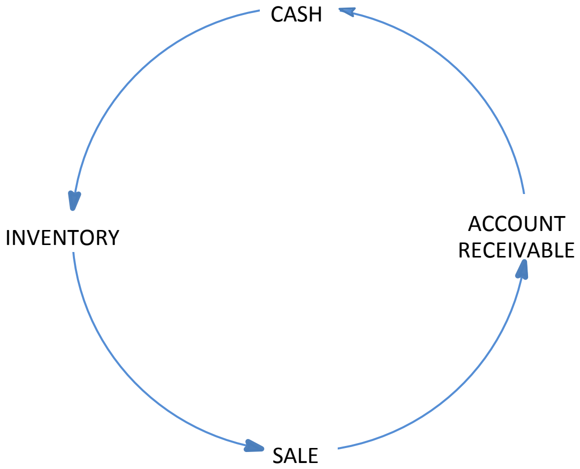

Figure 12-2 The revenue operating cycle

The length of time it takes BDCL to complete one revenue operating cycle is an important measure of liquidity. The amount of time required to complete a single cycle can be calculated using the number of days it takes to turn over inventory (as indicated by the number of days of sales in inventory) and the number of days it takes to collect receivables that result from sales. The relevant BDCL financial data required for this calculation follows.

	2019	*2018*
Average number of days of sales in inventory	98 days	73 days
Average number of days to collect receivables	55 days	44 days
Number of days to complete the revenue cycle	153 days	117 days

In 2019, 153 days were required to complete this cycle, compared to 117 days in 2018. If accounts payable are due within 60 days, as is common, it is obvious that BDCL will not be able to pay these liabilities with cash from the revenue operating cycle. Moreover, the situation in 2019 is worse than it was in 2018. The cycle is 36 days longer.

Analysis of BDCL's Liquidity

Reflecting on the results of all these ratios, it appears that Big Dog Carworks Ltd. is gradually growing more illiquid. Current assets, especially quick assets, are declining relative to current liabilities. The revenue operating cycle is increasing. In the face of these indicators, it is curious that the company has assumed no long-term debt. For the moment, we will limit our analysis to these general conclusions until other types of ratios are discussed and calculated below, particularly what level of return BDCL is earning on its invested assets. An overall assessment of all these ratios can then provide a more complete picture of the financial status of Big Dog Carworks Ltd.

C. Profitability Ratios: Analysing Returns on Business Activity

Measures of *profitability* indicate relative levels of various expenses to revenues, and how well overall the assets of a corporation have been utilized.

Gross Profit Ratio

The first such measure of profitability is the **gross profit ratio,** as discussed in an earlier chapter. This indicates the percentage of sales revenue that is left to pay operating expenses, creditor interest, and income taxes after deducting cost of goods sold. The ratio is calculated as:

$$\frac{\text{Gross profit}}{\text{Net sales}}$$

BDCL's gross profit ratios for the three years are:

		(000s)		
		2019	*2018*	*2017*
Gross profit	(a)	$ 700	$ 650	$ 540
Net sales	(b)	$3,200	$2,800	$2,340
Gross profit ratio	(a/b)	.22:1	.23:1	.23:1

In other words, for each dollar of sales BDCL has $.22 of gross profit left to cover operating, interest, and income taxes expenses ($.23 in 2018 and 2017). The ratio has not changed much from year to year. However, even a small decline in this percentage can affect net income significantly because the gross profit is such a large component of the income statement.

A lower gross profit ratio is not necessarily unfavourable, if it is accompanied by higher overall sales. In BDCL's case, the gross profit ratio has declined slightly during 2019, but gross profit in absolute terms has increased by $50,000 ($700,000 vs. 650,000) because sales have increased by $400,000 ($3.2M – 2.8M). That is, $50,000 more is available to cover other operating and financing expenses of the company in 2019 than in 2018. The slightly-declining gross profit ratio may also indicate that that BDCL is experiencing greater competition in its market niche. This possibility should be investigated, as it will impact future financial performance.

A simple review of the company's income statement is also useful here. Operating expenses (selling, general, and administrative expenses; employee benefits, and depreciation) have all increased. As a result, and despite increasing sales revenue and gross profit, net income has remained relatively flat. The reasons for these operating expense increases should be investigated.

Operating Profit Ratio

The **operating profit ratio** is one measure of relative change in these other expenses. This ratio indicates the percentage of sales revenue left to cover interest and income taxes expenses after deducting cost of goods sold and operating expenses. In other words:

$$\frac{\text{Income from operations}}{\text{Net sales}}$$

BDCL's operating profit ratio for the 2017, 2018, and 2019 fiscal years are calculated as follows:

		(000s)		
		2019	*2018*	*2017*
Income from operations	(a)	$300	$274	$204
Net sales	(b)	$3,200	$2,800	$2,340
Operating profit ratio	(a/b)	.09:1	.09:1	.09:1

For each dollar of sales revenue, the company has $.09 left to cover interest and income taxes expenses after deducting cost of goods sold and operating expenses. This suggests that cost of goods sold and operating expenses have increased in proportion to sales. This seems reasonable, though comparison with competitors' ratios or industry averages would help the analysis.

Net Profit Ratio

The **net profit ratio** is the percentage of sales revenue retained by the company after payment of operating expenses, interest expenses, and income taxes. It is an index of performance that can be used to compare the company to others in the same industry. This ratio is calculated by the following formula:

$$\frac{\text{Net income}}{\text{Net sales}}$$

BDCL's net profit ratios for the three years are calculated as follows:

		(000s)		
		2019	*2018*	*2017*
Net income	(a)	$ 116	$ 117	$ 112
Net sales	(b)	$3,200	$2,800	$2,340
Net profit ratio	(a/b)	.04:1	.04:1	.05:1

For each $1 of sales, BDCL has earned net income of about $.05 in 2017 and $.04 in 2018 and 2019. The measure has been relatively stable but needs to be compared with industry or competitor's averages for a better perspective.

A brief review of BDCL's assets on its balance sheet reveals that current, capital, and total assets have increased significantly during the three-year period. Current asset increases were noted in the prior section on liquidity analysis. As well, capital assets have increased from $712,000 to $1,053,000 from 2017 to 2019, a 48% increase [($1,053 – 712)/712]. Total assets have increased by 75% [($2,486 – 1,417)/1,417].

Corporations often have a considerable amount of investment tied up in capital assets like property, plant and equipment that are used to produce or house items for sale. The financial strength and success of a corporation depends on their efficient use. An analysis of these investment decisions can be made by calculating several ratios.

Sales to Total Assets Ratio

Are BDCL's sales adequate in relation to its investment in capital assets? The calculation of the **sales to total assets ratio** helps to answer this question by establishing the number of sales dollars earned for each dollar invested in assets. The ratio is calculated by the following formula:

$$\frac{\text{Net sales}}{\text{Average total assets}}$$

BDCL's ratios are calculated as follows:

		(000s)	
		2019	*2018*
Net sales	(a)	$ 3,200	$2,800
Average total assets	(b)	2,299[1]	1,765[2]
Sales to total assets ratio	(a/b)	1.39:1	1.59:1

[1] ($2,112 + 2,486)/2 = $2,299
[2] ($1,417 + 2,112)/2 = $1,765

The ratio has decreased somewhat from 2018 to 2019. Each $1 of investment in assets in 2018 generated sales of $1.59. In 2019, each $1 invested generated only $1.39 in sales. Over the same period, BDCL's investment in assets has increased noticeably –particularly current assets. Capital assets have also increased significantly during 2018 ($712,000 to $1,128,000) though the carrying amounts at the end of 2019 is somewhat lower ($1,053,000 vs. $1,128,000). The ratios indicate that the additional assets are not producing revenue as effectively as the existing ones. It may be too soon to tell whether the significant increase in capital assets in 2018 (and current assets in 2018 and 2019) will eventually create greater sales, but at this point the trends are troubling.

As usual, comparison with industry averages would be useful. A low ratio in relation to other companies in the same industry may indicate an over-investment in or inefficient use of assets by BDCL. On the other hand, a higher ratio in comparison to other companies would be a positive indicator.

Return on Total Assets Ratio

The **return on total assets ratio** is designed to measure the efficiency with which all of a company's assets are used to produce income from operations. The ratio is calculated by the following formula:

$$\frac{\text{Income from operations}}{\text{Average total assets}}$$

Note that expenses need to finance the company operations are excluded from the calculation, specifically interest and income taxes. This is because all the assets of the company are considered in the ratio's denominator, whether financed by investors or creditors. Average Total Assets are used in the calculation because the amount of assets used likely varies during the year. The use of averages tends to smooth out such fluctuations.

BDCL's returns on total assets for 2018 and 2019 are calculated as follows:

		(000s)	
		2019	*2018*
Income from operations	(a)	$ 300	$ 274
Average total assets	(b)	$2,299[a]	$1,765[b]
Return on total assets	(a/b)	.13:1	.16:1

[a] ($2,112 + 2,486)/2 = $2,299

[b] ($1,417 + 2,112)/2 = $1,765

The ratios indicate that Big Dog's earned $.13 of income from operations for every $1 of average total assets in 2019, a decrease from $.16 per $1 in 2018. This downward trend indicates that assets are being used less efficiently during a period of rapidly expanding sales. However, it may be that the significant investment in assets during this period has not yet begun to pay off. On the other hand, although sales are increasing, it is possible that future sales volume will not be sufficient to justify such a significant increase in assets. More information about the company's plans and projections would be useful.

A number qualitative factors also could be affecting this ratio. For example, there may be an underutilisation of equipment as a result of labour-management issues, or inevitable problems acquiring and integrating new capital assets like warehouses and sales premises. As with any ratio analysis, these possibilities require further investigation.

Note that ROA is the product of the operating profit ratio and the sales to total assets ratios. This can be shown mathematically:

Operating profit ratio x Sales to total assets ratio = Return on assets

$$\frac{\text{Income from operations}}{\cancel{\text{Net sales}}} \times \frac{\cancel{\text{Net sales}}}{\text{Average total assets}} = \frac{\text{Income from operations}}{\text{Average total assets}}$$

The relevant BDCL financial information to demonstrate this is:

$$2019: \quad \frac{\$300}{3{,}200} \quad x \quad \frac{\$3{,}200}{(2{,}486 + 2{,}112)/2} \quad = \quad \frac{\$300}{(2{,}486 + 2{,}112)/2}$$

$$\text{OR} \quad .09 \quad x \quad 1.39 \quad = \quad .13$$

$$2018: \quad \frac{\$274}{2{,}800} \quad x \quad \frac{\$2{,}800}{(2{,}112 + 1{,}417)/2} \quad = \quad \frac{\$274}{(2{,}112 + 1{,}417)/2}$$

$$\text{OR} \quad .09 \quad x \quad 1.59 \quad = \quad .16$$

In other words, BDCL's decrease in return on total assets from 16% in 2018 to 13% in 2019 is due entirely to the growing inefficiency of assets to generate sales, as demonstrated by the sales to total assets ratio. The company's expansion of its asset base has not (yet) produced a commensurate increase in sales. Cost of goods sold and operating expenses have not changed in relative terms as demonstrated by the operating income ratio (9% each year), and thus have had no effect on the decreasing ROA.

Return on Shareholders' Equity Ratio (ROSE)

The **return on shareholders' equity ratio** indicates relative return to shareholders alone, excluding creditor's investment in assets of the company. This is an important measure for investors. The ratio is calculated by the following formula:

$$\frac{\text{Net income}}{\text{Average shareholders' equity}}$$

Net income is used because this is determined after payments to creditors in the form of interest and income taxes. This is consistent with the use of shareholders' equity in the denominator, as this represents only shareholder claims on the net assets of the corporation. Average equity is used because the amount of equity can vary during the year.

The 2018 and 2019 returns on shareholders' equity ratios for BDCL are calculated as follows (the 2017 ratio is excluded because average shareholders' equity cannot be calculated; 2016 ending balances are not provided):

		(000s)	
		2019	*2018*
Net income	(a)	\$ 116	\$ 117
Average shareholders' equity	(b)	\$1,213[a]	\$1,122[b]
Return on shareholders' equity	(a/b)	.10:1	.10:1

[a] (\$1,195 + 1,231)/2 = \$1,213
[b] (\$1,048 + 1,195)/2 = \$1,122

The 2019 ratio is virtually unchanged from 2018. In both years, shareholders on average earned 10 cents for every \$1 invested in BDCL, or 10%. Industry averages could help this analysis. For instance, if the industry as a whole earned only a 5% return on shareholders' equity in 2019, BDCL has performed better than average by this measure in each year.

Leverage Ratios: Analysing Financial Structure

The accounting equation expresses a relationship between assets owned by an entity and the claims against those assets. Although shareholders own a corporation, they alone do not finance the corporation; creditors also finance some of its activities. Together, creditor and shareholder capital are said to form the *financial structure* of a corporation. At December 31, 2019, the balance sheet of BDCL shows the following financial structure:

ASSETS	=	LIABILITIES	+	SHAREHOLDERS' EQUITY
$2,486	=	$1,255	+	$1,231

The proportion of creditor to shareholders' claims is called the **debt to equity ratio**, and is calculated by dividing total liabilities by shareholders' equity. In BDCL's case, these amounts are:

			(000s)	
		2019	*2018*	*2017*
Total liabilities	(a)	$1,255	$917	$369
Shareholders' equity	(b)	1,231	1,195	1,048
Debt to equity ratio	(a/b)	1.02:1	.76:1	.35:1

In other words, BDCL has $1.02 of liabilities for each dollar of shareholders' equity at the end of its current fiscal year, 2019. The proportion of debt financing has been increasing since 2017. In 2017 there was only $.35 of debt for each $1 of shareholders' equity. In 2019, creditors are financing a greater proportion of BDCL than are shareholders. This may be a cause for concern.

On the one hand, management's reliance on creditor financing is good. Issuing additional shares might require existing shareholders to give up some of their control of BDCL, as discussed in a previous chapter. Creditor financing may also be more financially attractive to existing shareholders if it enables BDCL to earn more with the borrowed funds than the interest paid on the debt.

On the other hand, management's increasing reliance on creditor financing may be troublesome. Interest has to be paid on this debt and the debt must be repaid at some point. Before deciding to extend credit, creditors often look at the total debt load of a company, and therefore the company's ability to meet interests and principal payments in the future. Total earnings of BDCL could be reduced if high interest payments have to be made, especially if interest rates rise. Creditors are more interested in a secure investment and they may evaluate shareholder commitment by measuring relative amounts of capital invested. As far as creditors are generally concerned, the more capital that is invested by owners of the company increases the relative risk assumed by shareholders and decreases that of creditors.

Although no specific figures can be stated as the most appropriate debt to equity ratio, there are techniques for estimated the optimum balance. These are beyond the scope of introductory financial accounting. For now, it is sufficient to note that the debt to equity ratio has increased considerably over the three-year period.

Times Interest Earned Ratio

Creditors as well are interested in evaluating financial performance of a company. They need to project whether the corporation will be able to pay interest on borrowed funds and repay the debt when it comes due. Creditors are therefore interested in measures like the **times interest earned ratio**. This ratio indicates the amount by which income from operations could decline before a default on interest may result. The ratio is calculated by the following formula:

$$\frac{\text{Income from operations}}{\text{Interest expense}}$$

Note that income from operations is used, so that income before deduction of creditor payments in the form of income taxes and interest is incorporated into the calculation. BDCL's 2018 and 2019 ratios are calculated as follows:

		(000s)		
		2019	*2018*	*2017*
Income from operations	(a)	$300	$274	$204
Interest expense	(b)	$ 89	$ 61	-0-
Times interest earned ratio	(a/b)	3.4:1	4.5:1	n/a

The larger the ratio, the better creditors are protected. BDCL's interest coverage has decreased from 2018 to 2019 (3.4 times vs. 4.5 times), but income would still need to decrease significantly for the company to be unable to pay its obligations to creditors. The analysis does indicate, though, that interest charges have increased significantly in comparison to income from operations over the past two years. Conversion of some of BDCL's short-term debt to long-term debt may produce more favourable interest rates, less interest expense, and an improved ratio in the future. On the other hand, as previously mentioned, the company's future debt-paying ability may be declining. Creditors need to assess company plans and projections, particularly those affecting income from operations to determine whether their loans to the company are at risk. As discussed above, it may be that significant investments in assets have not yet generated significant, related increases in sales and therefore income from operations.

Means by which investors analyse the financial performance of a company are discussed below.

D. Market Ratios: Analysis of Financial Returns

Investors consider whether to invest or divest in shares of a corporation frequently. There are various ratios that help them make this decision. These are called market ratios, because the stock market plays an important role in allocating financial resources to corporations that offer their shares to the public.

Earnings-per-Share (EPS)

Measures of efficiency can focus on shareholder returns on a per-share basis. That is, the amount of net income earned in a year can be divided by the number of common shares outstanding to establish how much return has been earned for each outstanding share. This **earnings-per-share (EPS)** value is calculated by the following formula:

$$\frac{\text{Net income}}{\text{Number of common share outstanding}}$$

This expression of net income as a per-share amount is widely quoted in financial markets and is usually required disclosure in the financial statements of publicly-traded companies. If there are preferred shareholders, they have first rights to distribution of dividends. As a result, their claims on net income are deducted to calculate the amount available for common shareholders when calculation EPS. The ratio is calculated in the following modified form:

$$\frac{\text{Net income – preferred share dividends}}{\text{Number of common share outstanding}}$$

BDCL has no preferred shares and thus no preferred share dividends. Recall that 100,000 common shares are outstanding at the end of 2017, 2018, and 2019. For BDCL, EPS calculations for the three years are:

		(000s)		
		2019	*2018*	*2017*
Net income	(a)	$116	$117	$112
Number of common shares outstanding	(b)	100	100	100
Earnings per share	(a/b)	$1.16	$1.17	$1.12

Big Dog's EPS has remained relatively constant over the three-year period because both net income and number of outstanding shares have remained fairly stable. Increasing sales levels and the resulting positive effects on net income, combined with unchanged common shares issued, has generally accounted for the slight increase from 2017 to 2018.

Price-earnings (P/E) Ratio

A price at which a common share trades on a stock market is perhaps the most important measure of a company's financial performance. The market price of one share reflects the opinions of often thousands of investors about a company's future value compared to alternative investments. There are several measures used to evaluate financial performance of a company based on its market price per share.

The earnings performance of common shares is often expressed as a **price-earnings (P/E) ratio**. This measure is commonly used as an initial means to evaluate investment opportunities. It is calculated by dividing the market value of a share by its earnings per share calculated above, or:

$$\frac{\text{Market price per share}}{\text{Earnings per share}}$$

This ratio is used as an indicator of the market's expectation of the future performance of a company. Assume company A has a current market value of $15 per share and earned $1 per share. It will have a P/E ratio of 15. If company B has a market value of $4 per share and earned $.50 per share, it will have a P/E ratio of 8. The stock market is indicating that company A is expected to earn relatively more in the future than company B. For every $1 of net income generated by company A, investors are willing to invest $15. In comparison, for every $1 of net income generated by company B, investors are willing to pay only $8. Other factors being equal (for example, relative risk and similar industry), shares of company A are perceived as being more valuable by investors because the company is expected to earn greater returns in the future than company B.

Assume that BDCL's average market price per common share was \$4 in 2017, \$5 in 2018, and \$6 in 2019. Its P/E ratio would be calculated as:

		(000s)		
		2019	*2018*	*2017*
Market price per common share	(a)	\$6.00	\$5.00	\$4.00
Earnings per share ratio (see above)	(b)	\$1.16	\$1.17	\$1.12
Price-earnings ratio	(a/b)	5.17	4.27	3.57

BDCL's P/E ratio has been steadily and significantly increasing each year. Although industry and competitor's P/E ratio comparisons would be especially important to compare, BDCL's increasingly positive ratio also indicates that investors are "bullish" on BDCL. That is, the stock market indicates that it expects BDCL to be increasingly profitable in the coming years. Despite a relatively flat EPS ratio from 2017 to 2019, investors are willing to pay more and more for the company's common shares. This must be because future financial prospects are anticipated to be better than in the past three years.

Dividend Yield

Some investors' primary objective is to maximise dividend revenue from share investments, rather than increasing the market price of the shares they hold. Both a company's earnings available for distribution to shareholders and the actual amount of cash paid out as dividends are more meaningful to this type of investor when these amounts are compared to the market price of the shares.

The **dividend yield ratio** is a means to determine this. It is calculated by dividing annual dividends per share by a share's current market price.

$$\frac{\text{Dividends per share}}{\text{Market price per share}}$$

This ratio indicates how large a return in the form of dividends can be expected from an investment in a company's shares. The relevant information for BDCL over the last three years is shown in the financial statements, as follows:

		(000s)		
		2019	*2018*	*2017*
Dividends declared	(a)	\$80	\$70	\$60
Outstanding common shares	(b)	100	100	100
Dividends per share	(a/b)	\$.80	\$.70	\$.60

The dividend yield ratio is therefore:

		(000s)		
		2019	*2018*	*2017*
Dividends per share (see above)	(a)	\$.80	\$.70	\$.60
Market price per share (given)	(b)	\$6.00	\$5.00	\$4.00
Dividend yield ratio	(a/b)	.13:1	.14:1	.15:1

The company's dividend yield ratio is decreasing steadily. In 2017, investors received \$.15 for every \$1 invested in shares. By 2019, this had decreased to \$.13 for every \$1 invested. Though the decline is slight, the trend may concern investors who seek steady cash returns. Also notice that dividends have increased each year even though net income did not substantially increase, and despite the company's poor liquidity position noted in earlier analysis. Investors might ask why such high levels of dividends are being paid, given this situation.

E. Overall Analysis of Big Dog's Financial Statements

Results of ratio analysis are always more useful if accompanied by other information such as overall industry performance, the general economy, financial ratios of prior years, and qualitative factors such as analysts' opinions and managements' plans.

However, there are some useful points to glean about BDCL from the foregoing ratio analyses. Although BDCL is experiencing growth in sales, net income has not substantially increased over the three-year period. The gross profit ratio is relatively constant. There appear to be issues with the growth of operating expenses like employee benefits. The sales to total assets and return on assets ratios have decreased due to a recent investment in capital assets and growth in current assets. It seems premature to conclude that the capital asset outlays have been well timed, because income from operations has not increased commensurately with the growth in the asset base.

The most immediate problem facing BDCL is the shortage of working capital and its poor liquidity measures. BDCL has expanded its plant and experienced a major increase in relative levels of accounts receivable and inventories and its revenue operating cycle. To address some of these issues, the company should review its credit policies and monitor its investment in inventory to ensure that it expands only commensurately with sales volume.

The plant expansion produced a major increase in current liabilities (mainly borrowings). The company's ability to meet its debt obligations is deteriorating. The ability of income from operations to cover interest expense has declined. The company's working capital position is deteriorating, even though it continues to produce net income each year. BDCL should look at alternatives to short-term borrowings, such as converting some of this to long-term debt and issuing additional share capital to retire some of its short-term debt obligations.

Despite these challenges, the stock market indicates that it expects BDCL to be increasingly profitable in the future. Perhaps it views the negative indicators noted above as only temporary or easily rectified by management.

The next section provides further insights into BDCL's operations through trend analysis of the company's financial statements.

F. Trends

In evaluating the various ratios used in this chapter, attention has frequently focused on trend analysis – the study of ratio results over several years. Another means to evaluate financial performance is to recast financial statements in terms of percentages. Percentages can be used to analyse amounts appearing in financial statements by two means.

Horizontal analysis involves the analysis of financial statements by calculating percentage changes in components over two or more years. **Vertical analysis** requires numbers in a financial statement to be recast as percentages of a base. For income statement analysis, the base used is sales. For balance sheet analysis, total assets, or total liabilities and shareholders' equity are used as the base. (These always equal each other, so either can be used.)

Horizontal and vertical analyses of the balance sheets of Big Dog Carworks Ltd. are as follows:

Horizontal Analysis: Balance Sheets

			Change	
	2019	*2018*	*Amount*	*Per Cent*
Current assets	$1,433 (a)	$ 984 (b)	+$449 (a-b)	+45.6 [(a-b)/b]
Capital assets	1,053	1,128	-75	-6.6
Total	$2,486	$2,112 (c)	+$374	+17.1
Current liabilities	$1,255	$917	+$338	+36.9
Shareholders' equity	1,231	1,195	+36	+3.0
Total	$2,486	$2,112	+$374	+17.1

Vertical Analysis: Balance Sheets

	2019	*2018*
Current assets	57.6	46.6 (b/c)
Capital assets	42.4	53.4
Total	100.0	100.0
Current liabilities	50.5	43.4
Shareholders' equity	49.5	56.6
Total	100.0	100.0

Notice the two columns introduced here. Analysis of the changes indicates a large increase in current assets (45.6%) together with a large increase in current liabilities (36.9%). There was a small decline in capital assets (6.6%) and a small increase in shareholders' equity (3%). The percentage change must always be interpreted together with the absolute dollar amount of change to avoid incorrect conclusions; percentages can sometimes be misleading, and changes inconsequential. .

In the common size balance sheet, it is clear that the composition of the assets has changed with an overall shift to current assets in 2019 (57.6% vs. 46.6%). Also, an increase in the percentage of current liabilities has occurred, resulting in an overall shift from shareholder financing to creditor financing from 2018 to 2019.

The same analysis of BDCL's income statement is as follows:

Horizontal Analysis: Income Statements

			Change	
	2019	*2018*	*Amount*	*Per Cent*
Sales	$3,200 (a)	$2,800 (b)	+$400 (a-b)	+14.3 ([(a-b)/b]
Cost of Goods Sold	2,500	2,150	+350	+16.3
Gross Profit	700	650 (c)	+$ 50	+7.7
Expenses	584	533	+$ 51	+9.6
Net income	$ 116	$ 117	-$ 1	-.9

Vertical Analysis: Income Statements

	2019	*2018*
Sales	100.0	100.0 (b/c)
Cost of Goods Sold	78.1	76.8
Gross Profit	21.9	23.2
Expenses	18.3	19.0
Net income	3.6	4.2

Although sales and gross profit increased in dollar amounts, net income decreased slightly from 2018 to 2019 (.9%). This net decrease resulted because cost of goods sold increased at a faster rate than sales (16.3% vs. 14.3%).

Notice the relative change in the components. For example, cost of goods sold increased in 2019 relative to sales (78.1% vs. 76.8%), while expenses in 2019 relative to sales decreased (18.3% vs. 19%). The overall changes were almost offsetting, as net income remained fairly stable (3.6% vs. 4.2%).

The percentages calculated become more informative when compared to earlier years. Further analysis is usually undertaken in order to establish answers to the following questions:

Horizontal Analysis:	*Vertical Analysis:*
What caused this change? Is the change favourable or unfavourable?	How do the percentages of this company compare with other companies in the same industry? In other industries?

These and similar questions call attention to areas that require further study. One item of note becomes more apparent as a result of the above trend analysis. Initially, it was stated that operating expenses were increasing inordinately between 2017 and 2019. Based on trend analysis, however, these expenses are actually declining as a percentage of sales. As a result, their fluctuations may not be as significant as first inferred. Conversely, the increases each year in cost of goods sold may be worrisome. Initial gross profit ratio calculations seemed to indicate little variation, and thus little effect on income from operations. In fact, the relative increase in cost of goods sold (78.1% vs. 76.8% of sales) may warrant further investigation. Perhaps competition within the industry is more pronounced than initially assumed.

G. Summary of Financial Ratios

The ratios covered in this chapter are summarised below.

Analysis of liquidity:	**Calculation of ratio:**	**Indicates:**
1. Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$	The amount of current assets available to pay current liabilities.
2. Acid-test ratio	$\frac{\text{Quick current assets}}{\text{Current liabilities}}$	Whether the company is able to meet the immediate demands of creditors. (This is a more severe measure of liquidity.)
3. Accounts receivable collection period	$\frac{\text{Average accounts receivable}}{\text{Net credit sales}}$ x 365	The average time needed to collect receivables.
4. Number of days of sales in inventory	$\frac{\text{Average inventory x 365}}{\text{Cost of goods sold}}$	How many days of sales can be made with existing inventory.
5. Revenue operating cycle	Average number of days to collect receivables + average number of days of sales inventory	Length of time between the purchase of inventory and the subsequent collection of cash.

Analysis of profitability:	**Calculation of ratio:**	**Indicates:**
1. Gross profit ratio	$\frac{\text{Gross profit}}{\text{Net sales}}$	The percentage of sales revenue that is left to pay operating expenses, interest, and income taxes after deducting cost of goods sold.
2. Operating profit ratio	$\frac{\text{Income from operations}}{\text{Net sales}}$	The percentage of sales revenue that is left to pay interest and income taxes expenses after deducting cost of goods sold and operating expenses.
3. Net profit ratio	$\frac{\text{Net income}}{\text{Net sales}}$	The percentage of sales left after payment of all expenses.
4. Sales to total assets ratio	$\frac{\text{Net sales}}{\text{Average total assets}}$	The adequacy of sales in relation to the investment in assets.
5. Return on total assets	$\frac{\text{Income from operations}}{\text{Average total assets}}$	How efficiently a company uses its assets as resources to earn net income.
6. Return on shareholders' equity	$\frac{\text{Net income}}{\text{Average shareholders' equity}}$	The adequacy of net income as a return on shareholders' equity.

Analysis of financial structure:	**Calculation of ratio:**	**Indicates:**
1. Debt to equity ratio	$\frac{\text{Total liabilities}}{\text{Shareholders' equity}}$	The proportion of creditor financing to shareholder financing.
2. Times interest earned ratio	$\frac{\text{Income from operations}}{\text{Interest expense}}$	The ability of a company to pay interest to long-term creditors.

Analysis of financial returns:	**Calculation of ratio:**	**Indicates:**
1. Earnings per share	$\frac{\text{Net income – preferred share dividends}}{\text{Average number of common shares outstanding}}$	The amount of net income that has been earned on each common share after deducting dividends to preferred shareholders.

2. Price-earnings ratio	$\frac{\text{Market price per share}}{\text{Earnings per share}}$	Market expectations of future profitability.
3. Dividend yield ratio	$\frac{\text{Dividends per share}}{\text{Market price per share}}$	The short-term cash return that can be expected from an investment in a company’s shares.

Schematically, the various analytic tools can be illustrated as follows:

Liquidity		Profitability		Financial Structure	Market Measures	Trend Analysis
Short-term cash needs	*Current asset performance*	*Returns on sales*	*Returns on balance sheet items*			
Current ratio	A/R collection period	Gross profit ratio	Sales to total assets ratio	Debt to equity ratio	Earnings per share	Horizontal
Acid-test ratio	Number of days of sales in inventory	Operating income ratio	Return on total assets	Times interest earned ratio	Price-earnings ratio	Vertical
	Revenue operating cycle	Net profit ratio	Return on shareholders’ equity		Dividend yield ratio	

Appendix: The Scott Formula

The **Scott formula** was developed by W.R. Scott, a Canadian accounting academic. The formula links return on total assets (ROA) to return on shareholders’ equity (ROSE), and also integrates a number of related financial ratios to provide a more informed analysis of ROSE. The formula breaks down return on shareholders’ equity into two major components –*return on operating capital*, similar to return on total assets, and *return on leveraging* – that is, the return to a corporation through its ability to borrow money at a given interest rate, purchase assets with the loan proceeds, and earn a return on these assets that is greater than the interest rate paid on the loan. This excess return accrues to shareholders since creditors already have been paid for the use of borrowed funds via interest payments.

An Example of Leverage

To illustrate the concept of leverage, consider the following example:

	Company A	*Company B*
Total assets	$400,000	$400,000
Bonds (12%)	-0-	200,000
Shareholders’ equity	400,000	200,000

Although both A and B have the same amount of assets – $400,000. However, company A has no long-term liabilities. Company B has $200,000 of 12-per cent bonds. If both companies earn income from operations of $100,000, do they have a similar return on total assets and shareholders' equity? First, net income needs to be determined, as follows:

	Company A	*Company B*
Income from operations	$100,000	$100,000
Less: Interest ($200,000 x 12%)	-0-	(24,000)
Income before income taxes	100,000	76,000
Less: Income taxes (50%)	(50,000)	(38,000)
Net income	$ 50,000	$ 38,000

Figure 12–3 Partial income statement of companies A and B

The use of long-term financing results in a lower net income figure for company B because of interest expense ($24,000). This is mitigated somewhat by the lower income taxes expense that results for company B ($38,000 vs. $50,000). The difference occurs because the interest expense incurred by B is a deductible expense for income tax purposes. As a result, B's net interest expense is only $12,000, and its *after-tax* cost of borrowing is 6% (12% x 50%). When an interest expense is recorded separately and an income taxes expense is allocated between income from operations and interest expense, this becomes more apparent:

	Company A	*Company B*
Income from operations	$100,000	$100,000
Less: Income taxes (50%)	(50,000)	(50,000)
Income from operations, after-tax	50,000	50,000
Financing costs	-0-	(24,000)
Interest expense ($200,000 x 12%)		
Less: Income tax savings (50%)	-0-	12,000
Net interest expense	-0-	12,000
Net income	$ 50,000	$ 38,000

Figure 12–4 Partial income statement of companies A and B showing allocation of income taxes expense

Now consider the implications of this higher debt load on the calculation of after-tax return on total assets and return on shareholders' equity:

		Company A	*Company B*
Income from operations, after-tax	(a)	$50,000	$50,000
Net income for the year	(b)	50,000	38,000
Total assets	(c)	400,000	400,000
Shareholders' equity	(d)	400,000	200,000
Return on total assets	(a/c)	12.5%	12.5%
Return on shareholders' equity	(b/d)	12.5%	19%

Figure 12–5 Effects of leverage on return on shareholders' equity

The return on total assets is 12.5% for both companies; however the return on shareholders' equity is considerably greater for company B (19% vs. 12.5% = 6.5%). This is because company B borrowed funds at an after-tax cost of 6% to earn a 12.5% return on the assets it purchased. This 6.5 cent gain for every $1 borrowed (12.5% –

6%) accrues to shareholders of company B and therefore increases or *leverages* return on shareholders' equity.

However, there is risk involved in leveraging. While return on shareholders' equity is increased when the return on related assets exceeds the cost of borrowing the funds, the opposite occurs. In this case, return on shareholders' equity is decreased. As a result, and in general, companies with stable earnings can carry more debt in their financial structures than companies with fluctuating earnings because there is less risk that the cost of borrowing will exceed the return on assets that the borrowed funds generate.

The Specifics of the Scott Formula

To add analytic power to the Scott formula analysis, the traditional balance sheet format is rearranged somewhat:

1. Liabilities like accounts payable and income taxes payable that arise from normal operating activities are deducted from related assets like accounts receivable and inventory. This is called "**working capital from operations**" .
2. Cash and marketable securities normally reported as current assets are deducted from borrowings to give a more representative picture of amounts actually owing to creditors (since these could be used to pay off debt if desired). The new amount is called "**net financial debt**".
3. With these changes, total assets are now called "**operating capital**" . The total of net financial debt and shareholders' equity is now called "**financial capital**" . Operating capital always equals financial capital, just as total assets always equals total liabilities plus shareholders' equity on a standard balance sheet.

Recall the Big Dog Carworks Ltd. balance sheet presented in Figure 12-1 above. For Scott formula analysis, this would be re-cast as follows:

Big Dog Carworks Ltd.
Balance Sheet
At December 31
($000s)

Operating liabilities are deducted from operating assets to arrive at working capital from operations.

Cash and marketable securities are deducted from borrowings to arrive at net financial debt.

Operating capital equals financial capital.

Operating Capital	*2019*	*2018*	*2017*
Working Capital from Operations			
Accounts Receivable	544	420	257
Inventories	833	503	361
Less: Accounts Payable	(382)	(295)	(219)
Income Taxes Payable	(48)	(52)	(50)
	947	576	349
Property, Plant, and Equipment, at carrying amount	1,053	1,128	712
Operating Capital	$2,000	$1,704	$1,061
Net Financial Debt			
Borrowings	$ 825	$ 570	$ 100
Less: Cash	(20)	(30)	(50)
Marketable Securities	(36)	(31)	(37)
	769	509	13
Shareholders' Equity			
Share Capital	1,063	1,063	963
Retained Earnings	168	132	85
	1,231	1,195	1,048
Financial Capital	$2,000	$1,704	$1,061

Figure 12–6 BDCL balance sheet restated in terms of operating and financial capital.

Some changes are also made to the presentation of income taxes expense on the BDCL income statement, using the same concept as illustrated in Figure 12-4 above.

1. First, the average income tax rate needs to be calculated. This is 45% for all three years, derived from Figure 12-1 as follows:

		2019	*2018*	*2017*
Income Before Income Taxes	(a)	211	213	204
Less: Income Taxes	(b)	95	96	92
Net Income		$ 116	$ 117	$ 112
Income tax rate	(b/a)	45%	45%	45%

2. Based on this rate, income taxes expense is allocated between income from operations and interest expense, as shown below:

Big Dog Carworks Ltd.
Income Statement
For the Year Ended December 31
($000s)

	2019	*2018*	*2017*
Sales (net)	$3,200	$2,800	$2,340
Cost of Goods Sold	2,500	2,150	1,800
Gross Profit	700	650	540
Operating Expenses			
Selling, General, and Administration	212	183	154
Employee Benefits	113	100	119
Depreciation	75	84	63
	400	376	336
Income from Operations	300	274	204
Less: Income Taxes (45%)	(135)	(123)	(92)
Income from Operations, after-tax	165	151	112
Financing Costs			
Interest	89	61	-0-
Less: Income Taxes Saved (45%)	(40)	(27)	-0-
Net interest expense	49	34	-0-
Net Income	$ 116	$ 117	$ 112

Income taxes effects are allocated.

Net income remains unchanged.

Figure 12–7 BDCL income statement restated to allocate income taxes expense (savings).

Allocating income taxes expense in this manner lowers income from operations as previously stated (for example in 2019 from $300 to $165), and decreases interest expense by 45% (for example in 2019: from $89 to $49).

The Scott formula can now be used to calculate how much of BDCL's return on shareholders' equity is derived from operations (return on assets) and how much is derived from leverage. It is calculated as:

RETURN ON CAPITAL + RETURN ON LEVERAGING = RETURN ON SHAREHOLDERS' EQUITY

Return on capital and return on leveraging will be examined more closely below.

Return on Operating Capital

Under the Scott Formula, return on operating capital is calculated as:

$$\frac{\text{Income from operations (after-tax)}}{\text{Operating capital}}$$

Based on the altered balance sheet and income statement of BDCL as shown in Figures 12-6 and 12-7 above, the calculations of return on operating capital (ROC) for the three years are:

		2019	*2018*	*2017*
Income from operations (after-tax)	(a)	$ 165	$ 151	$ 112
Operating capital	(b)	$2,000	$1,704	$1,061
Return on operating capital	(a/b)	8.3%	8.9%	10.6%

Return on operating capital is significantly lower than the somewhat equivalent return on assets originally calculated earlier in this chapter (for example in 2019: 8.3% vs. 13%). This is primarily because income tax effects on income from operations are now considered, but also because the denominator is somewhat lower. Accounts payable and income taxes payable are now deducted from current assets to arrive at operating capital; cash and marketable securities are omitted.

Return on operating capital is analysed further within the Scott formula. Two related ratios are calculated: the **after-tax operating profit ratio**, and the **sales to operating capital ratio**. These are somewhat similar to two ratios studied earlier in the chapter – the operating profit ratio and sales to total assets ratio, respectively. However, they are altered to incorporate changes to the balance sheet and income statement noted above. One other change is also made to simplify calculations: *ending balance sheet amounts rather than average are used*.

The after-tax operating profit ratio for BDCL can be calculated as:

$$(1) \quad \frac{\text{Income from operations (after-tax)}}{\text{Net sales}}$$

The sales to operating capital ratio is calculated as:

$$(2) \quad \frac{\text{Net sales}}{\text{Operating capital}}$$

Notice that the product of these two ratios equals the return on operating capital ratio:

$$\begin{array}{ccccc} (1) & \text{x} & (2) & = & (3) \\ \textit{After-tax Operating} & & \textit{Sales to Operating} & & \textit{Return on Operating} \\ \textit{Profit Ratio} & & \textit{Capital Ratio} & & \textit{Capital} \end{array}$$

$$\frac{\text{Income from operations (after-tax)}}{\cancel{\text{Net sales}}} \ \text{x} \ \frac{\cancel{\text{Net sales}}}{\text{Operating capital}} = \frac{\text{Income from operations (after-tax)}}{\text{Operating capital}}$$

This relationship is used to provide further insights into the return on operating capital ratio. Using BDCL's financial statement from Figures 12-6 and 12-7, the ratios are calculated as:

$$\begin{array}{lccccc} & (1) & & (2) & & (3) \\ \textit{2019} & \frac{\$\ 165}{3,200} & \text{x} & \frac{\$3,200}{2,000} & = & \frac{\$\ 165}{2,000} \\ \text{OR} & 5.1\% & \text{x} & 1.6 & = & 8.3\% \\ \textit{2018} & \frac{\$\ 151}{2,800} & \text{x} & \frac{\$2,800}{1,704} & = & \frac{\$\ 151}{1,704} \\ \text{OR} & 5.4\% & \text{x} & 1.6 & = & 8.9\% \\ \textit{2017} & \frac{\$\ 112}{2,340} & \text{x} & \frac{\$2,340}{1,061} & = & \frac{\$\ 112}{1,061} \\ \text{OR} & 4.8\% & \text{x} & 2.2 & = & 10.6\% \end{array}$$

The return on operating capital (column 3) has declined from 10.6% in 2017 to 8.3% in 2019. The after-tax operating profit ratio (column 1) has fluctuated somewhat over the same period. No trend is apparent. Therefore, the largest effect on ROC has been the decline in the sales to operating capital ratio (column 2) from 2.2 times in 2017 to 1.6 times in 2018 and 2019. This indicates that the increase in operating capital (chiefly assets like accounts receivable, inventory, and PPE) has not been matched with a proportionate increase in sales. This is similar to the conclusion reached earlier in the chapter. However, using the Scott formula, its direct effect on ROC (and ROSE, as will be shown later) can now be observed.

Return on Leveraging

As noted above, the other useful feature of the Scott formula is its analysis of return on leverage, and the resultant effects on return on shareholders' equity. Recall that leverage is the return generated by assets in excess of the cost of borrowing money to finance these assets (after-tax interest expense). An example of leveraging was illustrated in Figure 12-5. A further refinement of leverage is the effect of financial structure. This is indicated by the debt to equity ratio. In Figure 12-5, the debt to equity ratio is 1:1 for company B ($200,000/200,000). (We can ignore analysis of leverage for company A, as it has no liabilities.) Now assume the same information for company B, and additional information for company C, as follows:

	Company B	*Company C*
Total assets (same as operating capital)	$400,000	$400,000
Bonds (12%) (same as net financial debt)	200,000	300,000
Shareholders' equity	200,000	100,000

The only difference in financial structure is that company C has $300,000 of bonds and only $100,000 of shareholders' equity. Its debt to equity ratio is 3:1 ($300,000/100,000) compared to company B's debt to equity ratio of 1:1 ($200,000/200,000). Assume the same income from operations and income tax rate as our prior example in Figure 12-5. The partial income statements of each company would show:

	Company B	*Company C*
Income from operations	$100,000	$100,000
Less: Income taxes (50%)	(50,000)	(50,000)
Income from operations, after-tax	50,000	50,000
Financing costs	(24,000)	-0-
Interest expense (B) ($200,000 x 12%)		
Interest expense (C) ($300,000 x 12%)		(36,000)
Less: Income tax savings (50%)	12,000	18,000
Net interest expense	12,000	18,000
Net income	$ 38,000	$ 32,000

Return on capital and return on shareholders’ equity would be calculated for each company as follows using the Scott formula:

		Company B	*Company C*
Income from operations, after-tax	(a)	$50,000	$50,000
Net income for the year	(b)	38,000	32,000
Total operating capital	(c)	400,000	400,000
Shareholders’ equity	(d)	200,000	100,000
Return on operating capital	(a/c)	12.5%	12.5%
Return on shareholders’ equity	(b/d)	19%	32%

Figure 12–8 Effects of leverage and financial structure: return on shareholders’ equity

In each case, the companies have realized leverage on borrowed money. Bonds were issued at an after-tax interest rate of 6% and earned returns on operating capital of 12.5% for both companies, a difference of 6.5%. Why is company C’s return on shareholders’ equity 32%, and company B’s only 19%? The answer lies in the relative financial structure of the companies. In company B’s case, the debt to equity ratio is 1:1. Therefore each 6.5 cents earned on one dollar of financed assets (12.5 – 6%) is transferred to shareholders in proportion to the debt to equity ratio (1:1). In other words, company B’s return on shareholders’ equity is composed of a 12.5% return on assets plus a 6.5% return on leveraging, for a total return on shareholder’s equity of 19%.

However, in company C’s case each 6.5 cents earned on one dollar of financed assets is increased because there are three dollars of debt for each dollar of equity. Therefore, the return on borrowed money *to shareholders* is magnified by this amount, or 6.5% x 3 = 19.5%. Company C’s return on shareholders’ equity is composed of a 12.5% return on assets plus a 19.5% return on leveraging, for a total return on shareholder’s equity of 32%.

Return on leveraging (ROL) is therefore determined as follows using the Scott formula:

$$[\text{ROC} – \text{Interest rate (after-tax)*}] \times \frac{\text{Net financial debt}}{\text{Shareholders' equity}}$$

$$\text{*calculated as: } \frac{\text{Interest expense (after-tax)}}{\text{Net financial debt}}$$

For company C, return on leveraging for 2019 is calculated as:

$$\left[\frac{\$500,000}{400,000} - \frac{18,000}{300,000}\right] \times \frac{\$300,000}{100,000}$$

$$= (12.5\% - 6\%) \times 3$$

$$= 19.5\%$$

Combining Return on Operating Capital and Return on Leveraging

Recall that under the Scott formula, return on shareholders’ equity is the sum of return on operating capital and return on leverage; in other words, ROC + ROL = ROSE. Combining the constituent ratios for ROC and ROL, the Scott formula suggests that return on shareholders’ equity will equal:

$$\begin{array}{ccccccccc}
\multicolumn{3}{c}{\textit{Return on Operating Capital}} & + & \multicolumn{3}{c}{\textit{Return on Leveraging}} & = & \textit{Return on Shareholders' Equity} \\
(1) & & (2) & + & (3) & & (4) & & (5) \\
\left[\dfrac{\text{Income from operations (after tax)}}{\text{Net sales}}\right. & \times & \left.\dfrac{\text{Net sales}}{\text{Operating capital}}\right] & + & \left[(\text{ROC} - \text{Interest rate})\right. & \times & \left.\dfrac{\text{Net financial debt}}{\text{Shareholders' equity}}\right] & = & \dfrac{\text{Net income}}{\text{Shareholders' equity}}
\end{array}$$

This can be illustrated in the case of BDCL. The Scott formula ratios for the 2017, 2018 and 2019 years are calculated as follows:

$$\begin{array}{ccccccccc}
\multicolumn{3}{c}{\textit{Return on Operating Capital}} & + & \multicolumn{3}{c}{\textit{Return on Leveraging}} & = & \textit{Return on Shareholders' Equity} \\
(1) & & (2) & & (3) & & (4) & = & (5)
\end{array}$$

$$2019\ \left[\frac{\$165}{3{,}200} \times \frac{\$3{,}200}{2{,}000}\right] + \left[\left\{\frac{\$165}{2{,}000} - \frac{\$49}{769}\right\} \times \frac{\$769}{1{,}231}\right] = \frac{\$116}{1{,}231}$$

$$= \left[\ 5.1\% \times 1.6\ \right] + \left[\ 1.9\% \times .62\ \right] = 9.4\%$$

$$= \mathbf{8.3\%} + \mathbf{1.1\%} = \mathbf{9.4\%}$$

$$2018\ \left[\frac{\$151}{2{,}800} \times \frac{\$2{,}800}{1{,}704}\right] + \left[\left\{\frac{\$151}{1{,}704} - \frac{\$34}{509}\right\} \times \frac{\$509}{1{,}195}\right] = \frac{\$117}{1{,}195}$$

$$= \left[\ 5.4\% \times 1.6\ \right] + \left[\ 2.2\% \times .43\ \right] = 9.8\%$$

$$= \mathbf{8.9\%} + \mathbf{.9\%} = \mathbf{9.8\%}$$

$$2017\ \left[\frac{\$112}{2{,}340} \times \frac{\$2{,}340}{1{,}061}\right] + \left[\left\{\frac{\$112}{1{,}061} - \frac{\$0}{13}\right\} \times \frac{\$13}{1{,}048}\right] = \frac{\$112}{1{,}048}$$

$$= \left[\ 4.8\% \times 2.2\ \right] + \left[\ 10.6\% \times .01\ \right] = 10.7\%$$

$$= \mathbf{10.6\%} + \mathbf{.1\%} = \mathbf{10.7\%}$$

Analysing BDCL's Performance using The Scott Formula

Maintaining an acceptable return on shareholders' equity is an important objective for investors, and senior managers are hired to maximize these returns. The Scott formula highlights a number of interconnected ratios and demonstrates how these influence return on shareholders' equity. Because of this, it can provide a valuable analytic tool for investors and managers.

In BDCL's case, the formula results indicate that return on shareholders' equity has declined from 10.7% to 9.4% over the three years (column 5), in spite of increasing returns from leveraging of .1% in 2017 to 1.9% in 2019 (columns 3 and 4).

Return on operating capital has declined more precipitously than ROSE, from 10.6% in 2017 to 8.3% in 2019 (columns 1 and 2). With respect to return on operating capital, and as noted earlier, the after-tax operating profit ratio displays no trend (column 1). However, the sales to operating capital ratio has declined from 2.2 times in 2017 to 1.6 times in 2018 and 2019, indicating that the additions to operating assets as yet have not been matched with a proportionate increase in sales. With respect to return on leverage, the relatively small difference between return on capital and the after-tax cost of borrowing funds in 2018 and 2019 (column 3) suggests that return from leveraging will most likely be improved by increasing the difference between return on capital and the after-tax cost of borrowing funds. This further emphasises the importance of increasing the sales to operating capital ratio, as it most significantly affects the return on operating capital ratio. The relatively low debt to equity ratio (column 4), suggests that BDCL should consider borrowing more funds when required, rather than issuing additional shares and increasing the amount of shareholders' equity. This can magnify return on leveraging. However, the difference between return on operating capital and the cost of borrowed funds should be improved before more borrowing takes place, to minimize risk to shareholders and maximize effects on return on shareholders' equity.

ASSIGNMENT MATERIALS

Discussion Questions

1. Ratios need to be evaluated against some base. What types of information can be used?
2. Explain what *liquidity* means. When a corporation is illiquid, what are the implications for shareholders? for creditors?
3. How is it possible that a corporation producing net income each year can be illiquid?
4. What ratios can be calculated to evaluate liquidity? Explain what each one indicates.
5. a. Define working capital. Distinguish between the current ratio and the acid-test ratio.
   b. "The current ratio is, by itself, inadequate to measure liquidity." Discuss this statement.
6. Two firms have the same amount of working capital. Explain how it is possible that one is able to pay off short-term creditors, while the other firm cannot.
7. Management decisions relating to accounts receivable and inventory can affect liquidity. Explain.
8. What is one means to evaluate the management of accounts receivable? inventory?
9. Discuss the advantages and disadvantages of decreasing number of days of sales in inventory.
10. What is the revenue operating cycle? How is its calculation useful in evaluating liquidity?
11. Identify and explain six ratios (and any associated calculations) that evaluate a corporation's profitability. What does each ratio indicate?
12. Why are analysts and investors concerned with the financial structure of a corporation?
13. Is the reliance on creditor financing good or bad? Explain its impact on net income.
14. Discuss the advantages and disadvantages of short-term debt financing compared to long-term debt financing.
15. Identify and explain ratios that evaluate financial returns for investors.
16. Distinguish between horizontal and vertical analyses of financial statements.
17. (Appendix) Describe the components of the Scott formula.

Discussion Cases

DC 12-1: Stockwell Inc.

The following are condensed comparative financial statements of Stockwell Inc. for the three years ended December 31, 2015.

Balance Sheet
At December 31

Assets

	2015	*2014*	*2013*
Current			
Cash	$21	$8	$17
Accounts Receivable	38	30	20
Merchandise Inventory	60	40	30
Prepaid Expenses	1	2	3
Total Current Assets	120	80	70
Capital Assets, at carrying amount	260	150	76
Total Assets	$380	$230	$146
Liabilities			
Current			
Accounts Payable	$100	$80	$50
Non-current			
Bonds Payable, 4%	50	50	-0-
	150	130	50
Shareholders' Equity			
Common Shares	200	80	80
Retained Earnings	30	20	16
	230	100	96
Total Liabilities and Shareholders' Equity	$380	$230	$146

Income Statement
For the Years Ended December 31

	2015	*2014*	*2013*
Sales	$210	$120	$100
Cost of Goods Sold	158	80	55
Gross Profit	52	40	45
Operating Expenses	35	32	33
Income from Operations	17	8	12
Interest Expense	2	2	-0-
Income before Income Taxes	15	6	12
Income Taxes	5	2	4
Net Income	$ 10	$ 4	$ 8

Additional information:

a. The company's accounts receivable at December 31, 2012 totalled $20.
b. The company's merchandise inventory at December 31, 2012 totalled $20.
c. The company's capital assets at December 31, 2012 totalled $70.
d. Credit terms are net 60 days from date of invoice.
e. Number of common shares outstanding: 2013—80, 2014—80, 2015—400.

For Discussion

1. Calculate liquidity ratios and discuss.
2. What is your evaluation of
   a. The financial structure of the corporation?
   b. The proportion of shareholder and creditor claims to its assets?
   c. The structure of its short-term and long-term credit financing?
3. What are some other observations you can make about the financial performance of Stockwell?
4. (Appendix) Restate the financial statements to facilitate Scott formula analysis. Then calculate this formula for 2014 and 2015, and analyse your results. Does this analysis change any or your observations in part 3?

DC 12-2: Hi Inc. and Low Corp.

The following are comparative financial statements of Hi Inc. and Low Corp. for the last four years:

Balance Sheets
At December 31
(000s)

	Hi Inc.				*Low Corp.*			
Assets	*2015*	*2014*	*2013*	*2012*	*2015*	*2014*	*2013*	*2012*
Current Assets	$185	$165	$155	$140	$ 480	$ 450	$410	$381
Capital Assets, at carrying amount	535	397	392	378	599	603	572	601
	$720	$562	$547	$518	$1,079	$1,053	$982	$982
Liabilities								
Current Liabilities	$160	$135	$130	$110	$ 272	$ 251	$170	$180
Bonds Payable								
12% Due in 10 Years	120	-0-	-0-	-0-				
15% Due in 7 Years					400	400	400	400
Total Liabilities	280	135	130	110	672	651	570	580
Shareholders' Equity								
Share Capital								
Preferred (Issued: 200,000 shares)	200	200	200	200	200	200	200	200
Common (Issued: Hi 100,000 shares; Low 50,000 shares)	100	100	100	100	50	50	50	50
Retained Earnings	140	127	117	108	157	152	162	152
Total Equity	440	427	417	408	407	402	412	402
	$720	$562	$547	$518	$1,079	$1,053	$982	$982

Income Statements
For the Year Ended December 31
(000s)

	Hi Inc.				*Low Corp.*			
	2015	*2014*	*2013*	*2012*	*2015*	*2014*	*2013*	*2012*
Sales	$600	$540	$528	$516	$330	$330	$320	$270
Cost of Goods Sold	460	430	420	410	105	75	100	90
Gross Profit	140	110	108	106	225	145	220	180
Operating Expenses	56	50	50	50	85	105	100	96
Income From Operations	84	60	58	56	140	40	120	84
Interest Expense	14	-0-	-0-	-0-	60	60	60	60
Income (Loss) Before Income Taxes	70	60	58	56	80	(20)	60	24
Income Taxes (Recovered)	35	30	29	28	40	(10)	30	12
Net Income (Loss)	$ 35	$ 30	$ 29	$ 28	$ 40	$(10)	$ 30	$ 12
Dividends declared								
Preferred	$10	$10	$10	$10	$20	$-0-	$10	$10
Common	$12	$10	$10	$10	$15	$-0-	$10	$10
Market price per common share	$1.25	$1.00	$0.95	$0.90	$0.80	$0.20	$1.20	$0.10

For Discussion

1. a. Calculate the following ratios for each corporation for 2013, 2014, and 2015.
    - Current
    - Sales to total assets
    - Return on total assets
    - Return on shareholders' equity
    - Gross profit
    - Net profit
    - Debt to equity
    - Earnings per share
    - Price-earnings

   b. Evaluate each company's trends for sales, gross profit, and net income as disclosed on the income statements.
2. What is your evaluation of
    - a. The liquidity of each corporation?
    - b. Profitability?
    - c. The financial structure of each corporation?
    - d. The stock market's perceptions of these companies?
3. Which corporation do you think would be a better investment if you were planning to purchase common shares?
4. (Appendix) Restate the financial statements to facilitate Scott formula analysis. Then calculate this formula for each company for 2013, 2014, and 2015, and analyse your results. Assume there is no cash or marketable securities, and that current liabilities all relate to operations. Does this analysis change any or your observations in part 3?

Comprehension Problems

CP 12-1

The following information is taken from the partial balance sheet of Quail Productions Corp.

	2012	*2011*
Current assets		
Cash	$ 10	$ 15
Temporary investments	35	35
Accounts receivable	200	150
Inventory	600	400
Current liabilities		
Accounts payable	500	400
Borrowings	245	180

View Solution

Required:

1. Describe the purpose of and calculate the current ratio for each year.
2. Describe the purpose of and calculate the acid-test ratio for both years.
3. What observations can you make from a comparison of the two types of ratios?
4. (Appendix) Restate the balance sheet to facilitate Scott formula analysis.

CP 12-2

The following information is taken from the records of Black Spruce Co. Ltd.:

	2013	*2012*	*2011*
Sales	$252	$141	$120
Gross profit	63	48	54
Net income	12	5	15

View Solution

Required: Analyse the gross profit and net profit ratios using the above data. Comment on trends you observe.

CP 12-3

The following information relates to three companies in the same industry:

Company	*Latest market price*	*Earnings per share*	*Dividends per share*
A	$35	$11	$-0-
B	40	5	4
C	90	10	6

View Solution

Required: Explain and calculate the price-earnings and dividend yield ratios. On the basis of only the foregoing information, which company represents the most attractive investment opportunity to you? Explain.

CP 12-4

The following data are taken from the records of Cronkite Corp.:

	2012	*2011*
Sales	$2,520	$1,440
Cost of Goods Sold	1,890	960
Gross Profit	630	480
Other Expenses	510	430
Net Income	$ 120	$ 50

View Solution

Required: Perform horizontal analysis on the above date and interpret your results.

CP 12-5

In the left-hand column, a series of independent transactions is listed; in the right-hand column, a series of ratios is listed.

		Effect on Ratio		
Transaction	*Ratio*	*Increase*	*Decrease*	*No Change*
Declared a cash dividend	Current ratio			
Wrote-off an uncollectible account receivable	Accounts receivable collection period			
Purchased inventory on account	Acid-test ratio			
Issued 10-year bonds to acquire capital assets	Return on total assets			
Issued additional shares for cash	Debt to equity ratio			
Declared a share dividend on common shares	Earnings per share			
Restricted part of retained earnings	Return on shareholders' equity			
Purchased supplies on account	Current ratio			
Paid a short-term creditor in full	Acid-test ratio			
Paid an account payable, taking the cash discount	Number of days of sales in inventory			

View Solution

Required: For each transaction indicate whether the ratio will increase, decrease, or remain unchanged. Assume all ratios are greater than 1:1 before each transaction where applicable.

CP 12-6

Consider the following financial statement data:

Balance Sheet

Cash	$20	Accounts Payable	$20
Accounts Receivable	20	Non-current Borrowings	60
Merchandise Inventory	40	Common Shares (8 shares issued)	80
Plant, at carrying amount	140	Retained Earnings	60
	$220		$220

Income Statement

Sales	$100
Cost of Goods Sold	50
Gross Profit	50
Operating Expenses	14
Income from Operations	36
Less: Interest	6
Income before Income Taxes	30
Less: Income Taxes	10
Net Income	$20

Assume that the average of all balance sheet items is equal to the year-end figure and that all sales are on credit.

View Solution

Required:

1. Calculate the following ratios:
   a. Return on total assets (assume interest has been paid)
   b. Return on shareholders' equity
   c. Times interest earned ratio
   d. Earnings per share
   e. Number of days of sales in inventory
   f. Accounts receivable collection period
   g. Sales to total assets ratio
   h. Current ratio
   i. Acid-test ratio
   j. Debt to equity ratio.
2. Which of these ratios are measures of liquidity?
3. (Appendix) Restate the financial statements to facilitate Scott formula analysis.
4. (Appendix) Calculate the Scott formula.

CP 12-7

Consider the following information:

Salinas Limited
Balance Sheet
At December 31, 2012

Assets		*Liabilities and Shareholders' Equity*	
Cash	$72	Accounts Payable	$60
Accounts Receivable	88	Bank Loan, non-current	150
Merchandise Inventory	100		
Prepaid Expenses	40	Preferred Shares (10%)	60
Property, Plant, and Equipment, at carrying amount	320	Common Shares	250
		Retained Earnings	100
Total Assets	$620	Total Liabilities and Shareholders' Equity	$620

Salinas Limited
Income Statement
For the Year Ended December 31, 2012

Sales		$240
Cost of Goods Sold		144
Gross Profit		96
Operating Expenses		
Salaries	$44	
Depreciation	6	50
Income from Operations		46
Less: Interest		8
Income before Income Taxes		38
Less: Income Taxes		18
Net Income		$20

Assume that 80% of sales are on credit, that the average of all balance sheet items is equal to the year-end figure, that all preferred share dividends have been paid, and that the number of common shares outstanding is 10.

View Solution

Required: Calculate the following ratios and percentages

1. Current ratio
2. Return on total assets
3. Sales to total assets
4. Acid-test ratio
5. Times interest earned
6. Earnings per common share
7. Accounts receivable collection period
8. Return on shareholders' equity
9. (Appendix) Scott formula.

CP 12-8

Assume a company has the following financial information:

Cash and marketable securities	$ 6
Prepaid expenses	-0-
Capital assets	90
Total liabilities	40
Shareholders' equity	140
Sales	420
Credit sales	300
Current ratio	2.5:1
Acid-test ratio	1:1
Gross profit ratio	30%

View Solution

Required: Assume current assets consist of cash, marketable securities, accounts receivable, inventory, and prepaid expenses, and that ending balances are the same as average balances for the year. Calculate

1. Current liabilities
2. Inventory
3. Accounts receivable collection period
4. Number of days of sales in inventory.
5. (Appendix) Net financial debt. Assume current liabilities consist of a bank loan.

CP 12-9

View Solution

Required: Match the following ratios with the appropriate formula.

Ratio or Rate		*Formula*
______ Acid-test	a.	$\frac{\text{Income from operations}}{\text{Interest expense}}$
______ Current	b.	$\frac{\text{Total liabilities}}{\text{Shareholders' equity}}$
______ Return on shareholders' equity	c.	$\frac{\text{Net income– preferred share dividends}}{\text{Number of common shares outstanding}}$
______ Times interest earned	d.	$\frac{\text{Net sales}}{\text{Average total assets}}$
______ Earnings per share	e.	$\frac{\text{Market price per share}}{\text{Earnings per share}}$
______ Accounts receivable collection period	f.	$\frac{\text{Current assets}}{\text{Current liabilities}}$
______ Sales to total assets	g.	$\frac{\text{Average inventory}}{\text{Cost of goods sold}}$ x 365 days
______ Dividend yield	h.	$\frac{\text{Net income}}{\text{Net sales}}$

_______ Price-earnings ratio

_______ Number of days of sales in Inventory

_______ Debt to equity ratio

_______ Net profit ratio

_______ Accounts receivable collection period

_______ Return on total assets

i. $\frac{\text{Income from operations}}{\text{Average total assets}}$

j. $\frac{\text{Dividends per share}}{\text{Market price per share}}$

k. $\frac{\text{Net income}}{\text{Average shareholders' equity}}$

l. $\frac{\text{Quick current assets}}{\text{Current liabilities}}$

m. $\frac{\text{Average accounts receivable}}{\text{Net credit sales}}$ x 365 days

n. $\frac{\text{Average accounts receivable}}{\text{Net credit sales}}$ x 365 days

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CP 12-10

A company began the month of May with $200,000 of current assets, a 2.5 to 1 current ratio, and a 1.25 to 1 acid-test ratio. During the month, it completed the following transactions:

	Effect on Current Ratio		
Transaction	*Increase*	*Decrease*	*No Change*
a. Bought $20,000 of merchandise on account (the company uses a perpetual inventory system)			
b. Sold for $10,000 cash, merchandise that cost $5,000			
c. Collected a $2,500 account receivable			
d. Paid a $10,000 account payable			
e. Wrote off a $1,500 bad debt against the allowance for doubtful accounts			
f. Declared a $1 per-share cash dividend on the 10,000 outstanding common shares			
g. Paid the dividend declared above			
h. Borrowed $10,000 from a bank by assuming a 60-day, 10-per cent loan			
i. Borrowed $25,000 from a bank by placing a 10-year mortgage on the plant			
j. Used the $25,000 proceeds of the mortgage to buy additional machinery.			

View Solution

Required:

1. Indicate the effect on current ratio assuming each transaction is independent of the others.

2. At the end of May, and taking all the above transactions into account, what was
   a. The current ratio?
   b. The acid-test ratio?

   Use the following format:

		May 1 Bal.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	May 31 Bal.
Current assets	x												
Current liabilities	y												
Current ratio	x/y												

Problems

P 12-1

Consider the following information:

Mammoth Corporation
Balance Sheet
At December 31, 2010

Assets		*Liabilities and Shareholders' Equity*	
Current		*Current*	
Cash	$ 100	Accounts Payable	$ 300
Accounts Receivable	200	Wages Payable	50
Merchandise Inventory	500	Dividends Payable	50
Prepaid Expenses	50		400
	850	Bonds Payable	800
Capital Assets, at carrying amount	1,000		1,200
		Common Shares	500
		Retained Earnings	150
Total Assets	$1,850	Total Liabilities and Shareholders' Equity	$1,850

Required:

1. Based on this information, calculate the
   a. Current ratio
   b. Acid-test ratio
   c. Debt to equity ratio.
2. What do these ratios tell you about Mammoth Corporation?
3. What other information would help with the financial analysis of Mammoth Corporation?

P 12-2

The following information for 2012 was gathered from the financial statements of Epicentre Corporation.

Balance Sheet
As December 31, 2012

Assets	
Current	
Cash	$ 60
Accounts Receivable	140
Merchandise Inventory	250
Prepaid Expenses	10
	460
Capital Assets, at carrying amount	330
	$790
Liabilities	
Current	
Accounts Payable	$100
Current Portion of Bonds Payable	20
Notes Payable, due in 6 months	60
	180
Non-current	
Bonds Payable	140
	320
Shareholders' Equity	
Preferred Shares, 10% (8 shares outstanding)	120
Common Shares (50 shares outstanding)	250
Retained Earnings	100
	470
	$790

Income Statement
For the Year Ended December 31, 2012

Net Sales (all on credit)	$800
Cost of Goods Sold	600
Gross Profit	200
Selling and Administrative Expenses	100
Income from Operations	100
Less: Interest	20
Income before Income Taxes	80
Less: Income Taxes	30
Net Income	$ 50

Additional information from the December 31, 2011 balance sheet:

Accounts receivable	$180
Merchandise inventory	200
Capital assets, at carrying amount	250
Retained earnings	80
Preferred shares	120
Common shares	250

Required:

1. Compute the following ratios for 2012:
    a. Current ratio
    b. Acid-test ratio
    c. Accounts receivable collection period
    d. Number of days of sales in inventory
    e. Debt to equity ratio
    f. Return on shareholders' equity
    g. Earnings per share (assume all preferred share dividends are paid)
2. Compute dividends paid on common shares for 2012.
3. What do these ratios tell you about Epicentre Corporation?

4. (Appendix) Restate the financial statements to facilitate Scott formula analysis.
5. (Appendix) Calculate the Scott formula and analyse the results.

P 12-3

Belafonte Corporation's books were destroyed in a fire on April 20, 2011. The comptroller of the corporation can only remember a few odd pieces of information:

a. The current ratio was 3.75 to 1.
b. Sales for the year were $73,000.
c. Inventories were $20,000 and were equal to property, plant and equipment at carrying amount, and also equal to bonds payable.
d. The accounts receivable collection period was 40 days.
e. The bonds payable amount was 10 times cash.
f. Total current assets were twice as much as common shares.

Required: Using this information, prepare Belafonte Corporation's balance sheet at April 30, 2011. Assume balances at April 30, 2011 are the same as average balances for the year then ended, and besides retained earnings, there are no accounts other than those mentioned above.

P 12-4

Assume you are an accountant analysing Escalade Corporation. Escalade has expanded its production facilities by 200% since 2010. Its income statements for the last three years are as follows:

Escalade Corporation
Comparative Income Statements
For the Years Ending December 31

	2012	*2011*	*2010*
Sales	$250	$150	$120
Cost of Goods Sold	190	100	60
Gross Profit	60	50	60
Other Expenses	35	34	35
Net Income	$ 25	$ 16	$ 25

Required:

1. Prepare a vertical analysis of Escalade Corporation's income statement for the three years.
2. What inferences can be drawn from this analysis?

P 12-5

The incomplete balance sheet of Hook Limited is given below.

Hook Limited
Balance Sheet
At December 31, 2011

	Assets	
Current		
Cash	$ 30,000	
Accounts Receivable	?	
Merchandise Inventory	?	
		$?
Capital Assets	?	
Less: Accumulated Depreciation	100,000	?
Total Assets		$?
	Liabilities	
Current		
Accounts Payable	$ 50,000	
Accrued Liabilities	?	
		$120,000
Non-current		
8% Bonds Payable		?
	Shareholders' Equity	
Common Shares		?
Retained Earnings		?
Total Liabilities and Shareholders' Equity		$?

Additional information for 2011 year-end:

a. The amount of working capital is $150,000.
b. The issued value of the shares is $10 per share.
c. Market price per share is $15.
d. Price-earnings ratio is 3.
e. Income before payment of interest and income tax is $80,000.
f. The ratio of shareholder's equity to total assets is 0.60 to 1.
g. Income tax expense equals $30,000.
h. The acid-test ratio is 1.5 to 1.
i. The times interest earned ratio is 8 to1.

Required: Complete Hook Limited's balance sheet.

Alternate Problems

View Solution

AP 12-1

The Regina Corporation reported the following information for the year ended December 31, 2018:

Net income	$61,200
Interest expense	5,000
Income taxes	20,000

The company's balance sheet at December 31, 2018 disclosed the following information: preferred shares ($0.12 per share cumulative dividends, 10,000 shares issued and outstanding at $20 per share); and common shares (15,000 shares issued and outstanding at $25 per share). The Regina Corporation has prided itself on never missing a dividend payment. During 2018, $5 per-share cash dividends were declared and paid to the common shareholders, in addition to the preferred share dividends. Dividend yield on common shares was 27.5%.

Required: Determine Regina's:

1. Earnings per share
2. Price-earnings ratio.

AP 12-2

The financial statements of Crockett Corporation are as follows:

Crockett Corporation
Balance Sheet
At December 31, 2010

Assets		*Liabilities and Shareholders' Equity*	
Cash	$ 20	Accounts Payable	$ 30
Accounts Receivable	60	Wages Payable	10
Merchandise Inventory	90		40
	170	Bonds Payable (8%)	100
Capital Assets, at carrying amount	110	Total Liabilities	140
		Common Shares	100
		Retained Earnings	40
Total Assets	$280	Total Liabilities and Shareholders' Equity	$280

Crockett Corporation
Income Statement
For the Year Ended December 31, 2010

Sales	$300
Cost of sales	180
Gross Profit	$120
Other Expenses	80
Net Income	$ 40

The following additional information is available:

a. The income tax rate is 50%; income taxes expense is included in other expenses.
b. Interest expense is included in other expenses. Bonds were outstanding for the entire year.
c. Beginning balances of balance sheet accounts were the same as ending balances as applicable.
c. All sales are on credit.

View Solution

Required: Descriptions of certain ratios are given below. Give the name of the corresponding ratio and calculate the ratios for the Crockett Corporation.

1. Primary test for liquidity
2. A more severe test of liquidity
3. Test of efficiency of account receivable collection
4. Indication of liquidity of inventory
5. Reflection of financial strength and cushion for creditors
6. Indication of the net productivity of each sales dollar
7. Indication of management's ability to efficiently use resources provided.
8. (Appendix) Restate the financial statements to facilitate Scott formula analysis. Calculate the Scott formula.

AP 12-3

The following financial information is available for Maxim Enterprises Limited for the year ended December 31, 2018:

a. The acid-test ratio is 1.5 to 1.
b. Accounts receivable is $3,000, which is one-half of the quick assets, one-third of the current assets, and twice the amount of property, plant, and equipment at carrying amount.
c. Notes payable is a long-term liability; it is four times the dollar amount of the marketable securities.
d. Total shareholders' equity is equal to the working capital, and common shares are 150% of the dollar amount of the retained earnings.

View Solution

Required: Using this information, prepare the company's balance sheet at December 31, 2018. Assume that other than retained earnings, there are no additional accounts.

AP 12-4

The following information is taken from the records of Erie Corp. for the year ended December 31:

	2013	*2012*
Sales	$1,397	$1,122
Cost of goods sold	935	814
Selling expenses	154	121
General expenses	88	77
Other revenue	4	7
Interest expense	2	9
Income taxes	134	66

View Solution

Required:

1. Prepare a vertical analysis of the income statement, showing the above items as well as gross profit, income from operations (excludes other revenue), income before interest and income taxes, income before income taxes, and net income.
2. Describe the favourable and unfavourable changes.

AP 12-5

The following ratios and other data are taken from the financial statements of Dene Company for the year ended December 31, 2010.

Current ratio	1.8 to 1
Acid-test ratio	1.3 to 1
Net working capital	$40,000
Number of days of sales in inventory	73 days
Gross profit as a percentage of sales	50%
Earnings per share	$0.25
Accounts receivable collection period	73 days
Common shares outstanding	50,000 shares
Current liabilities to shareholders' equity	31.25%
Issued value of each common share	$2.25
Income tax rate	20%

Assume beginning balance sheet amounts equal ending balance sheet amounts when calculating averages.

View Solution

Required:

1. Using the information given, prepare the balance sheet. Assume only accounts indicated by the ratios above appear on the balance sheet, other than retained earnings. Show all calculations.
2. Prepare an income statement listing sales, cost of goods sold, gross profit, operating expenses, income before income taxes, income taxes, and net income. Show all calculations.
3. (Appendix) Restate the financial statements to facilitate Scott formula analysis. Assume 50% of current liabilities are borrowings and the rest relate to operations. Assume interest expense (before taxes) is $1,000 and is included in operating expenses. Calculate the Scott formula.

Supplementary Problems

SP 12-1

The balance sheet of the Blanchet Corporation is as follows:

Blanchet Corporation
Balance Sheet
At December 31

	2011	*2010*
Assets		
Current		
Cash	$60	$10
Marketable Securities	10	20
Accounts Receivable	60	40
Merchandise Inventories	108	120
Prepaid Expenses	12	10
	250	200
Property, Plant, and Equipment at carrying amount	170	180
Total Assets	$420	$380
Liabilities and Shareholders' Equity		
Accounts Payable	$100	$80
Accrued Liabilities	20	10
Bonds Payable	50	30
	170	120
Common Shares (10 shares outstanding)	150	150
Retained Earnings	100	110
Total Liabilities and Shareholders' Equity	$420	$380

Required:

1. Prepare a horizontal analysis of Blanchet Corporation's balance sheet for 2011.
2. What are some observations you can make?

SP 12-2

Part A

The balance sheet and income statement of Post Inc. are shown below.

Balance Sheet
At December 31, 2018

Assets		*Liabilities and Shareholders' Equity*	
Cash	$ 5	Accounts Payable	$ 26
Accounts Receivable	175	Notes Payable	66
Merchandise Inventory	240	Accrued Liabilities	10
Prepaid Insurance	6	Common Shares	300
Property, Plant, and Equipment at carrying amount	360	Retained Earnings	384
Total Assets	$786	Total Liabilities and Shareholders' Equity	$786

Income Statement
For the Year Ended December 31, 2018

Sales	$1,000
Cost of Goods Sold	730
Gross Profit	270
Operating Expenses	120
Income Before Income Taxes	150
Income Taxes	60
Net Income	$ 90

Additional Information: No shares were issued and no dividends were paid during the year. There were 30 common shares outstanding throughout the year. Assume ending balance sheet amounts are the same as averages where applicable.

Required:

1. Calculate
   a. current ratio
   b. number of days of sales in inventory
   c. earnings per share
   d. return on shareholders' equity ratio.
2. Comment on the results.
3. (Appendix) Restate the financial statements to facilitate Scott formula analysis. Assume interest expense (before tax) is $10 and is included in operating expenses.
4. (Appendix) Calculate the Scott formula and comment on the results. Does this change any of your observations from part 2?

Part B

Assume that the following unrelated transactions occurred in Post Inc. in 2019.

Required: Indicate the effect of each transaction below on the current ratio.

	Effect on Current Ratio		
Transaction	*Increase*	*Decrease*	*No Change*
Additional common shares were sold for cash			
Paid $20,000 of accounts payable			
Purchased $15,000 of inventory on account			
Wrote off $2,000 of accounts receivable as uncollectible.			

SP 12-3

The following are condensed comparative financial statements of Nero Corporation for the three years ended December 31, 2010, 2011, and 2012.

Nero Corporation
Balance Sheet
At December 31

Assets	*2012*	*2011*	*2010*
Current			
Cash	$ 24	$ 0	$ 0
Accounts Receivable	45	45	44
Inventory	72	48	36
Prepaid Expenses	3	3	4
	144	96	84
Property, Plant, and Equipment, at carrying amount	312	180	91
Total Assets	$456	$276	$175
Liabilities and Shareholders' Equity			
Current			
Accounts Payable	$ 54	$ 72	$ 40
Accrued Liabilities	30	24	20
Bonds Payable, 4%	96	60	-0-
Total Liabilities	180	156	60
Common Shares	240	96	96
Retained Earnings	36	24	19
Total Liabilities and Shareholders' Equity	$456	$276	$175

	2012	*2011*	*2010*
Sales	$252	$144	$120
Cost of Goods Sold	189	96	66
Gross Profit	63	48	54
Selling and Administrative	37	34	30
Income from Operations	26	14	24
Interest	6	6	-0-
Income before Income Taxes	20	8	24
Income Taxes	8	3	9
Net Income	$ 12	$ 5	$ 15

The following additional information is available:

a. All sales are on credit; credit terms are net 60 days after invoice date.
b. Twenty common shares were outstanding in years 2010 and 2011. On April 1, 2012, an additional 30 common shares were issued for $144 cash in total.
c. The accounts receivable balance at January 1, 2010 was $19.
d. The inventory balance at January 1, 2010 was $24.
e. The net capital assets balance at January 1, 2010 was $91.
f. The total assets balance at January 1, 2010 was $165.
g. The total shareholders' equity balance at January 1, 2010 was $101.
h. Dividends of $8 were declared in 2010. No dividends were declared in 2011 and 2012.
i. Interest has been paid on the bonds each year and is included in interest expense.

Required:

1. From the above information, calculate the following for each of the three years:
   a. Liquidity:
      Current ratio
      Acid-test ratio
      Accounts receivable collection period
      Number of days of sales in inventory
      Revenue operating cycle.
   b. Profitability:
      Gross profit ratio
      Net profit ratio
      Return on total assets
      Return on shareholders' equity
   c. Financial structure:
      Debt to equity ratio
      Times interest earned
   d. Market measures:
      Earnings per share
2. What conclusions can be drawn?
3. (Appendix) Restate the financial statements for all three years to facilitate Scott formula analysis.
4. (Appendix) Calculate the Scott formula for the three years and comment on the results.

Decision Problems

DP 12-1

The selected financial information presented below has been derived from the financial statements of four companies. Each of the companies belongs to one of the following industries: (1) public accounting, (2) vehicle manufacturing, (3) airline, and (4) retail grocery sales.

	Firm A	*Firm B*	*Firm C*	*Firm D*
Percentage of total assets in:				
Cash and temporary investments	5%	5%	7%	3%
Accounts receivable	2	10	40	1
Inventories	2	30	42	70
Total current assets	9	45	89	74
Property, plant, and equipment (net)	91	55	13	26
Total assets	100%	100%	100%	100%
Percentage relative to total sales:				
Net income	10%	12%	12%	9%
Gross profit	–	45	–	10
Depreciation	35	20	1	5

Required:

1. Which of the companies would be expected to have relatively large investments in receivables? in inventories? in property, plant, and equipment?
2. Which company would have high gross profit? a high rate of depreciation?
3. Identify the industry to which each company belongs.

DP 12-2

You are the bank manager of Third National Bank. Two companies, A and B, are seeking bank loans. You are given the following financial statements.

Balance Sheets
At December 31, 2011

Assets	*Company A*	*Company B*	*Liabilities and Shareholders' Equity*	*Company A*	*Company B*
Cash	$ 80	$165	Current Liabilities	$ 240	$ 300
Accounts Receivable	125	235	Non-current Liabilities	600	500
Merchandise Inventory	480	660	Common Shares	250	640
	685	1,060	Retained Earnings	100	160
Capital Assets, at carrying amount	505	540			
	$1,190	$1,600		$1,190	$1,600

Income Statements
For the Year Ended December 31, 2011

	Company A	*Company B*
Sales (all on credit)	$1,500	$900
Cost of Goods Sold	1,050	540
Gross Profit	450	360
Selling and Administrative Expenses	90	170
Income from Operations	360	190
Interest	60	50
Income before Income Taxes	300	140
Income Taxes	60	30
Net Income	$240	$110

Required:

1. From this information, calculate for each company
   - Current ratio
   - Acid-test ratio
   - Accounts receivable collection period
   - Number of days of sales in inventory
   - Revenue operating cycle
   - Return on total assets
   - Return on shareholders' equity
   - Debt to equity ratio
   - Times interest earned
   - Sales to total assets ratio
   - Gross profit ratio
   - Net profit ratio

   Assume averages equal ending balances where necessary.
2. Choose one company to which you would grant a 6-month, 6% loan of $150. Give reasons for your choice.
3. (Appendix) Restate the financial statements to facilitate Scott formula analysis and calculate the formula. Assume current liabilities all relate to operations. Does this additional information change your decision in (2) above? Explain.

DP 12-3

As chief financial officer of Jumbo Corporation, you have calculated the following ratios and percentages of the company's financial information to enable you to answer questions the board of directors may ask at their next meeting.

	2012	*2011*	*2010*
Current ratio	3.1:1	2.6:1	2.0:1
Acid-test ratio	0.8:1	1.2:1	1.5:1
Accounts receivable collection period	93 days	76 days	64 days
Number of days of sales in inventory	88 days	72 days	68 days
Return on shareholders' equity	12.0%	13.3%	14.1%
Return on total assets	12.6%	12.8%	13.3%
Percentage sales increase over prior year	123%	118%	100%
Selling expenses to net sales ratio	13.9%	13.9%	14.2%

Required:
Using these ratios, answer each question with a brief explanation to support each answer.

1. Is it becoming easier than in previous years for the company to take advantage of cash discounts offered by suppliers?
2. Is the company collecting its accounts receivable more rapidly than before?
3. Is the company's investment in accounts receivable decreasing?
4. Is the company's investment in inventory increasing?
5. Is the shareholders' return on investment increasing?
6. Did the dollar amount of selling expenses decrease during the three-year period?

DP 12-4

When a vehicle is built, it contains parts purchased or produced by the original equipment manufacturer (OEM). When these parts need to be replaced, consumers often purchase after-market parts instead of OEM replacement parts because they may be cheaper or of better quality, and may enhance the performance or appearance of the vehicle. Acme Auto Parts Ltd. is an after-market automotive parts manufacturer established in 2010. It went public in 2014. The company's headquarters are located in Oakville, Ontario. It has manufacturing plants in Oakville and four other Canadian and US locations. Each location is organised as a separate division. The company manufactures electrical components and provides parts to US and Canadian national retail chains that specialise in providing both sound advice and reliable parts to clients with higher-than-average disposable incomes, like car and truck hobbyists, as well as heavy truck fleet owners. It has several regional warehouses and divisional offices across Canada and the US. It has a reputation for producing high quality parts that are innovative, reliable, and efficient, and backing what it sells through a generous warranty and refund policy.

Acme has weathered a recent economic downturn well enough. Demand for its type of electrical auto parts has remained relatively strong. The company has two main competitors, both headquartered in the Far East. Though still ranked as the number one after-market electronic parts supplier in Canada in terms of total sales dollars and number four in the US, its competitors are slowly gaining ground. Acme is considered well-managed and is respected for the high quality of its electrical components. It does not compete by supplying a full range of after-market automotive products, but by identifying new niche markets for electrical components and leveraging its product line by continually searching for innovations in design and performance.

Acme has maintained very good relations with its suppliers and retail chains. These chains actively promote the brand as good value for money, and provide valuable feedback to Acme about retail customer purchasing trends and requests for new products. Unlike its competitors, the Acme sales force is well-trained to not only sell existing products, but to glean new ideas from customers and communicate these back to Acme management for consideration.

The company recognises that long-term success largely depends on continued promotion of Acme products by these retail chains, which means that the chains must be able to continue to earn high gross profit on sales of these same products. However, increased competition from lower-priced electrical components produced by Acme' Far East competitors has begun to cut into Acme' sales and profit margins.

In the past, Acme has relied on research and development and the North American patent process to maintain its market share. A few extremely successful product innovations were responsible for most of the past sales levels and profit margins. However, increased complexity of component design has created longer timelines to move new products from conception to production. Also, at least one of its competitor's activities border on patent infringement, but legal remedies are costly, time-consuming, and often unsatisfactory.

Acme' manufacturing facilities and processes are state-of-the-art. Once products have been successfully designed and tested, they are able to be manufactured very quickly and inexpensively, and in small batches. Acme' distribution costs are lower than competitors because its manufacturing plants are closer to customers. In recent years, the threat of shortages of rare, very expensive metals used in the manufacture of many of its products has required the company to increase its raw materials inventories. Rapidly developing economies, particularly China, are demanding increasing amounts of these precious metals, and have begun to lock up supplies from African producers.

Financial statements for the three years ended December 31, 2019 are shown at the end of this problem, as well as financial ratios for the 2017 and 2018 fiscal years. Additional information gathered from the auditor's report, management discussion and analysis, and notes to the financial statements indicated that:

1. All sales are on credit.
2. In 2017, vacant land was sold for $11,000,000. No capital assets were sold in 2018 or 2019.
3. Issued shares are composed entirely of common shares. Average number of shares outstanding was as follows:
    2017: 700,000 shares
    2018: 1,100,000 shares
    2019: 1,200,000 shares
4. Average market price per share was as follows:
    2017: $32.52
    2018: $55.50
    2019: $73.40
5. Electronic fuel injectors are a significant portion of the company's product line. Starting in mid-2018 until the problem was rectified near the end of 2019, a number of defective injectors were produced. As a result, warranty claims increased significantly during this period.
6. Unlike the rest of the industry, the company depreciates tools, dies, and moulds over a two year period using an accelerated method. The rest of the industry generally depreciates these assets over a four-year period on a straight line basis. Acme' investment in tools, dies, and moulds was significant during the period 2017-2019.
7. Research and development has remained important to the company. On average, the industry spends about 2% of sales on R&D.
8. There are no outstanding litigation issues, nor is management aware of any impending litigation.
9. There are no operating leases for rented premises in place after 2019.
10. The company's auditor has issued unqualified audit reports each year.

Required: Assume you are a loans officer with a large investment bank. Complete the 2019 financial ratio calculations below based on the financial statements at the end of this question, then analyse the results. Make a recommendation regarding Acme's recent request for an additional $10 million long-term loan from your bank.

Acme Auto Parts Ltd.
Selected Financial Ratios

		2019	*2018*	*2017*	*2019 Industry Average*
a.	Current ratio		1.3	1.5	1.8
b.	Acid-test ratio		.48	.62	1.1
c.	Accounts receivable collection period		35	30	35
d.	Number of days of sales in inventory		140	135	122
e.	Return on total assets		14.9%	(7.0%)	18.0%
f.	Return on shareholders' equity		23.2%	15.2%	20.0%
g.	Times interest earned ratio		3.9X	(2.9)X	5X
h.	Sales to total assets ratio		2.7	2.9	3.4
i.	Debt to equity ratio		2.4	2.6	1.5
j.	Gross profit ratio		59.1%	60.7%	52.4%
k.	Net profit ratio		2.5%	1.7%	2.1%
l.	Earnings per share		$3.00	$2.14	$4.00
m.	Price-earnings ratio		18.5X	15.2X	21X

Acme Auto Parts Ltd.
Balance Sheet
At December 31, 2019
($000,000s)

	2019	*2018*	*2017*
Assets			
Current			
Cash	$ 1.6	$ 2.2	$ 3.2
Accounts Receivable	17.3	12.5	7.2
Inventory	37.1	25.7	15.2
	56.0	40.4	25.6
Property, Plant, and Equipment, at carrying value	28.4	23.0	10.4
Total Assets	$84.4	$63.4	$36.0
Liabilities			
Current			
Borrowings	$43.8	$18.5	$8.3
Accounts Payable	10.5	7.7	3.3
Warranty Reserve	1.2	4.4	5.2
	55.5	30.6	16.8
Non-current Borrowings	7.8	14.4	9.1
Total Liabilities	63.3	45.0	25.9
Shareholders' Equity			
Share Capital	11.6	11.2	5.2
Retained Earnings	9.5	7.2	4.9
	21.1	18.4	10.1
Total Liabilities and Shareholders' Equity	$84.4	$63.4	$36.0

Acme Auto Parts Ltd.
Income Statement
For the Year Ended December 31, 2019
($000,000s)

	2019	*2018*	*2017*
Sales	$142.0	$132.0	$89.0
Cost of Goods Sold	63.0	54.0	35.0
Gross Profit	79.0	78.0	54.0
Operating Expenses			
Selling Expenses			
Commissions	14.0	15.5	12.3
Rent	1.2	2.2	3.2
Marketing	.5	4.9	6.6
Total Selling Expenses	15.7	22.6	22.1
General and Administrative Expenses			
Warranty	2.6	2.5	2.4
Employee Benefits	41.0	36.5	26.3
Research and Development	7.2	6.2	4.4
Depreciation	2.8	2.8	1.4
Total General and Administrative Expenses	53.6	48.0	34.5
Total Operating Expenses	69.3	70.6	56.6
Income (Loss) from Operations	9.7	7.4	(2.6)
Other Revenue			
Gain on Sale of Capital Assets	-0-	-0-	6.0
Income before Interest Expense	9.7	7.4	3.4
Interest Expense	2.6	1.9	.9
Income Before Income Taxes	7.1	5.5	2.5
Income Taxes	2.7	2.2	1.0
Net Income	$ 4.4	$ 3.3	$ 1.5

Acme Auto Parts Ltd.
Statement of Changes in Equity
For the Year Ended December 31, 2019
($000,000s)

	2019			*2018*	*2017*
	Share Capital	*Retained Earnings*	*Total Equity*	*Total Equity*	*Total Equity*
Opening Balance	$11.2	$7.2	$18.4	$10.1	$ 9.1
Common Shares Issued	.4	–	.4	6.0	–
Net Income	–	4.4	4.4	3.3	1.5
Dividends Declared	–	(2.1)	(2.1)	(1.0)	(.5)
Ending Balance	$11.6	$9.5	$21.1	$18.4	$10.1

CHAPTER THIRTEEN

The Statement of Cash Flows

Details about the amount of cash received and paid out during an accounting period are not shown on the balance sheet, income statement, or statement of changes in equity. This information is disclosed on the statement of cash flows (SCF). This chapter will discuss:

1. What information does the statement of cash flows communicate?
2. How are cash and cash equivalents defined?
3. What kinds of transactions affect cash flow?
4. How is a statement of cash flows prepared?
5. How is a statement of cash flows interpreted?

A. Financial Statement Reporting

Cash flow is an important factor in determining the success or failure of a corporation. It is quite possible for a profitable business to be short of cash. As seen in a precious chapter, a company can be illiquid because of large amounts tied up in inventory and accounts receivable, for instance. Conversely, an unprofitable business might have sufficient cash to pay its bills if it has access to sufficient financing from loans or by issuing share capital.

As discussed in previous chapters, the financial activities of a corporation are reported through four financial statements: a balance sheet, an income statement, a statement of changes in equity, and a **statement of cash flows (SCF).** This chapter discusses the statement of cash flows in more detail.

The statement of cash flows provides a detailed summary of where cash came from during the accounting period and how cash was used. The SCF explains why cash on hand at the end of the accounting period is different from the cash on hand at the beginning of the period by describing the enterprise's *financing* and *investing* activities and the effects of these together with *operating* activities—on the enterprise's cash resources.

Cash flow information is useful to management when making decisions concerning the purchase of equipment, plant expansion, the retirement of long–term debt, or the declaration of dividends. It is useful to external readers of financial statements when evaluating the financial performance of a corporation.

Provision of information useful for assessing the timing, amount, and uncertainty of future cash flows is a primary objective of financial reporting. Using the SCF, analysts examine the relationship among the various sources and uses of cash during the period to help predict future cash flows.

The SCF, together with the income statement, provides a somewhat limited means of assessing future cash flows because they are based on historical, not prospective data. Nevertheless, the ability to generate cash from past operations is often an important indication of whether the enterprise will have difficulty meeting obligations as they fall due, paying dividends, paying for recurring operating costs, or surviving adverse economic conditions.

"Cash" consists of anything a bank will accept for deposit. However, for SCF purposes, cash can also include **cash equivalents**—assets that can be quickly converted into a known amount of cash, such as marketable securities, treasury bills, and money market funds, and which are not subject to significant risk of changes in value. For our purposes, an investment will be considered a cash equivalent when it has a maturity of three months or less from the date of acquisition. Conversely, there are examples of "negative" cash, like bank overdrafts. An overdraft occurs when a corporation is allowed to pay out more cash from its bank account than it has on deposit, with the understanding that the overdraft situation is temporary and limited to a predetermined amount.

Because of differences in the nature of each entity and industry, management judgement is required to determine what assets constitute cash and cash equivalents for a particular firm. This decision needs to be disclosed on the SCF or in a note to the financial statements. For instance, referring to the Big Dog Carworks Ltd. (BDCL) balance sheet at December 31, 2019 shown in Figure 12-1, chapter 12, the following note disclosure would be made:

Note X

Cash and cash equivalents consist of cash on deposit and marketable securities held for the purposes of meeting cash commitments within three months from the balance sheet date. Cash and Cash Equivalents consist of the following:

	($000s) *2019*	*2018*	*2017*
Cash on Deposit	$20	$30	$50
Marketable Securities	36	31	37
	$56	$61	$87

Cash flows result from a wide variety of a corporation's activities as cash is received and disbursed over a period of time. Because accrual accounting matches expenses with revenues, it often does not reflect cash receipts and disbursements during the time period they were made. As we will see, the statement of cash flows converts net income, the product of accrual accounting, to cash flow from operating activities.

B. Preparing the Statement of Cash Flows

The statement of cash flows is classified into three sections: operating activities, financing activities, and investing activities. Cash flow from operating activities represents cash flows generated from the principal activities that produce revenue for a corporation, such as selling products, and the related expenses reported on the income statement to carry out this business. Changes to non-cash working capital accounts like accounts receivable also affect cash generated by operating activities.

Cash flows from financing activities result when the composition of the debt and equity capital structure of the entity changes. This category is generally limited to increases and decreases in long–term liability and equity accounts. These include cash flows from the issue and repayment of debt, and the issue and repurchase of share capital. Dividend payments are considered to be financing activities, since these represent a return on the original capital invested by shareholders.

Cash flows from investing activities involve increases and decreases in long–term asset accounts. These include outlays for the acquisition of property, plant, and equipment, as well as proceeds from their disposal.

The analysis of cash inflows and cash outflows focuses any transactions that involve a cash and cash equivalents account and any other balance sheet account. The following balance sheet format can be used to visualise this analysis. The bold black line separates the cash and cash equivalent accounts from all other accounts.

Balance Sheet Format

Assets	*Liabilities and Equity*
Cash and Marketable Securities	Bank Overdraft and Short-term (Operating) Loans
Non-cash current assets	Other current liabilities
Non-current assets	Non-current liabilities
	Equity
	Share capital
	Retained earnings
	+ Revenue
	- Expenses

Any transaction that "crosses the black line" results in either a cash inflow or a cash outflow. Such transactions cause changes to cash and cash equivalents. For simplicity, cash and cash equivalents used in examples throughout this chapter to illustrate the preparation of the SCF consists only of the asset cash.

Consider the balance sheet, income statement and statement of changes in equity of Example Corporation:

Example Corporation
Balance Sheet
At December 31
($000s)

	2012	*2011*
Assets		
Current		
Cash	$ 27	$ 150
Accounts Receivable	375	450
Merchandise Inventory	900	450
Prepaid Expenses	20	10
	1,322	1,060
Non-current Investments[1]	140	220
Property, Plant, and Equipment		
Land	70	70
Buildings	1,200	400
Machinery	990	700
Less: Accumulated Depreciation	(540)	(300)
	1,720	870
Total Assets	$3,182	$2,150
Liabilities		
Current		
Accounts Payable	$ 235	$ 145
Dividends Payable	25	30
Income Taxes Payable	40	25
	300	200
Non-current Borrowings	1,000	500
	1,300	700
Shareholders' Equity		
Share Capital	1,210	800
Retained Earnings	672	650
	1,882	1,450
Total Liabilities and Shareholders' Equity	$3,182	$2,150

[1] These assets consist of shares in other companies anticipated to be held for longer than one year.

Example Corporation
Income Statement
For the Year Ended December 31, 2012
($000s)

Sales		$1,200
Cost of Goods Sold		674
Gross Profit		526
Operating Expenses		
Selling, General, and Administration	$115	
Depreciation	260	375
Income from Operations		151
Other Items		
Gain on Disposal of Non-Current Investments	24	
Loss on Disposal of Machinery	(10)	14
Income Before Interest Expense		165
Interest		50
Income Before Income Taxes		115
Income Taxes		35
Net Income		$ 80

Example Corporation
Statement of Changes in Equity
For the Year Ended December 31, 2012
($000s)

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$ 800	$650	$1,450
Common Shares Issued	410	-	410
Net Income	-	80	80
Dividends Declared	-	(58)	(58)
Ending Balance	$1,210	$672	$1,882

The SCF can be prepared from an analysis of transactions recorded in the cash account. Accountants summarise and classify these cash flows on the SCF for the three major activities noted above – operating, investing, and financing. To aid our analysis, the following summarised transactions from the records of Example Corporation will be used.

Transaction Number	*Description ($000s)*
1	Investments in shares of another corporation costing $80 were sold for $104.
2	A building was purchased for $800 cash.
3	Machinery was purchased for $350 cash.
3	Machinery costing $60 with accumulated depreciation of $20 was sold for $30 cash.
4	Depreciation expense of $260 was recorded during the year.
5	Example Company received $500 cash from a long-term bank loan.
6	Shares were issued for $410 cash.
7	$58 of dividends were declared and paid during the year.

Analysis of Cash Flows

The steps used to prepare a statement of cash flows are as follows:

Step 1	Set up a cash flow table.
Step 2	Calculate the changes in each balance sheet account.
Step 3	Analyse changes in non-cash balance sheet accounts.
Step 4	Prepare the cash flow from operating activities section of the SCF.
Step 5	Prepare a statement of cash flows.

Step 1 Set up a cash flow table

Set up a table as shown below with a row for each account shown on the balance sheet. Enter amounts for each account for 2011 and 2012. Show credit balances in parentheses. Total both columns and ensure they equal zero. The table should appear as follows after this step has been completed:

	Balance ($000s)	
Account	*2012 Dr. (Cr.)*	*2011 Dr. (Cr.)*
Cash	27	150
Accounts Receivable	375	450
Merchandise Inventory	900	450
Prepaid Expenses	20	10
Investments	140	220
Land	70	70
Buildings	1,200	400
Machinery	990	700
Accumulated Depreciation	(540)	(300)
Accounts Payable	(235)	(145)
Dividends Payable	(25)	(30)
Income Taxes Payable	(40)	(25)
Borrowings	(1,000)	(500)
Share Capital	(1,210)	(800)
Retained Earnings	(672)	(650)
Total	-0-	-0-

These two accounts are analysed together because of their interrelationship.

Step 2 Calculate the changes in each balance sheet account

Add two columns to the cash flow table. Calculate the net debit or net credit changes for every account on the balance sheet and insert these changes in the appropriate column. This step is shown below.

	Step 1		Step 2	
	Balance ($000s)		*Change*	
Account	*2012 Dr. (Cr.)*	*2011 Dr. (Cr.)*	*Dr.*	*Cr.*
Cash	27	150		123
Accounts Receivable	375	450		75
Merchandise Inventory	900	450	450	
Prepaid Expenses	20	10	10	
Investments	140	220		80
Land	70	70	-0-	
Buildings	1,200	400	800	
Machinery	990	700	290	
Accumulated Depreciation	(540)	(300)		240
Accounts Payable	(235)	(145)		90
Dividends Payable	(25)	(30)	5	
Income Taxes Payable	(40)	(25)		15
Borrowings	(1,000)	(500)		500
Share Capital	(1,210)	(800)		410
Retained Earnings	(672)	(650)		22
Total	-0-	-0-	1,555	1,555

Cash has decreased by $123.000.

Total debit changes equal total credit changes.

Step 3 Analyse changes in non–cash balance sheet accounts

Recall from earlier chapters that a cash inflow is recorded as a debit to cash. For instance, a cash sale of $100 is recorded as:

Dr.	Cash	100	
Cr.	Sales		100

Similarly, a cash outflow is recorded as a credit to cash. Purchase of $50 of inventory for cash is recorded as:

Dr.	Inventory	100	
Cr.	Cash		100

This same principle is used to record cash inflows and outflows from operating, investing, and financing activities when the cash flow table method is used to prepare the SCF. A debit to cash represents a cash inflow; a credit to cash represents a cash outflow. Each type of activity represents a cash flow effect, in or out.

The next step is to set up three columns to the right of the “Change” columns shown in the table above. These columns should be titled “Cash Effect—Inflow,” “Cash Effect—Outflow,” and “Activity.” Record the changes in each account listed in Step 2 as a cash inflow effect if the account’s change is a credit (because the opposing debit represents an increase in cash, and therefore a cash inflow), or a cash outflow effect if the change is a debit (because the opposing credit represents a decrease in cash, a cash outflow). The cash flow table should appear as follows:

	Step 1		Step 2		Step 3		
Account	*Balance ($000s)*		*Change*		*Cash Effect*		*Activity*
	2012 Dr. (Cr.)	*2011 Dr. (Cr.)*	*Dr.*	*Cr.*	*Inflow Dr.*	*Outflow Cr.*	
Cash	27	150		123			To be explained by SCF
Accounts Receivable	375	450		75	75		
Merchandise Inventory	900	450	450			450	
Prepaid Expenses	20	10	10			10	
Investments	140	220		80	80		
Land	70	70	-0-				
Buildings	1,200	400	800			800	
Machinery	990	700	290			290	
Acc. Depreciation	(540)	(300)		240	240		
Accounts Payable	(235)	(145)		90	90		
Dividends Payable	(25)	(30)	5			5	
Income Taxes Payable	(40)	(25)		15	15		
Borrowings	(1,000)	(500)		500	500		
Share Capital	(1,210)	(800)		410	410		
Retained Earnings	(672)	(650)		22	22		
Total	-0-	-0-	1,635	1,635	1,574	1,697	

$123 net cash outflow ($1,574 – 1,697)

The $123 net change in all non-cash balance sheet accounts ($1,574 – 1,697) equals the $123 change in cash ($150 – 27). This $123 represents a net cash outflow for the year Therefore, an analysis of these non-cash accounts below the thick black line will explain the decrease (outflow) in cash. This follows. Each account shown in the table above will be examined to determine whether the observed changes result from operating, investing, or financing activities.

Note 1: Calculating cash flow from operating activities

Calculating cash flow from operating activities is the first step in preparing a statement of cash flows. Net income of $80,000 is used as the starting point. Let's assume for the moment that this net income represents a net inflow of cash from operating activities of the same amount. The summary journal entry would be

Dr.	Cash	80,000	
Cr.	Retained Earnings		80,000

Therefore, the first cash flow table effect we record is to the Retained Earnings account. The effect on the SCF would be a $80,000 cash inflow, shown as follows:

Account	*Balance ($000s)*		*Change*		*Cash Effect*		*Activity*
	2012 Dr. (Cr.)	*2011 Dr. (Cr.)*	*Dr.*	*Cr.*	*Inflow Dr.*	*Outflow Cr.*	
Retained Earnings	(672)	(650)		80*	80		Operating

(*The actual change is a $22 credit. This $58 discrepancy will be explained in Note 3a)

The net income is recorded as an operating activity in the cash flow table. However, this amount includes three categories of items that must be adjusted to derive cash flow from operating activities: (a) net debit and credit changes in working capital that do not affect the income statement; (b) losses and gains not due to normal operations of the entity; and (c) expenses and revenues not involving cash.

a. Analysis of working capital accounts that do not affect the income statement

The first category of adjustments involves working capital accounts that are used in accrual accounting. For Example Corporation, these consist of:

Current Assets	*Current Liabilities*
Accounts Receivable	Accounts Payable
Merchandise Inventory	Income Taxes Payable
Prepaid Expenses	

The criteria for inclusion are whether adjustments through these accounts at some point affect items on the income statement. As a result, changes to the related Dividends Payable account are not considered operating activities. (Payment of dividends directly affects the Retained Earnings account, not a net income account.) The Dividends Payable account is therefore not analysed at this point.

The remaining non-cash current asset and current liability accounts are relevant to the calculation of cash flow from operating activities because they affect expense and revenue items in the income statement. Examples of related items are sales on account that are recorded as accounts receivable, and merchandise purchases that eventually are reflected as Cost of Goods Sold. The effects of changes in these accounts on net income must be considered when calculating cash flow from operating activities.

First, consider the change of $75 credit in the Accounts Receivable balance from the end of 2011 to 2012. If the relative levels of accounts receivable have decreased by $75 from 2011 to 2012 (a credit), a $75 cash inflow (a debit) has also occurred, as shown in the related cash effect column below.

Account	*Balance ($000s)*		*Change*		*Cash Effect*		*Activity*
	2012 Dr. (Cr.)	*2011 Dr. (Cr.)*	*Dr.*	*Cr.*	*Inflow Dr.*	*Outflow Cr.*	
Accounts Receivable	375	450		75	75		Operating

In effect, Example Corporation has produced cash inflow during 2012 by speeding up cash collections of its accounts receivable from customers. This overall effect is not reflected in net income. This cash inflow must be added to the net income figure when calculating cash flow from operating activities in the statement of cash flows.

Next, consider the working capital account Merchandise Inventory. The balance in this account has increased by $450 from 2011 to 2012. If the relative levels of merchandise inventory have increased by $450 (a debit), cash of $450 has been used to accomplish this. This activity has not been included in net income. Hence the $450 credit (a cash outflow) shown in the cash effect column below needs to be deducted from the net income figure used as the starting point in determining cash flow from operating activities on the SCF. Similarly, the prepaid expenses balance has increased by $10 (a debit) from 2011 to 2012. To accomplish this, a $10 cash outflow (a credit) must have occurred, also as shown in the related cash effect column below. This amount also needs to be deducted from net income on the SCF to arrive at cash flow from operating activities.

Account	*Balance ($000s)*		*Change*		*Cash Effect*		*Activity*
	2012 Dr. (Cr.)	*2011 Dr. (Cr.)*	*Dr.*	*Cr.*	*Inflow Dr.*	*Outflow Cr.*	
Merchandise Inventory	900	450	450			450	Operating
Prepaid Expenses	20	10	10			10	Operating

The next applicable working capital account to be analysed is accounts payable, a liability. Refer to the table below. The balance in this account has increased by $90 from 2011 to 2012. In effect, Example Corporation has delayed cash payments to its short-term creditors during 2012, causing this liability account to increase. An increase in a liability is indicated by a credit. The consequent effect on cash is the opposite – a debit, denoting a cash inflow effect. Example Corporation has provided more cash for itself by delaying payments to trade creditors. Similarly, the income taxes payable liability account has increased by $15 from 2011 to 2012 (a credit). The consequent cash effect is a $15 inflow (a debit), as shown in the table. By increasing the amount that Example Corporation owes to the government, the company has created a $15 cash inflow effect. These effects are shown as cash inflows from operating activities on the SCF. They are added to net income to arrive at cash flow from operating activities.

Account	*Balance ($000s)*		*Change*		*Cash Effect*		*Activity*
	2012 Dr. (Cr.)	*2011 Dr. (Cr.)*	*Dr.*	*Cr.*	*Inflow Dr.*	*Outflow Cr.*	
Accounts Payable	(235)	(145)		90	90		Operating
Income Taxes Payable	(40)	(25)		15	15		Operating

b. Losses and gains not due to normal operating activities

Losses and gains are not part of normal operations and therefore do not affect cash flow from operating activities. Since a loss is deducted when calculating net income, it is added back when calculating cash flow from operating activities on the SCF. Conversely, a gain on sale is included in net income reported on the income statement. It is deducted from the net income starting point when calculating cash flow from operating activities on the SCF.

The first example of this effect arises when analysing the changes to the Investment account. As noted previously (transaction 1), investments in shares of another corporation originally costing $80 were sold for $104. The journal entry to record the sale of the investments would have been:

Dr.	Cash		104,000	
Cr.		Investments		80,000
Cr.		Gain on Disposal of Investments		24,000

The sale of the investments thus has two effects on the SCF, as shown in the cash effects columns in the table below. First, the gain of $24 is shown as a credit. It was initially included in net income, but does not relate to day-to-day operations. Therefore, the gain is *deducted* from net income on the SCF to negate the original effect and arrive at cash flow from operating activities. This is done by recording it as a cash outflow. Second, in the above journal entry, the $104 sale proceeds are shown as a cash inflow (debit). This represents a cash inflow from an investing activity, since it involves a non-current asset account. The cash effects are shown below.

Account	*Balance ($000s)*		*Change*		*Cash Effect*		*Activity*
	2012 *Dr. (Cr.)*	*2011* *Dr. (Cr.)*	*Dr.*	*Cr.*	*Inflow* *Dr.*	*Outflow* *Cr.*	
Investments	140	220		80	104		Investing
						24	Operating

c. Expenses and revenue not involving cash

These consist of non-cash amounts that were included in the calculation of net income – depreciation expense in this case. Depreciation for 2012 amounted to $260 as shown on the Example Corporation income statement. The entry to record the amount must have been

Dr.	Depreciation Expense	260,000	
Cr.	Accumulated Depreciation – Property, Plant, and Equipment		260,000

Note that this entry does not involve cash flow. However, it is *added back* to net income on the SCF to reverse its effect and arrive at cash flow from operating activities. Hence it is shown as a $260 debit in the cash effect column of the table, as shown below:

Account	*Balance*		*Change*		*Cash Effect*		*Activity*
	2012 *Dr. (Cr.)*	*2011* *Dr. (Cr.)*	*Dr.*	*Cr.*	*Inflow* *Dr.*	*Outflow* *Cr.*	
Accumulated Depreciation	(540)	(300)		260*	260		Operating

(* The actual change is $240. This discrepancy will be explained in Note 4)

In addition to adjustments described above needed to translate net income reported on the income statement into cash flow from operating activities, the remaining cash flow table accounts need to be analysed to complete the SCF. This process is described below.

Note 2: Calculating Cash Flow from Investing Activities

a. Analysis of Buildings account

As noted earlier, a building was purchased for $800,000 cash. The journal entry would have been:

Dr.	Buildings	800,000	
Cr.	Cash		800,000

The effect on cash is obvious – a cash outflow of $800,000 (a credit) is recorded in the applicable cash effect column in the table as shown below. Since this transaction affects a non-current asset account, it is recorded in the Investing section of the SCF.

Account	*Balance ($000s)*		*Change*		*Cash Effect*		*Activity*
	2012	*2011*			*Inflow*	*Outflow*	
	Dr. (Cr.)	*Dr. (Cr.)*	*Dr.*	*Cr.*	*Dr.*	*Cr.*	
Buildings	1,200	400	800			800	Investing

b. Analysis of Machinery account - purchases

The next accounts to be analysed are the Machinery and Accumulated Depreciation accounts. Recall that machinery costing $350,000 was purchased for cash. The journal entry to record this would be:

Dr.	Machinery	350,000	
Cr.	Cash		350,000

The cash effect should be a $350,000 outflow (a credit). Since this transaction affects a non-current asset account, it is recorded in the Investing section of the SCF.

Account	*Balance ($000s)*		*Change*		*Cash Effect*		*Activity*
	2012	*2011*			*Inflow*	*Outflow*	
	Dr. (Cr.)	*Dr. (Cr.)*	*Dr.*	*Cr.*	*Dr.*	*Cr.*	
Machinery	990	700	350*			350	Investing

(* The actual change is $290. This discrepancy will be explained in Note 2b)

c. Analysis of Machinery account - disposals

The transactions recorded to this point do not fully account for the change in the Machinery account balances from 2011 to 2012 ($990 – 700 = $290 debit) nor the Accumulated Depreciation balances ($540 – 300 = $240 credit). An additional transaction needs to be considered. As noted earlier, machinery costing $60,000 and having accumulated depreciation of $20,000 was sold for $30,000 cash.

The journal entry to record the sale would be:

Dr.	Cash	30,000 (a)	
Dr.	Accumulated Depreciation	20,000 (b)	
Dr.	Loss on Sale of Machinery	10,000 (c)	
Cr.	Machinery		60,000 (d)

There are two types of cash effects that need to be recorded in the SCF. The $10 loss on sale (c) originally has been deducted to arrive at net income on the income statement. Since the transaction does not relate to an operating activity, it is recorded as a debit (cash inflow) in the applicable cash effect column and *added back* to net income on the SCF to arrive at cash flow from operating activities.

Second, the $30 cash proceeds (a) from the sale need to be recorded as a cash inflow (debit) in the cash effects column, and shown as an investing activity on the SCF. The cash flow table would show these effects as follows:

Account	*Balance ($000s)*		*Change*		*Cash Effect*		*Activity*
	2012 Dr. (Cr.)	*2011 Dr. (Cr.)*	*Dr.*	*Cr.*	*Inflow Dr.*	*Outflow Cr.*	
Machinery	990	700	350			350	Investing
				(d) 60	(a) 30		Investing
Acc. Dep.	(540)	(300)	(b) 20		(c) 10		Operating
				260	260		Operating

After these adjustments, all the changes in the Machinery and Accumulated Depreciation accounts have been recorded.

Note 3: Calculating cash flow from financing activities

a. Analysis of dividends

Changes in the Dividends Payable account from 2011 to 2012 are analysed in conjunction with any dividends declared during 2012. As noted previously, these amounted to $58,000. As well, dividends payable have decreased by $5 from 2011 to 2012 ($25 – 30 = $5 debit). This implies a net $5 credit (cash outflow) in the cash flow table and the SCF. Together, the effect on the SCF is recorded as a $63,000 cash outflow from financing activities ($58,000 + $5,000), as shown in the cash effects column below.

Account	*Balance ($000s)*		*Change*		*Cash Effect*		*Activity*
	2012 Dr. (Cr.)	*2011 Dr. (Cr.)*	*Dr.*	*Cr.*	*Inflow Dr.*	*Outflow Cr.*	
Dividends Payable	(25)	(30)	5			5	Financing
Retained Earnings	(672)	(650)	58*			58	Financing
						63	

(*The actual change is a $22 credit. The balancing amount is the $80 net income credit, explained in Note 1 above).

b. Analysis of borrowings

The transaction summary shown earlier stated that Example Corporation received $500,000 cash from a long-term bank loan. This is reflected in the change in the Borrowings account from 2011 to 20x2. The journal entry to record this transaction would have been:

Dr.	Cash	500,000	
Cr.	Borrowings		500,000

The cash effect is a $500,000 inflow (debit) as shown in the journal entry above and the applicable cash effects section below. This is recorded as a financing activity on the SCF because it relates to a non-current liability account.

Account	*Balance ($000s)*		*Change*		*Cash Effect*		*Activity*
	2012 Dr. (Cr.)	*2011 Dr. (Cr.)*	*Dr.*	*Cr.*	*Inflow Dr.*	*Outflow Cr.*	
Borrowings	(1,000)	(500)		500	500		Financing

A Note about Offsetting Cash Flows

Certain transactions may involve offsetting cash inflows and outflows. For instance, if a $200,000 building is acquired entirely by borrowing money from a bank, the journal entry would be:

Dr.	Buildings	200,000	
Cr.	Borrowings		200,000

Based on this entry, there is no cash effect. However, for SCF purposes, two transactions are considered to have occurred. First, the receipt of the bank loan proceeds:

Dr.	Cash	200,000	
Cr.	Borrowings		200,000

This would be shown as a cash inflow in the financing section of the SCF. Second, the purchase of the building:

Dr.	Buildings	200,000	
Cr.	Cash		200,000

This would be shown as a cash outflow in the investing section of the SCF. These effects are automatically considered using the cash flow table method, since each balance sheet account is considered separately.

c. Analysis of share capital

As noted in transaction 6 above, share capital of $410,000 was issued during 2012. This accounts for the entire change in this account. The entry to record this transaction would have been:

Dr.	Cash	410,000	
Cr.	Share Capital		410,000

The cash effect is a $410,000 inflow (debit), as shown by the journal entry and in the cash effects column below. This is recorded as a financing activity inflow on the SCF because it relates to an equity account.

Account	*Balance ($000s)*		*Change*		*Cash Effect*		*Activity*
	2012 Dr. (Cr.)	*2011 Dr. (Cr.)*	*Dr.*	*Cr.*	*Inflow Dr.*	*Outflow Cr.*	
Share Capital	(1,210)	(800)		410	410		Financing

All accounts have now been analysed. Based on this, the revised cash flow table is as follows:

	Step 1		Step 2		Step 3		
Account	*Balance ($000s)*		*Change*		*Cash Effect*		*Activity*
	2012 Dr. (Cr.)	*2011 Dr. (Cr.)*	*Dr.*	*Cr.*	*Inflow Dr.*	*Outflow Cr.*	
Cash	27	150		123	To be explained		Cash and Cash Equiv.
Accounts Receivable	375	450		75	75		Operating (Note 1a)
Merchandise Inventory	900	450	450			450	Operating (Note 1a)
Prepaid Expenses	20	10	10			10	Operating (Note 1a)
Investments	140	220		80	~~80~~	24	Operating (Note 1b)
					104		Investing (Note 1b)
Land	70	70	-0-				Investing (No change)
Buildings	1,200	400	800			800	Investing (Note 2a)
Machinery	990	700	~~290~~		~~290~~		
			350			350	Investing (Note 2b)
				(d) 60	(a) 30		Investing (Note 2c)
Acc. Depreciation	(540)	(300)	(b) 20		(c) 10		Investing(Note 2c)
				260	260		Operating (Note 1c)
				~~240~~	~~240~~		
Accounts Payable	(235)	(145)		90	90		Operating (Note 1a)
Dividends Payable	(25)	(30)	5			5	Financing (Note 3a)
Income Taxes Payable	(40)	(25)		15	15		Operating (Note 1a)
Borrowings	(1,000)	(500)		500	500		Financing (Note 3b)
Share Capital	(1,210)	(800)		410	410		Financing (Note 3c)
Retained Earnings	(672)	(650)		22	~~22~~		
					80		Operating (Note 1)
						58	Financing (Note 3a)
Total	-0-	-0-	1,635	1,635	1,574	1,697	

From this, the statement of cash flows can be prepared, classified into operating, investing, and financing activities.

Step 4 Prepare the cash flow from operating activities section of the SCF

The following cash flow from operating activities section of the SCF can now be prepared from the information in the cash effects columns in the cash flow table (amounts in 000s). Each activity labelled “Operating” in the completed cash flow table is used:

Net Income		$ 80
Add (Deduct) Changes in Non–cash Working Capital Accounts		
Increase in Accounts Receivable	$ 75	
Increase in Inventory	(450)	
Increase in Prepaid Expenses	(10)	
Increase in Accounts Payable	90	
Increase in Income Taxes Payable	15	(280)
Items Not Affecting Cash Flow		
Depreciation Expense		
Loss on Disposal of Machinery	260	
Gain on Disposal of Investment	10	
	(24)	246
Cash Flow from Operating Activities		$ 46

To start the SCF preparation process, we originally assumed that net income of $80,000 was the same amount of cash inflow from operating activities. After adjusting net income for the three categories of items that do not affect cash flow, we see that cash flow from operating activities is actually only $46,000. The major effects accounting for this difference are the add-back of depreciation expense ($260,000) and the large cash expenditures to build up inventory during 2012 ($450,000).

There are still some slight changes needed to the cash flow from operating activities section of the SCF to conform to generally accepted accounting standards.

a. Income taxes paid need to be disclosed separately. To accomplish this, income before income taxes is used as the starting point instead of net income. The income taxes expense of $35 as shown on the income statement is considered a separate cash outflow. This is combined with the change in the income taxes payable account between 2011 and 2012. The change in the income taxes payable account is a $15 credit ($40 – 25). The cash effect of this change is a $15 debit, or a cash inflow. The net effect on the SCF is that income taxes have created a $20 cash outflow during the year ($35 outflow – $15 inflow).

b. For presentation brevity, often only the net changes in non-cash working capital accounts, and gains or losses on are shown. If desired, details of these changes can be disclosed in a note to the financial statements.

The revised cash flow from operating activities section of the SCF would show:

Income before Income Taxes	$ 115
Income Taxes Paid	(20)
Items Not Affecting Cash Flow	
Net Changes in Non–cash Working Capital Accounts	(295)
Depreciation Expense	260
Net Gains (Losses) on Disposal	(14)
Cash Flow from Operating Activities	$ 46

Note that cash flow from operating activities ($46) has not changed.

Step 5 Prepare a statement of cash flows

When analysis is complete, the cash effects columns of the cash flow table contain all the information needed to prepare the statement of cash flows:

Example Corporation
Statement of Cash Flows
For the Year Ended December 31, 2012
($000s)

Operating Activities		
Income before Income Taxes		$ 115
Income Taxes Paid		(20)
Items Not Affecting Cash Flow		
Net Changes in Non-cash Working Capital		(295)
Depreciation Expense		260
Net Gains (Losses) on Disposal		(14)
Cash Flow from Operating Activities		46
Investing Activities		
Proceeds from Sale of Investments	$ 104	
Proceeds from Sale of Machinery	30	
Purchase of Building	(800)	
Purchase of Machinery	(350)	
Cash Flow used by Investing Activities		(1,016)
Financing Activities		
Loan Proceeds	500	
Issuance of Shares	410	
Payment of Dividends	(63)	
Cash flow from Financing Activities		847
Net Decrease in Cash		(123)
Cash at Beginning of Year		150
Cash at End of Year		$ 27

This agrees to the cash flow table

These amounts agree to the 2011 and 2012 cash amounts reported on the balance sheets.

C. Interpreting the Statement of Cash Flows

Readers of financial statements need to know how cash has been used by the enterprise. The SCF provides external decision makers like creditors and investors with this information. The statement of cash flows provides information about an enterprise's financial management policies and practices. It also may aid in predicting future cash flows, which is an important piece of information for investors and creditors.

The *quality* of earnings as reported on the income statement can also be assessed with the information provided by the SCF. The measurement of net income depends on a number of accruals and allocations that may not provide clear information about the cash-generating power of a company. Users will be more confident in a company with a high correlation between cash provided by operations and net income measured under the accrual basis. Recall, for instance, that although Example Corporation has net income of $80,000 during 2012, its net cash inflow from operations is only $46,000 –

chiefly due to the large increase in inventory levels. Although net cash flow from operations is still positive, this discrepancy between net income and cash flow from operations may indicate looming cash flow problems, particularly if the trend continues over time.

Example Corporation's SCF also reveals that significant net additions to capital assets occurred during the year ($1,016,000), financed somewhat by cash flow from operating activities but primarily by financing activities that included the assumption of loans and issue of share that amounted to $857,000, net of dividend payments.

It appears that a significant capital asset acquisition program may be underway, which may affect future financial performance positively. This expansion has been financed mainly by increases in long–term debt and issuance of common shares. However, the magnitude of the capital asset purchases, coupled with the payment of the dividends to shareholders has more than offset cash inflows from operating and financing activities, resulting in a net overall decrease in cash of $123,000. Though the current cash expenditure on long–term productive assets may be a prudent business decision, it has resulted in (hopefully temporary) adverse effects on overall cash flow.

The SCF is not a substitute for an income statement prepared on the accrual basis. Both statements should be used to evaluate a company's financial performance. Together, the SCF and income statement provide a better basis for determining the enterprise's ability to generate funds from operations and thereby meet current obligations when they fall due (liquidity), pay dividends, meet recurring operating costs, survive adverse economic conditions, or expand operations with internally-generated cash.

The SCF highlights the amount of cash available to a corporation, which is important. Excess cash on hand is unproductive. Conversely, inadequate cash decreases liquidity. Cash is the most liquid asset, and its efficient use is one of the most important tasks of management. Cash flow information, interpreted in conjunction with other financial statement analyses, is useful in assessing the effectiveness of the enterprise's cash management policies.

Readers who wish to evaluate the financial position and results of operations of an enterprise also require information on cash flows produced by investing and financing activities. The SCF is the only statement that explicitly provides this information. By examining the relationship among the various sources and uses of cash during the year, readers can also focus on the effectiveness of management's investing and financing decisions and how these may affect future financial performance.

ASSIGNMENT MATERIALS

Discussion Questions

1. Using an example, explain in your own words the function of a statement of cash flows. Why is it prepared? What does it communicate to the reader of financial statements? What is its advantage over a balance sheet? over an income statement?
2. Why are financing and investing activities of a corporation important to financial statement readers?
3. How does an increase in accounts receivable during the year affect the cash flow from operating activities?
4. Is a statement of cash flows really only a summary of cash receipts and disbursements recorded in the corporation's Cash account?
5. What effect does the declaration of a cash dividend have on cash flow? the payment of a dividend declared and paid during the current year? the payment of a dividend declared in the preceding year?
6. Why may a change in the Marketable Securities account not affect the amount of cash provided by operations?
7. Why is it possible that cash may have decreased during the year, even though there has been a substantial net income during the same period?
8. Describe common transactions affecting balance sheet accounts that use cash. Explain how these items are analysed to identify cash flows that have occurred during the year.
9. How is the cash flow table method used to prepare a SCF?
10. What is the basic format of a SCF? Prepare a model format.

Comprehension Problems

CP 13–1

The following transactions were carried out by Crozier Manufacturing Limited.

View Solution

Required: Indicate into which category each transaction or adjustment is placed in the statement of cash flows: operating (O), financing (F), or investing (I) activities.

_______ A payment of $5,000 was made on a bank loan.
_______ Depreciation expense for equipment was $1,000.
_______ $10,000 of share capital was issued for cash.
_______ Cash dividends of $2,500 were declared and paid to shareholders.
_______ Bonds were issued in exchange for equipment costing $7,000.
_______ Land was purchased for $25,000 cash.
_______ $750 of accrued salaries was paid.
_______ $5,000 was borrowed by issuing a 60–day note payable.
_______ $10,000 of accounts receivable was collected.
_______ A building was purchased for $80,000: $30,000 was paid in cash and the rest was borrowed.
_______ An long-term investment in shares of another company was sold for $50,000 cash.
_______ Equipment was sold for $6,000. The related accumulation depreciation was $3,000 with an original cost of $10,000.
_______ $1,200 was paid for a 12-month insurance policy in effect next year.
_______ A patent was amortised for $500.
_______ Bonds were issued for $50,000 cash.

CP 13–2

The following table includes transactions carried out by Ram Horn Corporation, as well as columns for each of the three categories found in the statement of cash flows: operating, financing, and investing activities.

View Solution

Required: For each event shown, indicate whether there is an inflow or outflow of cash in each of the categories, and indicate the amount. If the transaction would not appear on the statement of cash flows, explain why.

	Operating Activities In (Out)	*Financing Activities In (Out)*	*Investing Activities In (Out)*
Example			
1. Retired $100 of bonds with cash	________	(100)	________
2. Purchased a building for $90; $60 was borrowed and the rest was paid in cash	________	________	________
3. Declared and paid cash dividends of $12 during the year	________	________	________
4. Purchased equipment by issuing $20 of common shares	________	________	________

5. Paid $50 in cash to pay off a bank loan
6. Sold land for $30 cash
7. Earned net income of $75
8. Purchased equipment costing $15; of this, $5 was paid in cash and the rest with a 90–day note payable
9. Amortised a patent by $2
10. Issued $100 of bonds and repurchased common shares
11. Purchased marketable securities for $5 cash
12. Sold a machine that cost $20 for $7 cash; the accumulated depreciation on it was $10
13. Depreciation expense for building and equipment amounted to $8
14. Paid in cash the note payable in transaction 8 above
15. Issued $20 of preferred shares for cash
16. Purchased a patent for $25 cash
17. Prepaid $20 for the next two months of advertising
18. Purchased $60 of ABC Ltd. common shares for cash.

CP 13–3

View Solution

Required: For each of the following items indicate whether it increases, decreases, or has no effect (N/E) on cash flow:

Cash Flow			
Inc.	Dec.	N/E	
			Example
			1. Earning net income for the year
			2. Redemption of bonds payable
			3. Purchase of inventory
			4. Issuing common shares for equipment
			5. Issuing bonds for cash
			6. Declaring a cash dividend
			7. Collection of an account receivable
			8. Payment of an account payable
			9. Purchase of land for cash
			10. Issuing common shares for cash
			11. Reclassifying long-term liabilities as current liabilities for the amount to be paid in cash next year
			12. Payment of a cash dividend declared last year
			13. Decrease in market value of marketable securities
			14. Calculated amount owing for income taxes.

Problems

P 13–1

Assume the following balance sheet information:

	End of Year	*Start of Year*
Assets		
Cash	$ -0-	$100
Marketable Securities	100	-0-
	$100	$100
Shareholders' Equity		
Share Capital	$100	$100

Required: Calculate the change in cash and cash equivalents during the year.

P 13–2

Assume the following income statement information:

Sales (all cash)	$35
Operating Expenses	
Depreciation	10
Income before Other Item	25
Other Item	
Gain on Sale of Equipment	8
Net Income	$33

Required:

1. Assume the equipment originally cost $20, had a carrying amount of $4 at the date of disposal and was sold for $12. Prepare the journal entry to record the disposal. What is the cash effect of this entry?
2. Calculate cash flow from operating activities.

P 13–3

Assume the following income statement and balance sheet information for the year ended December 31, 2012:

Sales	$200
Cost of Goods Sold	120
Gross Profit	80
Operating Expenses	
Rent	30
Net Income	$50

	2012 *Dr. (Cr.)*	*2011* *Dr. (Cr.)*
Cash	$100	$86
Accounts Receivable	60	40
Inventory	36	30
Prepaid Rent	10	-0-
Retained Earnings	(206)	(156)

Required: Calculate cash flow from operating activities.

P 13–4

Assume the following income statement and balance sheet information:

Service Revenue (all cash)	$300
Operating Expenses	
Supplies	200
Income Before Income Taxes	100
Income Taxes	20
Net Income	$ 80

	2012 *Dr. (Cr.)*	*2011* *Dr. (Cr.)*
Cash	$135	$38
Accounts Payable	(15)	(6)
Income Taxes Payable	(20)	(12)
Retained Earnings	(100)	(20)

Required: Prepare the cash flow from operating activities section of the SCF.

P 13–5

Assume the following income statement and balance sheet information:

Revenue	$ -0-
Depreciation Expense	(100)
Net Loss	$(100)

	2012 *Dr. (Cr.)*	*2011* *Dr. (Cr.)*
Cash	$350	$650
Machinery	500	200
Accumulated Depreciation — Machinery	(250)	(150)
Retained Earnings	(600)	(700)

No machinery was disposed during the year. All machinery purchases were paid in cash.

Required:

1. Prepare a journal entry to record the depreciation expense for the year. Determine the cash effect.
2. Prepare a journal entry to account for the change in the Machinery balance sheet account. What is the cash effect of this entry?
3. Prepare a statement of cash flows for the year ended December 31, 2012.

P 13–6

Assume the following income statement and balance sheet information:

Service Revenue (all cash)	$175
Operating Expenses	
Salaries (all cash)	85
Net Income	$90

	2012 *Dr. (Cr.)*	*2011* *Dr. (Cr.)*
Cash	$1,250	$1,600
Marketable Securities	100	200
Borrowings	(600)	(1,000)
Common Shares	(200)	(300)
Retained Earnings	(550)	(500)

Other information: All dividends were paid in cash. The marketable securities will be converted to cash in 60 days.

Required:

1. Calculate cash flow from operating activities.
2. Calculate the amount of dividends paid during the year.
3. Calculate cash flow used by financing activities.

P 13–7

The following transactions occurred in the Hubris Corporation during the year ended December 31, 2012.

a. Net income for the year (accrual basis)	$800
b. Depreciation expense	120
c. Increase in wages payable	20
d. Increase in accounts receivable	40
e. Decrease in merchandise inventory	50
f. Amortisation of patents	5
g. Payment of non-current borrowings	250
h. Issuance of common shares for cash	500
i. Payment of cash dividends	30

Other information: Cash at December 31, 2012 was $1,200.

Required:

1. Prepare a cash flow table. The first two columns are not necessary. Enter amounts above in the "Change" columns. (*Hint*: the change to cash is the balancing figure in the change columns.
2. Prepare a statement of cash flows.

P 13–8

During the year ended December 31, 2012, the Wheaton Co. Ltd. reported $95,000 of revenues, $70,000 of operating expenses, and $5,000 of income taxes expense. Following is a list of transactions that occurred during the year:

a. Depreciation expense, $3,000 (included with operating expenses)
b. Increase in wages payable, $500
c. Increase in accounts receivable, $900
d. Decrease in merchandise inventory, $1,200
e. Amortisation of patent, $100
f. Non-current borrowings paid in cash, $5,000
g. Issuance of common shares for cash, $12,500
h. Equipment, cost $10,000, acquired by issuing common shares
i. At the end of the fiscal year, a $5,000 cash dividend was declared, payable one month later
j. Old machinery sold for $6,000 cash; it originally cost $15,000 (one-half depreciated). Loss reported on income statement as ordinary item and included in the $70,000 of operating expenses.
k. Decrease in accounts payable, $1,000.
l. Cash at January 1, 2012 was $1,000; change in cash during the year, $37,900
m. There was no change in income taxes owing.

Required:

1. Prepare a cash flow table. The first two columns are not necessary. Enter amounts above in the "Change" columns.
2. Prepare a statement of cash flows.
3. Explain what this statement tells you about Wheaton Co. Ltd.

P 13–9

The comparative balance sheets of Glacier Corporation showed the following at December 31.

	2012	*2011*
Debits		
Cash	$ 10	$ 8
Accounts Receivable	18	10
Merchandise Inventory	24	20
Non-current Investments	10	24
Property, Plant, and Equipment	94	60
	$156	$122
Credits		
Accumulated Depreciation	$ 14	$ 10
Accounts Payable	16	12
Borrowings	40	32
Common Shares	60	50
Retained Earnings	26	18
	$156	$122

The income statement for 2012 appears below:

Glacier Corporation
income statement
For the Year Ended December 31, 2012

Sales		$300
Cost of Sales		200
Gross Profit		100
Operating Expenses		
Rent	$77	
Depreciation	6	83
Income from Operations		17
Other Gains (Losses)		
Gain on Sale of Equipment	1	
Loss on Sale of Investments	(4)	(3)
Net Income		$ 14

Additional information:

a. Cash dividends paid during the year amounted to $6.
b. Equipment was sold during the year that originally cost $7. Carrying amount was $5.
c. No non-current investments were purchased. These assets consist of shares in other companies.

Required:

1. Prepare a cash flow table.
2. Prepare a statement of cash flows for the year ended December 31, 2012.
3. Comment on the operating, financing, and investing activities of Glacier Corporation for the year ended December 31, 2012.

P 13–10

The following trial balance has been prepared from the ledger of Obelisk Corporation at December 31, 2012, following its first year of operations.

	Account Balances	
	Debits	*Credits*
Cash	$ 45	
Accounts Receivable	100	
Merchandise Inventory, Ending	60	
Prepaid Rent	10	
Equipment	160	
Accumulated Depreciation—Equipment		$ 44
Land	-0-	
Accounts Payable		50
Dividends Payable		5
Income Taxes Payable		8
Bonds Payable—due 2018		80
Common Shares		140
Retained Earnings		-0-
Dividends Declared	15	
Sales		225
Depreciation	44	
Cost of Goods Sold	92	
Selling and Administrative Expenses	39	
Income Taxes Expense	7	
Gain on Sale of Land		20
	$572	$572

Additional information:

a. Obelisk issued bonds during the year for $100 cash.
b. Obelisk issued common shares for equipment, $40. Other equipment was purchased for cash. No equipment was sold during the year.
c. Land costing $30 was purchased, then sold during the year for $50.
d. Some bonds were reacquired during the year for $20 cash. There was no gain or loss.
e. The company declared dividends of $15 during the year.

Required:

1. Calculate retained earnings at December 31, 2012.
2. Prepare a statement of cash flows.
3. Explain what the statement of cash flows tells you about Obelisk Corporation at December 31, 2012.

P 13–11

The balance sheet information of Cormier Limited at December 31 appears below.

	2012	*2011*
Debits		
Cash	$ 40	$ 30
Accounts Receivable	38	28
Merchandise Inventory	102	106
Prepaid Expenses	8	6
Non-current Investments	-0-	20
Buildings	240	180
Machinery	134	80
Patents, at carrying amount	8	10
	$570	$460
Credits		
Accounts Payable	$ 40	$ 44
Income Taxes Payable	8	6
Accumulated Depreciation	76	80
Non-current Borrowings	70	60
Common Shares	310	240
Retained Earnings	66	30
	$570	$460

The following additional information is available:

a. Net income for the year was $56,000; income taxes expense was $20,000.
b. Depreciation recorded on building and machinery was $14,000.
c. Amortisation of patents amounted to $2,000.
d. Machinery costing $30,000 was purchased; one-third was paid in cash and a 5-year interest-bearing note was given for the balance.
e. Machinery costing $60,000 was purchased, and was paid for by issuing 6,000 common shares.
f. Machinery was sold for $16,000 that originally cost $36,000 (one-half depreciated); loss or gain reported in the income statement.
g. Addition to building was made costing $60,000; paid cash.
h. The long-term investment of $20,000 was sold for $24,000 cash during the year. The related gain was reported in the income statement.
i. Cash dividends of $20,000 were paid.
j. No share capital was reacquired.

Required:

1. Prepare a cash flow table.
2. Prepare a statement of cash flows at December 31, 2012.
3. What observations about Cormier can you make from this statement?

Alternate Problems

AP 13–1

Assume the following information:

	End of Year	*Start of Year*
Assets		
Cash	$100	$50
Liabilities		
Demand Bank Loan	$100	$50

View Solution

Required: Calculate the change in cash and cash equivalents during the year, and the ending balance.

AP 13–2

Assume the following income statement information:

Service Revenue (all cash)		$235
Operating Expenses		
Rent	$ 50	
Amortisation of Leasehold Improvements	20	
Salaries	100	170
Income From Operations		65
Other Item		
Loss on Sale of Investment		(18)
Net Income		$ 47

Assume that rent and salaries expenses are all paid in cash.

View Solution

Required:

1. Prepare the journal entry to record the amortisation of leasehold improvements. What is the cash effect of this entry?
2. Assume that the investment was recorded at its original cost of $32 on the balance sheet at the disposal date and was sold for $14. Prepare the journal entry to record the disposal. What is the cash effect of this entry?
3. Calculate the cash flow from operating activities.

AP 13–3

Assume the following income statement and balance sheet information:

Sales	$400
Cost of Goods Sold	180
Gross Profit	220
Operating Expenses	
Insurance	50
Net Income	$170

	End of Year	*Start of Year*
Accounts Receivable	$35	$42
Inventory	56	65
Prepaid Insurance	8	12

View Solution

Required: Calculate the cash flow from operating activities.

AP 13–4

Assume the following income statement and balance sheet information:

Service Revenue (all cash)	$500
Operating Expenses	
Supplies	260
Income Before Income Taxes	240
Income Taxes	100
Net Income	$140

	End of Year	*Start of Year*
Accounts Payable	$26	$32
Income Taxes Payable	8	17

View Solution

Required: Prepare the cash flow from operating activities section of the SCF.

AP 13–5

Assume the following income statement and balance sheet information:

Revenue	$ -0-
Gain on Sale of Equipment	500
Net Income	$500

	End of Year	*Start of Year*
Equipment	$ -0-	$1,000
Accumulated Depreciation—Equipment	-0-	(600)

No equipment was purchased during the year. Equipment was sold for cash during the year.

View Solution

Required:

1. Calculate the amount of cash for which the equipment was sold.
2. Prepare the journal entry to record the sale of the equipment.
3. Calculate the cash flow from operating activities and investing activities.

AP 13–6

Assume the following balance sheet information:

	End of Year	*Start of Year*
Mortgage Payable	$2,000	$1,600
Preferred Shares	1,300	800
Common Shares	200	150

There were no income statement transactions during the year.

View Solution

Required: Calculate the cash provided by financing activities.

AP 13–7

The comparative balance sheets of Sovereign Corporation showed the following information at December 31.

	2012	*2011*
Debits		
Cash	$ 22	$ 20
Marketable Securities	30	38
Merchandise Inventory	110	104
Prepaid Expenses	16	6
Land	-0-	20
Buildings	240	180
Machinery	124	80
Patents, at carrying amount	8	10
	$550	$458
Credits		
Accounts Payable	$ 16	$ 24
Dividends Payable	26	18
Income Taxes Payable	4	6
Accumulated Depreciation	78	80
Non-current Borrowings	70	60
Common Shares	300	240
Retained Earnings	56	30
	$550	$458

Additional data for 2012:

a. Net income for the year amounted to $48, including income taxes expense of $12.
b. Amortisation of patents amounted to $2.
c. Purchased machinery for $30, paying $10 in cash, and gave a 5–year note for the balance.
d. Purchased $50 of machinery through the issue of common shares.
e. Paid $60 cash for an addition to the building.
f. Sold land for $24 (gain or loss is included in the income statement).
g. Declared cash dividends of $22.
h. Depreciation expense for the year amounted to $16.
i. Sold machinery for $14 that had originally cost $36; it was one-half depreciated at the time of sale (gain or loss is included in the income statement).
j. The marketable securities will be sold in 60 days for a known amount of cash.

View Solution

Required:

1. Explain the appropriate treatment of items c. and d. above.
2. Prepare a cash flow table.
3. Prepare a statement of cash flows.
4. Explain what the statement of cash flows tells you about Sovereign Corporation.

AP 13–8

The records of Cambria Corporation showed the following information in the balance sheet accounts at December 31, 2012 and 2011.

	2012	*2011*
Debits		
Cash	$ 11	$ 10
Marketable Securities	24	19
Merchandise Inventory	53	52
Prepaid Expenses	1	3
Non-current Investments	-0-	10
Property, Plant, and Equipment, net	147	95
	$236	$189
Credits		
Accounts Payable	$ 8	$ 12
Demand Bank Loan	2	3
Non-current Notes Payable	48	39
Common Shares	150	120
Retained Earnings	28	15
	$236	$189

Additional information for 2012:

a. Net income was $24; there were no income taxes.
b. Cash dividends of $11 were paid.
c. Depreciation expense was $3.
d. Common shares were given in exchange for equipment costing $30.
e. A building was purchased for $25; $16 was paid in cash and a non-current note payable was issued for the difference.
f. Non-current investments purchased for $10 were sold for a $6 gain. The gain is included in net income.
g. Marketable securities will be sold in 30 days for a known amount.

View Solution

Required:

1. Explain the appropriate treatment for items d. and e. above.
2. Prepare a cash flow table.
3. Prepare a statement of cash flows.
4. Explain what the statement of cash flows tells you about the Cambria Corporation.

AP 13–9

The comparative balance sheets for Sors Limited at December 31 were as follows:

Sors Limited
Balance Sheets
At December 31

	2012	2011
Assets		
Cash	$ 6,000	$ 7,000
Accounts Receivable	3,000	4,500
Merchandise Inventory	12,000	11,000
Non-current Investments	13,000	10,000
Land	10,000	-0-
Equipment	40,000	30,000
Accumulated Depreciation	(10,000)	(8,000)
	$ 74,000	$54,500
Liabilities and Shareholders' Equity		
Accounts Payable	$ 5,000	$ 7,000
Bonds Payable, due in one year	6,000	6,000
Bonds Payable, non-current	10,000	16,000
Common Shares	8,000	3,000
Retained Earnings—Unrestricted	26,250	22,500
—Restricted	18,750	-0-
	$ 74,000	$54,500

Additional information for 2012:

a. Net income for the year was $27,500. There were no income taxes.
b. No non-current investments were sold.
c. No land was sold.
d. Equipment was purchased for $20,000 in exchange for common shares valued at $5,000, plus $15,000 cash.
e. Equipment costing $10,000 was sold for $12,000 cash; a $3,000 gain was reported in net income.
f. Cash dividends of $5,000 were declared and paid.

View Solution

Required:

1. Prepare a cash flow table.
2. Prepare a statement of cash flows.
3. What observations about Sors Limited can you make from the SCF?

Decision Problems

DP 13–1

The balance sheet, income statement, and statement of changes in equity of Big Dog Carworks Ltd. for the years ended December 31, 2017 through 2019 were presented in Figure 12-1 of chapter 12. Refer to these.

Additional information:

1. Marketable securities are held to meet ongoing cash requirements and are liquidated 120 days after each balance sheet date.
2. Accounts receivable consist of the following ($000s):

	2019	*2018*	*2017*
Trade accounts receivable	$600	$406	$302
Allowance for doubtful accounts	(56)	(36)	(45)
Net trade receivables	544	370	257
Insurance proceeds from warehouse fire (see Note 4 below)	-0-	50	-0-
Total	$544	$420	$257

3. Inventory at December 31, 2019 was reduced by $200,000 due to obsolescence of some items.
4. During 2018, a warehouse building costing $100,000 and with a carrying amount of $47,000 was destroyed by fire. Insurance proceeds of $50,000 were received in 2009 and recorded as part of accounts receivable at December 31, 2018 (see note 2 above). The gain on disposal was recorded as part of selling, general, and administrative expenses on the 2018 income statement. There were no other disposals of property, plant, and equipment in 2018 and 2019.
5. Borrowings consist of the following ($000s):

	2019	*2018*	*2017*
Demand bank loan	$600	$570	$ -0-
Amount due to shareholder	225	-0-	-0-
Total	$825	$570	$ -0-

The shareholder loan is subordinated to the demand bank loan. That is, it may not be repaid before the bank loan.

6. Accounts payable at December 31, 2019 include $80,000 of Dividends payable (2018 and 2017: $-0-).

Required:

1. Prepare cash flow tables for 2018 and 2019. State any assumptions you make.
2. Prepare a comparative statement of cash flows for the years ended December 31, 2018 and 2019.
3. Review the BDCL financial statements' ratio analysis conducted in chapter 12. What additional information does the SCF provide, in your opinion? What ratio analyses are reinforced?

DP 13–2

Refer to DP 12-4 (Acme Auto Parts Ltd.) in chapter 12.

Required:

1. Prepare cash flow tables for 2018 and 2019. State any assumptions you make.
2. Prepare a comparative statement of cash flows for the years ended December 31, 2018 and 2019.
3. Interpret the SCF results. Does this affect your decision as the loans officer to grant Acme's request for a $10M loan?

GLOSSARY OF TERMS

Accelerated depreciation	A method of allocating the cost of a capital asset to future periods that assumes the asset contributes more to earning revenue in the earlier stages of its useful life and less in its latter stages.
Account	An accounting record in the general ledger designed to classify and accumulate the dollar effect of financial transactions affecting one financial statement item.
Account form balance sheet	Liabilities and equities are listed to the right of the assets.
Accounting cycle	The individual steps required to process accounting information during a period of time and produce financial statements.
Accounting equation	A financial formula that states that total assets of an entity must always equal the total claims against those assets by creditors and owners. It can be stated as ASSETS = LIABILITIES + EQUITY; see also *double-entry bookkeeping.*
Accounting Standards Board (AcSB)	The committee responsible for issuing accounting pronouncements in Canada.
Accounts payable	Money owed to creditors for products or services purchased on credit by a company.
Accounts receivable	Money owed by customers for products or services purchased on account (or *on credit*) from a company.
Accounts receivable collection period	Average accounts receivable divided by credit sales, multiplied by 365 days.
Accrual basis of accounting	A system of recording revenue when earned and expenses when incurred to earn revenue, not necessarily when cash is received or paid.
Accrued expenses	An increase in expenses during the current accounting period that will be paid in cash in a future accounting period.
Accrued revenues	An increase in revenues during the current accounting period that will be received in cash in a future accounting period.
Acid-test ratio	Cash and other current assets that are readily converted into cash, divided by current liabilities.

Adjusted trial balance	A listing of accounts and their balances after the posting of adjusting entries to the General Ledger accounts. The list is used to prove the equality of debits and credits prior to the preparation of financial statements.
Adjusting entries	Accounting changes made at the end of an operating cycle to update the accounts of an entity.
After-tax operating profit ratio	After-tax income from operations divided by net sales. Used to calculate the Scott formula.
Ageing of accounts receivable	The categorisation of amounts owing from customers based on time elapsed since the creation of the receivable.
Allowance for doubtful accounts	A contra asset (valuation) account, showing the estimated amount of accounts receivable that will not be collected at a point in time.
Amortisation (of an intangible asset)	The process of allocating the cost of an intangible asset over its estimated useful life.
Assets	Resources that are expected to bring future economic benefits to an enterprise.
Audit	An external examination of a company's financial statement information and its system of internal controls.
Auditor's report	An opinion of a professional accountant on the financial statements of an entity; states whether the financial statements present fairly the financial position and operating results of the entity and whether these statements have been prepared consistently in accordance with generally accepted accounting principles.
Authorised shares	The designated number of ownership units of each class of share capital that a corporation may issue.
Balance sheet	A financial report showing the assets, liabilities, and equities of an entity on a specific date; also referred to as a *statement of financial position*.
Balance sheet method (of estimating allowance for doubtful accounts)	A method of estimating bad debts expenses. An uncollectible amount is estimated based on the length of time accounts receivable have been outstanding.

Bank reconciliation	A schedule that explains the differences between cash shown on a bank statement and a company's books at a point in time; the process of comparing the items shown on the bank statement with entries made in the records of a company and identifying discrepancies.
Bank statement	A document sent usually each month by a financial institution to a customer that lists the beginning balance of cash on deposit, deposits received and other increases to the account during the month, cheques paid and other charges to the account, and an ending balance.
Bearer bond	A bond whose ownership is not tracked. Title passes on delivery of the bond to a new owner. Interest coupons attached to the bond are clipped and submitted to the issuing corporation for payment.
Board of directors	Elected representatives of a corporation's shareholders.
Bond	A debt security requiring the payment of a sum of money at a fixed date in the future, together with periodic interest payments over the life of the debt.
Bond indenture	A legal document specifying the terms of a bond issue with which the issuing corporation will comply.
Book value (of shares)	The amount of net assets of a corporation represented by one (usually common) share.
Call provision	A bond feature that permits the early redemption of a bond at a specified price, usually above face value.
Capital account (of a partnership or proprietorship)	A permanent account used to record the capital investment and withdrawals a proprietor or of each partner, and record the allocation of the profits and losses of a partnership.
Capital assets	Property, plant, equipment and other capital assets expected to have a useful life of more than one year; also called *long-lived assets.*
Capital expenditure	Cost of acquiring property, plant, or equipment or other assets that have economic benefits beyond one year; contrasts with *revenue expenditure.*
Carrying amount	The original cost of property, plant, or equipment less related accumulated depreciation; also called *net book value.*

Cash	Anything that will be accepted by a bank as a deposit; serves as a unit of account, a medium of exchange, and a store of purchasing power. Includes cash on deposit with a bank, cash on hand, and petty cash.
Cash equivalents	Short-term, highly liquid investments that are easily converted to a known amount of cash within three months, and that are subject to insignificant risk of changes in value.
Chart of accounts	A list of account names and numbers used in the general ledger; usually orders as they are presented in the financial statements.
CICA handbook	A codification of research pronouncements and accounting principles published by the Canadian Institute of Chartered Accountants (CICA).
Classified financial statements	Information that is grouped into meaningful, similar categories in financial reports.
Closing entries	The entries in a general ledger that reduce revenue and expense balances to zero in preparation for the next fiscal year.
Contra account	An account that is deducted from a property, plant, or equipment account. This decreases the overall value of the PPE on the balance sheet, but still allows the original cost of the asset to be retained in the accounting records; also called a *valuation* account.
Conversion provision (of a bond)	A feature whereby a bond may be converted into a specified number of shares of the company at the option of the bondholder.
Convertible bond	A bond that may be exchanged for common shares under certain specified conditions.
Copyright	The exclusive right granted by the state to publish a literary or artistic work.
Corporate social responsibility (CSR)	The process of corporate self-monitoring and reporting to ensure compliance with ethical standards, international social norms, and promotion of the public interest.
Corporation	An entity that is legally separate from shareholders and that issues ownership units called shares**.**
Cost-benefit considerations	Financial information is disclosed only if the perceived benefits for financial statement readers exceed the cost of obtaining and disclosing the information.

Credit	The right side of a general ledger T–account.
Creditor	A person or organization that lends money to an entity that must be repaid at a later date.
Cumulative preferred shares	Shares on which undeclared dividends accumulate. These dividends have to be paid in the future before any dividends can be paid on common shares.
Current assets	Economic resources that are expected to be converted to cash or consumed during the next year.
Current liabilities	Obligations that will be paid within one year or within the normal operating cycle, whichever is longer.
Current ratio	Current assets divided by current liabilities.
Date of declaration	The date on which the dividend is declared; compare to *date of record* and *date of payment*
Date of record	Dividends are paid to the shareholders who own shares at this date; compare to *date of declaration* and *date of payment.*
Date of payment	The date on which dividends are actually paid; compare to *date of declaration* and *date of record*.
Debenture	A formal document stating that a company is liable to pay a specified amount with interest to certain creditors, usually several years in the future. The debt is not secured.
Debit	The left side of a general ledger T–account.
Debt to equity ratio	A ratio indicating the relative creditor to shareholder claims on the assets of an entity; total liabilities divided by shareholders' equity.
Deficit	The balance in the general ledger Retained Earnings account that occurs when a company's expenses incurred and dividends declared have exceeded revenues over the life of the corporation.
Depreciation	The systematic allocation of the cost of property, plant, and equipment to expense.
Discount	The excess of the face value of a bond over the amount received by the issuer.
Dividends	The means by which profit is distributed to shareholders.

Dividend yield ratio	Dividends per share divided by market price per share.
Double-entry bookkeeping	A procedure for recording financial information in a financial accounting system, whereby every transaction or event affects at least two different general ledger accounts in an equal and offsetting manner; see also *accounting equation*.
Drawings account (of a partnership or proprietorship)	A temporary account used to record the withdrawal of cash or other assets by a proprietor or partner.
Earnings-per-share (EPS)	Net income less preferred share dividends, divided by number of common shares outstanding.
Entity	A unit of accountability that exists separately from its owners.
Entity concept	An accounting assumption that views an organisation as an individual unit of accountability separate from its owners.
Equity	The amount of assets available to owners of the entity after all liabilities have been deducted; also referred to as *shareholders' equity* or *net assets*.
Ethics	Beliefs that help differentiate right practices from wrong.
Expenses	Decreases in assets or increases in liabilities incurred to earn income.
Face value (of a bond)	The amount to be paid at the maturity date of a bond; also called the *par-value*.
Fair value (FV)	The cost of an asset negotiated between two independent parties.
Finance lease	An agreement whereby, in return for a series of payments, a lessee obtains the right from a lessor to use an asset for a specified period of time. During this period, substantially all the risks and rewards of ownership are transferred to the lessee.
Financial accounting	The process of recording, classifying, and accumulating financial transactions of an entity; the reporting of these transactions in a set of financial statements.
Financial capital	Net financial debt plus shareholders' equity. Financial capital always equals operating capital. Both are used to calculate the Scott formula.

Financial statement	A formal record of the financial activities of an entity
Financial transaction	An exchange of assets, obligations, services, or goods expressed in terms of a monetary unit like dollars.
First in, first out (FIFO)	An inventory cost flow assumption whereby first inventory items purchased are deemed to be the first goods sold.
Fiscal year	A 12–month accounting period that might coincide with the calendar year.
Flow of goods	The sequence in which purchased goods are assumed to be sold; includes first-in, first-out; last-in, first-out, and weighted average valuation techniques.
Fob (free on board) shipping point	Title to shipped goods passes when the goods leave the shipping point. The purchaser pays for shipping.
Fob (free on board) destination	Title to shipped goods passes when the goods reach their destination. The supplier pays for shipping.
Franchise	A legal right granted by one company to another to render a certain service or to produce a specified good.
General journal	A chronological record of an entity's financial transactions showing how equal and offsetting debits and credit entries affect applicable general ledger accounts.
General ledger	A record that contains the asset, liability, equity, revenue, and expense accounts of an entity, transactions affecting the applicable account, and the ending net debit or credit balance in the account.
Generally accepted account principles (GAAP)	The set of commonly-used principles, standards and procedures used to prepare financial statements.
Going concern	An accounting concept that assumes a company will continue to operate into the foreseeable future.
Goodwill	The value attached to the ability of a corporation to generate superior earnings compared to other companies in the same industry.
Gross profit	The excess of sales price over cost of the goods sold, also referred to as *gross margin*.

Gross profit method	Cost of goods sold is estimated by multiplying sales by the gross profit percentage. Ending inventory is calculated as the difference between cost of goods available and cost of goods sold.
Gross profit percentage	Gross profit divided by sales price times 100.
Gross profit ratio	Gross profit divided by net sales.
Historical cost	The original monetary value of an economic item.
Horizontal analysis	A means to analyse financial statements by calculating percentage changes in components over two or more years; contrasts with *vertical analysis.*
Impairment loss	The amount by which a capital asset's recoverable amount is less than its carrying amount.
Imprest petty cash system	A method of accounting for small cash disbursements that requires reimbursement of cash kept on hand in an amount equal to the sum of receipts presented.
Income statement	A financial report that summarises an entity's revenue less expenses over a time period.
Income statement method (of estimating bad debt expense)	A procedure used to estimate bad debt expense based on credit sales on the income statement. Bad debt expense is calculated by applying an estimated loss percentage to sales for the period.
Income summary	A temporary account used to accumulate all revenue and expense balances at the end of the fiscal year. This account summarises the net income (or net loss) for the period and is then closed to the retained earnings account.
Internal controls	The policies and procedures implemented by management to protect assets.
Issued shares	The cumulative total number of authorised shares that has been issued in the name of shareholders.
Intangible assets	Long-lived assets that lack physical substance.
Interest on partners' capital balances	A mechanism used for dividing a portion of the income of a partnership among partners by calculating interest on amounts that each partner has contributed at a point in time.
Interim financial statements	Financial reports prepared for a period of less than twelve months.

Internal controls	The processes instituted by management of an company to direct, measure, and monitor its objectives. This includes the prevention and detection of fraud and error.
International Accounting Standards Board (IASB)	An accounting body that develops International Financial Reporting Standards.
Inventory	Assets that are produced for sale or purchased for re-sale by a company.
Journal entry	An entry recorded in the general journal with at least one debit and one credit.
Journalising	The process of recording a transaction in an accounting journal.
Laid-down costs	Costs incurred to purchase, convert, transport, and otherwise prepare inventory for sale.
Last-in, first-out (LIFO)	An inventory cost flow concept that assumes the most recent inventory items purchased are sold first.
Ledger account	Record in a general ledger to which debit or credit parts of transactions are posted.
Leverage	The ability to earn returns on assets in excess of the interest rate paid on borrowed funds used to acquire the assets.
Liabilities	Obligations to pay assets in the future, resulting from past transactions.
Liquidation	Closure of an entity through sale of the assets, payment of creditors, and distribution of remaining cash to owners.
Liquidity	The ability of a company to satisfy its current liabilities as they come due.
Loan	A sum of money lent for interest.
Long-lived assets	Property, plant, equipment and other capital assets expected to have a useful life of more than one year; also called *capital assets.*
Lower of cost and net realizable value (LCNRV)	The value of ending inventory is determined by calculating its cost, then its net realisable value. The lesser value is chosen.
Mark-up	Retail selling price divided by the cost of an item.

Matching principle	Expenses are recognised in an appropriate time period or when related revenue is recognised.
Materiality	Financial information is considered material when its omission could influence the economic decisions of financial statement readers.
Maturity date (of debt)	The date specified for repayment of an amount owing.
Measuring unit	Accounting information is consistently valued in one currency (for example, Canadian dollars); the purchasing power of the currency is assumed to be stable.
Merchandise inventory	Goods held for resale by a retailer or a wholesaler.
Merchandising	The activity of buying and selling goods that are already made.
Mixed accounts	Accounts containing both a balance sheet and income statement portion at the date of adjusting entry preparation.
Mortgage	A debt secured by real property. A mortgage is also a legal document that states the existence of the loan and what property secures it.
Mutual agency (in a partnership)	The ability of a partner to make business decisions in the normal course of operations, which are legally binding on other partners.
Natural year end	The end of a fiscal year when business operations are at a low point.
Net book value	The original cost of property, plant, or equipment less related accumulated depreciation; also called *carrying amount.*
Net financial debt	Borrowings less cash and marketable securities. Used to calculate the Scott formula.
Net income	The excess of revenues over expenses; same as *profit*
Net profit ratio	Net income divided by net sales.
Net realisable value (NRV)	The estimated selling price of inventory under normal business conditions less any estimated remaining costs necessary to prepare the goods for sale.
Nominal value	The amount for which a share is originally issued; also called the *stated* value.

Non-cumulative preferred shares	Shares on which a dividend will be received only if dividends are declared in a given year.
Non-current assets	Assets that will be useful for more than one year.
Non-current liabilities	Obligations that do not require repayment until after one year.
Note receivable	An account receivable that has been formally acknowledged by the customer in a legally-binding document. Repayment terms are stated. Since it usually will be paid in installments and over a longer period of time than a normal account receivable, interest is often charged at a specified rate on the unpaid balance.
Number of days of sales in inventory	Average inventory divided by cost of goods sold, multiplied by 365 days.
Operating capital	Working capital from operations plus capital assets (at carrying amounts). Operating capital always equals financial capital. Both are used to calculate the Scott formula.
Operating profit ratio	Income from operations divided by net sales.
Outstanding shares	Authorised shares that have been issued and are held by shareholders.
Par-value (of a bond)	The amount to be paid at the maturity date of a bond; also called the *face value*.
Par-value (of shares)	The amount stated in the corporate charter below which ownership units of a class of shares cannot be sold upon initial offering.
Participating preferred shares	Shares entitled to receive a proportionate share in dividends with common shares after common shares have received a specified dividend payment.
Partnership	An entity owned by two or more persons, each of whom has unlimited liability for the obligations of the entity.
Partnership agreement	A written contract of a partnership, indicating how profits and losses are to be divided, how the partnership can be dissolved, and other matters relating to the entity.
Patent	An exclusive right to produce and sell an invention for a specified number of years.

Periodic inventory method	A method of calculating cost of goods sold whereby a record of individual purchases and sales during a period are not kept. Rather, ending inventory is calculated by physically counting the goods on hand and assigning a cost to these goods. This amount is deducted from cost of goods available for sale to calculate cost of goods sold.
Periodicity concept	Assumes that an entity's business activities can be separated into reporting periods so that financial statements can be prepared regularly.
Permanent accounts	General ledger records that have a continuing balance from one fiscal year to another. All balance sheet accounts are permanent accounts.
Perpetual inventory method	Inventory records are updated after each purchase or sale to show quantities and (often) values of each item on hand at a point in time.
Petty cash fund	A limited amount of money kept on hand in order to pay small cash disbursements. The fund saves the time and expense involved in writing cheques.
Posting	The process of transferring the debit or credit portion of a journal entry to the applicable general ledger account.
Post-closing trial balance	A listing of permanent accounts and their balances after all temporary accounts have been closed; all temporary accounts should have a zero balance after closing.
Premium (on a bond)	The excess of the amount received by the issuer over the face value of a bond.
Prepaid expenses	Assets that are paid in cash beforehand, but have benefits that apply over future periods.
Pre-emptive right	The right of shareholders to maintain their proportionate ownership of the corporation when additional shares are issued.
Preferred shares	Shares that give their owners priority over owners of ordinary shares in some manner, such as payment of dividends.
Prepaid expense	A current asset representing cash paid in advance for future expenses, such as insurance coverage or a subsequent period's rent.

Price-earnings (P/E) ratio	Market price per share divided by earnings per share.
Productive output	A measure of the expected goods to be produced or services to be provided by a long-lived asset.
Profit	The excess of revenues over expenses; same as *net income.*
Property, plant, and equipment (PPE)	Assets that are used for more than one fiscal year to produce goods, supply services, or serve administrative purposes.
Proprietorship	An entity owned by one person who has unlimited liability for the obligations of the entity.
Purchases	A general ledger expense account used to accumulate the cost of merchandise acquired for resale when the periodic inventory system is used.
Purchase returns and allowances	A contra-expense account (to the Purchases general ledger account) used to record the amount of damaged goods or goods returned to suppliers.
Recoverable amount	Fair value of a capital asset less estimated costs to sell it.
Registered bond	The name and address of each holder of a bond issue is recorded by a corporation or its trustee.
Report form balance sheet	Liabilities and equities are listed below assets.
Residual value	The estimated amount that would be received *currently* from the disposal of an asset if it were of the age and condition anticipated at the end of its useful life.
Restricted retained earnings	The assets of a corporation represented by an amount of retained earnings that is not available for dividends; contrasts with *unrestricted retained earnings.*
Retail inventory method	Ending inventory value is estimated by converting selling price to cost based on a known mark-up percentage.
Retained earnings	The accumulated profit of a corporation that has not been distributed to shareholders.
Return on leverage	The return on operating capital in excess of the after-tax interest rate paid on borrowed money, multiplied by the debt to equity ratio of the corporation. Used to calculate the Scott formula.

Return on operating capital	After-tax income from operations divided by operating capital. Used to calculate the Scott formula.
Return on shareholders' equity ratio (ROSE)	Net income divided by average shareholders' equity.
Return on total assets ratio	Income from operations divided by average total assets.
Revenue	Increases in assets or decreases in liabilities in return for services performed or goods sold during a period.
Revenue expenditure	An outlay that has no economic benefit beyond the current period; contrasts with *capital expenditure.*
Revenue operating cycle	The recurrent process from the acquisition of inventory to the sale of inventory and the receipt of cash.
Revenue recognition	The point at which revenue is recognised as earned, as when a service is performed or goods sold.
Reversing entry	A journal entry made at the beginning of a new accounting period to reverse an adjusting entry made in the immediately preceding accounting period that accrued an expense to be paid in cash in the next accounting period or revenue to be received in cash.
Salaries (to partners)	A mechanism used for dividing a portion of the income of the partnership among partners by recognising the differing value of services rendered by each one.
Sales	An account used to accumulate revenue transactions when merchandise is sold.
Sales returns and allowances	A contra account (to the Sales general ledger account); goods returned by customers or price adjustments allowed to customers are recorded in this account.
Sales discounts	A reduction in sales price if cash payment by a customer is made within a certain period.
Sales to operating capital ratio	Net sales divided by operating capital. Used to calculate the Scott formula.
Sales to total assets ratio	Net sales divided by average total capital assets.
Scott formula	Return on shareholders' equity is calculated as the sum of return on operating capital and return on leverage.

Secured bond	A bond issue backed by physical assets of the corporation; also referred to as a *mortgage bond* when real property is pledged.
Securities and Exchange Commission (SEC)	An agency of the US federal government that is influential in the development of accounting principles and reporting practices. It focuses on securities traded on US stock exchanges.
Serial bonds	Bonds with a special feature whereby one portion of the issue matures on one date and other portions mature on other dates.
Share	A unit of ownership in a corporation.
Share capital	A generic classification for all ownership units in a corporation; also referred to as *capital stock*.
Share dividend	A dividend paid in ownership units of a corporation instead of in cash.
Share split	An action taken by a corporation to increase the number of shares outstanding; involves the exchange of originally-issued shares for a larger number of new shares.
Sinking fund bond	A bond issue with a provision for a pre-determined amount of assets to be transferred to an independent trustee over a specified period in order to redeem the bonds at their maturity date.
Source documents	Evidence containing the raw data of the financial transactions of an entity. They include bank deposit slips, cancelled cheques, sales invoices, purchase invoices, insurance policies, contracts of the entity, and utility bills.
Specific identification costing	A method of valuing inventory whereby the cost of an individual item follows the physical item through the purchase and sales cycle.
Stated value (of a share)	The amount for which a share is originally issued; also called the *nominal* value.
Statement of cash flows	A financial statement that explains the sources (inflows) and uses (outflows) of cash over a period of time.
Statement of changes in equity	A financial statement of a corporation that provides information about changes to retained earnings and share capital over a period of time.

Statement of partners' equity	A financial statement of a partnership that summarises the changes that occurred in partners' Capital accounts during the period.
Stock exchanges	Entities that facilitate the purchase and sale of corporate securities like share capital.
Straight-line method of depreciation	A method of allocating the cost of a capital asset to future periods that assumes the asset contributes to earning revenue equally over its useful life.
T-account	The form of a general ledger account used to illustrate the accumulation of financial information in the general ledger. Debits are recorded on the left of the stem; credits on the right.
Tangible capital assets	Long-lived assets that have an actual physical existence; contrasts with *intangible assets*.
Temporary accounts	General ledger accounts that accumulate revenue and expenses for a fiscal year and that are closed at the end of the fiscal year to the Income Summary account, then to the Retained Earnings account.
Times interest earned ratio	Income from operations divided by interest expense.
Trade–in	The exchange of one capital asset for another, usually a newer one.
Trade–in allowance	The amount allocated to a capital asset being exchanged for another asset.
Trademark	A legal right granted by the state to use a symbol or a word to identify a company or one of its products or services.
Transportation-in	A general ledger expense account used to accumulate freight charges on merchandise purchased for resale; these charges are added to the purchase cost of merchandise on the income statement when using the periodic inventory system.
Treasury shares	Issued and outstanding shares that have been repurchased by a corporation.
Trial balance	A list of each general ledger account together with its individual debit or credit balance; used to establish the equality of debits and credits before posting adjusting entries and the the preparation of financial statements.

Trustee	An intermediary who administers the terms of a bond issue between a corporation and the bondholders.
Unearned revenue	Cash received by a company before goods are sold or services are provided.
Unissued shares	The shares that a corporation is authorised to issue but has not yet issued.
Unrestricted retained earnings	An amount of retained earnings representing assets of the corporation that are available for dividends; contrasts with *restricted retained earnings.*
Useful life	The estimated time period that a long-lived asset with a limited life will be used in the operations of a company; alternately, the asset's estimated productive output.
Valuation account	An account that is deducted from a property, plant, or equipment account. This decreases the overall value of the PPE on the balance sheet, but still allows the original cost of the asset to be retained in the accounting records; also called a *contra* account.
Vertical analysis	A comparison of financial statement items by restating them as percentages of a denominator (usually sales or total assets); contrasts with *horizontal analysis.*
Weighted average	A method of inventory valuation whereby the cost of each unit is calculated by dividing total cost of a category by the number of units it contains.
Working capital	The excess of current assets over current liabilities.
Working capital from operations	Liabilities like accounts payable and income taxes payable that arise from normal operating activities are deducted from related assets like accounts receivable and inventory. Used to calculate the Scott formula.
Year-end	The last day of a 12-month period, the period for which annual financial statements are prepared.

Student Solutions Manual to Accompany Introduction to Financial Accounting

Based on International Financial Reporting Standards

David Annand

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January 2, 2014

CHAPTER 1

Introduction to Financial Accounting

CP 1–1

Return to Question

A	=	L	+	+E	
(+)				(+)	Issued share capital for cash
(+)(-)					Purchased a truck for cash
(+)		(+)			Received a bank loan to pay for equipment
(+)(-)					Made a deposit for electricity service to be provided in the future
(-)				(-)	Paid rent expense
		No Effect			Signed a new union contract that provides for increased wages in the future
		No Effect			Hired a messenger service to deliver letters during a mail strike
(-)				(-)	Received a parcel; paid the delivery service
(+)				(+)	Billed customers for services performed
(-)		(-)			Made a cash payment to satisfy an outstanding obligation
(+)(-)					Received a payment of cash in satisfaction of an amount owed by a customer
(+)				(+)	Collected cash from a customer for services rendered
(-)				(-)	Paid cash for truck expenses (gas, oil, etc.)
(-)		(-)		(-)	Made a monthly payment on the bank loan; this payment included a payment on part of the loan and also an amount of interest expense. Equity is affected because interest expense is incurred.
		(-)		(+)	Issued shares in the company to pay off a loan.

CP 1–2

Return to Question

1	Issued share capital for cash
5	Paid an account payable
2	Borrowed money from a bank
3	Collected an account receivable
1	Collected a commission on a sale made today
4	Paid for an advertisement in a newspaper
2	Borrowed cash from the bank
X	Signed a contract to purchase a computer
6	Received a bill for supplies used during the month
3	Received a cash payment in satisfaction of an amount owed by a customer
1	Sent a bill to a customer for repairs made today
3	Sold equipment for cash
2	Purchased a truck on credit, to be paid in six months
X	Requested payment from a customer of an account receivable that is overdue
X	Increased vacations for employees from four weeks to six weeks
6	Recorded the amount due to the landlord as rent
6	Received the monthly telephone answering service bill

CP 1–3

Return to Question

ASSETS			=	LIABILITIES	+	EQUITY		
Cash	+	Equipment	=	Accounts Payable	+	Share Capital	+	Retained Earnings

A. Retained earnings = $5,000 (3,000 + 8,000 - 4,000 - 2,000)
B. Accounts payable = $3,000 (1,000 + 6,000 - 3,000 - 1,000)
C. Cash = $1,000 (4,000 - 1,500 - 3,000 - 500)
D. Retained earnings = $6,000 (6,000 + 7,000 - 3,000 - 4,000)
E. Equipment = $3,500 (2,500-4,500-500-1,000)

CP 1–4

Return to Question

ASSETS = LIABILITIES + EQUITY
Equity at Jan. 1 = $10,000 ($50,000 – 40,000)
Equity at Dec. 31 = $20,000 ($40,000 – 20,000)

The increase in equity during the year was $10,000 ($20,000-10,000). Assuming no capital was added or withdrawn, this must be the amount of net income earned.

CP 1–5

Return to Question

1. L
2. A
3. L
4. A
5. A
6. E
7. L
8. A
9. E
10. E
11. E
12. E
13. A

CP 1–6

Return to Question

1. ASSETS = Cash + Accounts Receivable + Unused Supplies + Land + Building + Equipment
   = \$33,000 + \$82,000 + \$2,000 + \$25,000 + \$70,000 + \$30,000
   = \$242,000
2. LIABILITIES = Bank Loan + Accounts Payable
   = \$15,000 + \$27,000
   = \$42,000
3. ASSETS = LIABILITIES + EQUITY
   EQUITY = \$242,000 - \$42,000
   = \$200,000

Since equity is \$200,000 and retained earnings is \$40,000, share capital must be \$160,000.

CP 1–7

Return to Question

Income Statement

Revenue		
Service Fees		$20,000
Expenses		
Insurance	$1,500	
Miscellaneous	2,500	
Office Supplies	1,000	
Wages	9,000	
Total Expenses		14,000
Net Income		$ 6,000

Statement of Changes in Equity

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$2,000	$ -0-	$2,000
Net Income	-0-	6,000	6,000
Ending Balance	$2,000	$6,000	$8,000

	Assets	
Cash		$ 1,000
Accounts Receivable		4,000
Equipment		8,000
Total Assets		$13,000
	Liabilities	
Accounts Payable		$ 5,000
	Shareholders' Equity	
Share Capital	$ 2,000	
Retained Earnings	6,000	8,000
Total Liabilities and Equity		$13,000

CP 1–8

Return to Question

Adams Ltd.
Income Statement
For the Month Ended January 31, 2011

Revenue		
Services		$3,335
Expenses		
Rent	$ 300	
Repair Supplies	500	
Salaries	1,000	
Miscellaneous	335	
Total Expenses		2,135
Net Income		$1,200

Adams Ltd.
Statement of Changes in Equity
For the Month Ended January 31, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$ -0-	$ -0-	$ -0-
Shares Issued	3,000	-0-	3,000
Net Income	-0-	1,200	1,200
Ending Balance	$3,000	$1,200	$4,200

Adams Ltd.
Balance Sheet
At January 31, 2011

Assets		
Cash	$1,000	
Land	1,000	
Building	2,500	
Total Assets		$4,500
Liabilities		
Accounts Payable		$ 300
Shareholders' Equity		
Share Capital	$3,000	
Retained Earnings	1,200	
Total Equity		4,200
Total Liabilities and Equity		$4,500

AP 1–1

Return to Question

Snider Truck Rentals Corporation
Transaction Worksheet
At May 31,2011

	ASSETS					LIABILITIES	EQUITY		
	Cash	Ppd. Ins.	Supp.	Equip.	Truck	Acct. Pay.	Share Capital	Retained Earnings	
Opening			400	3,000	7,000	4,000	8,000		
	+1,600								
a.	+5,000							+5,000	Rental revenue
b.	-500							-500	Rent expense
c.	-1,500					-1,500			
d.	-600	+600							
e.					+5,000	+5,000			
f.	-3,500							-300	Advertising expense
								-2,500	Salaries expense
								-150	Telephone expense
								-550	Truck operation expense
g.		-50						-50	Insurance expense
h.			-200					-200	Supplies expense
I.	+1,000						+1,000		
	$1,500 +	$550 +	$200 +	$3,000 +	$12,000 =	$7,500 +	$9,000 +	$750	

ASSETS
=$10,730

LIABILITIES + EQUITY =
$10,730

AP 1-2 Return to Question

1.

	ASSETS					LIABILITIES			EQUITY		
	Cash	+ Accounts Receivable	+ Prepaid Rent	+ Supplies	+ Equipment	= Bank Loan	+ Accounts Payable	+ Unearned Revenue	+ Share Capital	+ Retained Earnings	
May 1	+5,000								+5,000		
1	-1,500		+1,500								
2				+1,000			+1,000				
2	+1,000							+1,000			
3		+1,500								+1,500	Repair revenue
4	-50									-50	Advertising
5	+250									+250	Repair revenue
10	+1,500	-1,500									
15	-500						-500				
18	+2,000					+2,000					
22	-3,000				+3,000						
25		+3,500								+3,500	Repair revenue
27	-2,100									-75	Electricity
										-25	Telephone
										-2,000	Wages
31			-500							-500	Rent supplies
31										+600	Repair revenue
31				-800				-600		-800	
	$2,600	+ $3,500	+ $1,000	+ $ 200	+ $3,000	= $2,000	+ $ 500	$ 400	+ $5,000	$2,400	

ASSETS =$10,300

LIABILITIES + EQUITY = $10,300

AP 1-2 continued

2.

Jewell Contractors Corporation
Income Statement
For the Month Ended May 31, 2011

Revenue		
Repairs		$5,850
Expenses		
Advertising	$ 50	
Electricity	75	
Rent	500	
Supplies	800	
Telephone	25	
Wages	2,000	
Total Expenses		3,450
Net Income		$2,400

AP 1–3

Return to Question

Arthur Products Corporation
Balance Sheet
At December 31, 2011

Assets		
Cash		$ 1,000
Accounts Receivable		9,000
Prepaid Expenses		2,250
Land		10,000
Building		25,000
Equipment		5,800
Total Assets		$53,050
Liabilities		
Accounts Payable	$17,000	
Salaries Payable	2,000	$19,000
Equity		
Share Capital	25,000	
Retained Earnings	9,050	34,050
Total Liabilities and Equity		$53,050

Arthur Products Corporation
Income Statement
For the Month Ended December 31, 2011

Revenue		
Fees	$13,600	
Expenses		
Advertising	$1,000	
Insurance	250	
Property Tax	200	
Salaries	3,000	
Telephone	100	
Total Expenses		4,550
Net Income		$ 9,050

Arthur Products Corporation
Statement of Changes in Equity
For the Month Ended December 31, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$ -0-	$ -0-	$ -0-
Shares Issued	25,000	-0-	25,000
Net Income	-0-	9,050	9,050
Ending Balance	$25,000	$9,050	$34,050

AP 1–4

Slemko Bookkeeping Corporation
Income Statement
For the Month Ended September 30, 2011

Revenue		
Service Fees		$6,550
Expenses		
Advertising	$ 50	
Maintenance	250	
Rent	400	
Salaries	2,350	
Supplies	100	
Telephone	75	
Truck Operation	325	
Wages	1,500	
Total Expenses		5,050
Net Income		$1,500

Slemko Bookkeeping Corporation
Balance Sheet
At September 30, 2011

Assets		
Cash		$ 700
Accounts Receivable		6,000
Equipment		2,000
Total Assets		$8,700
Liabilities		
Accounts Payable		$2,200
Equity		
Share Capital	5,000	
Retained Earnings	1,500	6,500
Total Liabilities and Equity		$8,700

Slemko Bookkeeping Corporation
Statement of Changes in Equity
For the Month Ended September 30, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$5,000	$ -0-	$5,000
Net Income	-0-	1,500	1,500
Ending Balance	$5,000	$1,500	$6,500

Return to Question

AP 1–5

1. The fiscal year end is likely August 31, three months prior to November 30, assuming the interim financial statements are prepared for the entirety of the new fiscal year to date.

2. and 3.

Armfeld Industries Ltd.
Income Statement
For the Three Months Ended November 30, 201l

Revenue		
Repairs		$5,000
Expenses		
Advertising	$ 200	
Commissions	1,500	
Insurance	50	
Rent	450	
Wages	2,000	
Total Expenses		4,200
Net Income		$ 800

Armfeld Industries Ltd.
At November 30, 2011

Assets		
Cash		$ 750
Accounts Receivable		2,200
Prepaid Expenses		550
Unused Supplies		300
Equipment		6,000
Total Assets		$9,800
Liabilities		
Bank Loan	$5,000	
Accounts Payable	3,000	8,000
Equity		
Share Capital	1,000	
Retained Earnings	800	1,800
Total Liabilities and Equity		$9,800

Armfeld Industries Ltd.
Statement of Changes in Equity
For the Three Month Ended November 30, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$1,000	$ -0-	$1,000
Net Income	-0-	800	800
Ending Balance	$1,000	$ 800	$1,800

Return to Question

AP 1-6 Return to Question

1.

Polarscape Snow Services Ltd.
Transactions Worksheet
At Ended December 31,2011

	ASSETS					= LIABILITIES		+ EQUITY		
	Cash	+ Accounts Receivable	+ Prepaid Expense	+ Unused Supplies	+ Truck	= Accounts Payable	+ Wages Payable	+ Share Capital	+ Retained Earnings	
Dec. 1	+6,000							+6,000		
1	-4,000				+9,000	+5,000				
2					+2,000	+2,000				
5				+500		+500				
6	-200								-200	Truck operation expense
7	-360		+360							
14	-1,500								-1,500	Wage expense
16	-40								-40	Truck operation expense
20						+350			-350	Truck operation expense
24						+100			-100	Truck operation expense
24	+3,500	-3,500								
27	-500					-500				
28	+400								+400	Service revenue
28	-1,500								-1,500	Wage expense
30	No Effect									
31			-30						-30	Insurance expense
31				-400					-400	Supplies expense
							+450		-450	Wage expense
31										
31		+5,000							+5,000	Service revenue
	$1,800	+ $1,500	+ $330	+ $ 100	+ $11,000	= $7,450	+ $450	+ $6,000	+ $830	

ASSETS =$14,730

LIABILITIES + EQUITY = $14,730

AP 1-6 continued

2.

Polarscape Snow Services Ltd.
Income Statement
For the Month Ended December 31, 201l

Revenue		
Service Fees		$5,400
Expenses		
Insurance	$ 30	
Supplies	400	
Truck Operation	690	
Wages	3,450	
Total Expenses		4,570
Net Income		$ 830

Polarscape Snow Services Ltd.
Balance Sheet
At December 31, 201l

Assets		
Cash		$ 1,800
Accounts Receivable		1,500
Prepaid Expenses		330
Unused Supplies		100
Truck		11,000
Total Assets		$14,730
Liabilities		
Accounts Payable	$ 7,450	
Wages Payable	450	7,900
Equity		
Share Capital	6,000	
Retained Earnings	830	6,830
Total Liabilities and Equity		$14,730

Polarscape Snow Services Ltd.
Statement of Changes in Equity
For the Month Ended December 31, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$ -0-	$ -0-	$ -0-
Shares Issued	6,000	-0-	6,000
Net Income	-0-	830	830
Ending Balance	$6,000	$ 830	$6,830

CHAPTER 2

The Accounting Process

CP 2–1

Transaction	Any Asset		Any Liability		Share Capital		Any Revenue		Any Expense	
	Debit (increase)	*Credit* (decrease)	*Debit* (decrease)	*Credit* (increase)	*Debit* (decrease)	*Credit* (increase)	*Debit* (decrease)	*Credit* (increase)	*Debit* (decrease)	*Credit* (increase)
(1)	X					X				
(2)	X	X								
(3)	X	X								
(4)	X			X						
(5)				X					X	
(6)	X							X		
(7)	X							X		
(8)		X	X							
(9)	X	X								
(10)		X	X							
(11)				X					X	
(12)		X	X							
(13)	X	X								

Return to Question

CP 2–2 Return to Question

ASSETS = LIABILITIES + EQUITY

Current Assets + Long-term Assets = Current Liabilities + Long–Term Liabilities + Share Capital + Net Income

A.	$0	(100+200-50-75-175)
B.	$122	(72+130-10-50-20)
C.	$65	(71-5-25-100-6)
D.	$139	(20+200-10-61-10)

CP 2–3 Return to Question

	Assets		Liabilities		Equity	
	Debit (increase)	*Credit* (decrease)	*Debit* (decrease)	*Credit* (increase)	*Debit* (decrease)	*Credit* (increase)
2. Borrowed $5,000 from the bank	5,000			5,000		
3. Paid $2,000 of the bank loan		2,000	2,000			
4. Paid $600 in advance for a one–year insurance policy	600	600				
5. Received $500 in advance for next month’s rental of office space.	500			500		

CP 2–4 Return to Question

		Debit	*Credit*
2.	Purchased equipment on credit	Equipment	Accounts Payable
3.	Paid for a one–year insurance policy	Prepaid Expenses	Cash
4.	Billed a customer for repairs completed today	Accounts Receivable	Repair Revenue
5.	Paid for this month’s rent	Rent Expense	Cash
6.	Collected the amount billed in transaction 4 above	Cash	Accounts Receivable
7.	Collected cash for repairs completed today	Cash	Repair Revenue
8.	Paid for the equipment purchased in transaction 2 above	Accounts Payable	Cash
9.	Signed a union contract	n/a	
10.	Collected cash for repairs to be made for customers next month	Cash	Unearned Revenue
11.	Transferred this month’s portion of prepaid insurance to expenses	Insurance Expense	Prepaid Expenses

CP 2-5 Return to Question

Cash

(1)	5,000	(2)	900
(5)	7,500	(8)	2,500
(6)	500	(10)	2,000

Bank Loan

(8)	2,500	(5)	7,500

Share Capital

		(1)	5,000

Repair Revenue

		(3)	1,500

Accounts Receivable

(3)	1,500	(6)	500

Accounts Payable

(10)	2,000	(4)	2,000
		(7)	200

Electricity Expense

(7)	200		

Prepaid Expenses

(2)	900	(11)	300

Rent Expense

(11)	300		

Unused Supplies

(4)	2,000	(9)	800

Supplies Expense

(9)	800		

CP 2–6 Return to Question

		Debit	Credit
1.	Cash	3,000	
	Share Capital		3,000
	To record the issuance of share capital.		
2.	Equipment	2,000	
	Accounts Payable		2,000
	To record the purchase of equipment on account.		
3.	Rent Expense	400	
	Cash		400
	To record the payment of rent for the month.		
4.	Supplies	4,000	
	Accounts Payable		4,000
	To record the purchase of supplies.		
5.	Accounts Receivable	2,500	
	Repair Revenue		2,500
	To record repair revenue.		
6.	Accounts Payable	2,000	
	Cash		2,000
	To record the payment on account.		
7.	Cash	500	
	Accounts Receivable		500
	To record collection of an amount owed.		
8.	Cash	1,000	
	Equipment		1,000
	To record the sale of equipment.		

Alternately, two entries could be made

3. Prepaid Expenses	400	
Cash		400
To record payment in advance of rent for the month.		
9. Rent Expense	400	
Prepaid expenses		400
To record rent expense for the month.		

CP 2–7

Return to Question

1. Cash
   Share Capital
   To record the issuance of share capital.

2. Equipment
   Cash
   Accounts Payable
   To record the purchase of equipment.

3. Cash
   Accounts Receivable
   Service Revenue
   To record revenue earned.

4. Accounts receivable
   Service Revenue
   To record revenue earned.

5. Prepaid Rent
   Cash
   To record rent paid in advance.

6. Truck Operation Expense
   Accounts Payable
   To record bill received for truck repairs.

7. Supplies Expense
   Accounts Payable
   To record supplies purchased and used.

8. Cash
   Equipment
   To record the sale of equipment.

9. Rent Expense
   Prepaid Rent
   To record rent for the month.

10. Accounts Payable
    Cash
    To record payment on account.

11. Cash
    Bank Loan
    To record the receipt of a bank loan.

CP 2-8

Return to Question

Cross Corporation
Trial Balance
At December 31, 2011

	Account Balances	
	Debit	*Credit*
Cash	$120,400	
Accounts Receivable	26,000	
Unused Supplies	6,000	
Land	8,000	
Building	120,000	
Accounts Payable		$ 30,000
Loan Payable		80,000
Share Capital		170,000
Commissions Earned		5,000
Insurance Expense	100	
Rent Expense	1,000	
Salaries Expense	3,000	
Supplies Expense	300	
Telephone Expense	200	-
	$285,000	$285,000
	Total Debits	= Total Credits

Return to Question

CP 2–9

1. March 2011	Schulte Corporation GENERAL JOURNAL			Page 1
	Description	F	Debit	Credit
1	Cash	101	5	
	Share Capital	320		5
	To record issuance of share capital.			
2	Equipment	183	6	
	Cash	101		3
	Accounts Payable	210		3
	To record purchase of equipment for cash and on account.			
3	Prepaid Rent	162	2	
	Cash	101		2
	To record payment of rent in advance.			
15	Cash	101	4	
	Accounts Receivable	110	2	
	Service Revenue	470		6
	To record receipt of payments and billing of customers for work done.			
17	Cash	101	1	
	Equipment	183		1
	To record sale of equipment for cash.			
18	Supplies Expense	668	3	
	Accounts Payable	210		3
	To record purchase of supplies on account.			
24	Accounts Receivable	110	1	
	Service Revenue	470		1
	To record billing of client for work done.			
31	Rent Expense	654	1	
	Prepaid Rent	162		1
	To record write–off of rent expired for the month.			
31	Truck Operation Expense	670	2	
	Accounts Payable	210		2
	To record receipt of bill with respect to truck expenses incurred.			
31	Accounts Payable	210	1	
	Cash	101		1
	To record payment of account payable.			

CP 2-9 continued

2.

Cash No. 101

Mar. 1	5	Mar.2	3
15	4	3	2
17	1	31	1
	10		6
Bal.	4		

Accounts Receivable No. 110

Mar.15	2		
24	1		
Bal.	3		

Prepaid Rent No. 110

Mar. 3	2	Mar.31	1
Bal.	1		

Equipment No. 183

Mar. 2	6	Mar.17	1
Bal.	5		

Accounts Payable No. 210

Mar.31	1	Mar. 2	3
		18	3
		31	2
	1		8
		Bal.	7

Share Capital No. 320

		Mar.1	5

Service Revenue No. 470

		Mar.15	6
		24	1
		Bal.	7

Rent Expense No. 654

Mar.31	1		

Supplies Expense No. 668

Mar.18	3		

Truck Operation Expense No. 670

Mar.31	2		

CP 2–9 continued

3.

Schulte Corporation
Trial Balance
At March 31, 2011

	Account Balances	
	Debit	*Credit*
Cash	$ 4	
Accounts Receivable	3	
Prepaid Rent	1	
Equipment	5	
Accounts Payable		$ 7
Share Capital		5
Service Revenue		7
Rent Expense	1	
Supplies Expense	3	
Truck Operation Expense	2	
	$19	$19

Total Debits = Total Credits

4.

Schulte Corporation
Income Statement
For the Month Ended March 31, 2011

Revenue		
Service Fees		$7
Expenses		
Rent	$1	
Supplies	3	
Truck Operation	2	
Total Expenses		6
Net Income		$1

Schulte Corporation
Statement of Changes in Equity
For the Month Ended March 31, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$ -0-	$ -0-	$ -0-
Shares Issued	5	-0-	5
Net Income	--0-	1	1
Ending Balance	$ 5	$ 1	$ 6

CP 2–9 continued

Schulte Corporation
Balance Sheet
At March 31, 2011

Assets		
Cash		$ 4
Accounts Receivable		3
Prepaid Rent		1
Equipment		5
Total Assets		$13
Liabilities		
Accounts Payable		$7
Equity		
Share Capital	$5	
Retained Earnings	1	6
Total Liabilities and Equity		$13

CP 2–10

Return to Question

McQueen Corp.
Trial Balance
At December 31, 2011

	Account Balances	
	Debit	*Credit*
Cash	$ 15,500	
Temporary Investments	9,600	
Accounts Receivable	10,000	
Prepaid Expenses	8,000	
Service Supplies	2,800	
Land	12,000	
Building	50,000	
Furniture	6,000	
Accounts Payable		$ 8,550
Mortgage Payable		20,000
Notes Payable		10,350
Share Capital	-	75,000
	$113,900	$113,900

CP 2–11

Return to Question

1.

		Debit	Credit
Jun. 1	Cash	25,000	
	Share Capital		25,000
	To record the issuance of share capital.		
1	Rent Expense	500	
	Cash		500
	To record rent paid for the month.		
15	Salaries Expense	1,000	
	Cash		1,000
	To record payment of salaries.		
20	Cash	5,000	
	Repair Revenue		5,000
	To record repair revenue earned.		
23	Unused Supplies	4,000	
	Cash		4,000
	To record the purchase of office supplies.		
27	Telephone Expense	100	
	Accounts Payable		100
	To record telephone expense.		
30	Salaries Expense	1,000	
	Cash		1,000
	To record the payment of salaries.		
30	Temporary Investments	2,000	
	Cash		2,000
	To record the purchase of short term investments.		
30	Land	5,000	
	Building	15,000	
	Loan Payable		4,000
	Cash		16,000
	To record the purchase of land and building.		
30	Supplies Expense	200	
	Unused Supplies		200
	To record office supplies used.		
30	Accounts Receivable	3,000	
	Repair Revenue		3,000
	To record repair revenue earned.		

CP 2–11 continued

2.

Collins Corporation
Trial Balance
June 30, 2011

	Account Balances	
	Debit	*Credit*
Cash	$ 5,500	
Temporary Investments	2,000	
Accounts Receivable	3,000	
Unused Supplies	3,800	
Land	5,000	
Building	15,000	
Accounts Payable		$ 100
Loan Payable		4,000
Share Capital		25,000
Repair Revenue		8,000
Rent Expense	500	
Salaries Expense	2,000	
Supplies Expense	200	
Telephone Expense	100	
	$37,100	$37,100

3.

Collins Corporation
Income Statement
For the Month Ended June 30, 2011

Revenue		
Repairs		$8,000
Expenses		
Rent	$ 500	
Salaries	2,000	
Supplies	200	
Telephone	100	
Total Expenses		2,800
Net Income		$5,200

CP 2-11 continued

Collins Inc.
Statement of Changes in Equity
For the Month Ended January 31, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$ -0-	$ - 0-	$ - -0-
Shares Issued	25,000	0	25,000
Net Income	-0-	5,200	5,200
Ending Balance	$25,000	$5,200	$30,200

Collins Corporation
Balance Sheet
At June 30,2011

Assets		
Cash		$5,500
Temporary Investments		2,000
Account Receivable		3,000
Unused Supplies		3,800
Land		5,000
Building		15,000
Total Assets		$34,300
Liabilities		
Accounts Payable	$ 100	
Loan Payable	4,000	4,100
Equity		
Share Capital	25,000	
Retained Earnings	5,200	30,200
Total Liabilities and Equity		$34,300

CP 2–12

Return to Question

1.

Sabre Travels Inc.
Trial Balance
January 31, 2011

	Account Balances	
	Debit	*Credit*
Cash	$ 60	
Accounts Receivable	140	
Unused Supplies	10	
Equipment	300	
Building	700	
Land	300	
Accounts Payable		$ 20
Bank Loan		100
Share Capital		250
Fees Earned		1,875
Advertising Expense	200	
Repairs Expense	100	
Supplies Expense	20	
Telephone Expense	10	
Utilities Expense	5	
Wages Expense	400	
	$2,245	$2,245

2.

Sabre Travels Inc.
Income Statement
For the Year Ended January 31, 2011

Revenue		
Fees Earned		1,875
Expenses		
Advertising	$200	
Repairs	100	
Supplies	20	
Telephone	10	
Utilities	5	
Wages	400	
Total Expenses		735
Net Income		$1,140

Sabre Travels Inc.
Balance Sheet
At January 31, 2011

Assets		
Cash		$ 60
Accounts Receivable		140
Unused Supplies		10
Equipment		300
Building		700
Land		300
Total Assets		$1,510
Liabilities		
Accounts Payable	$ 20	
Bank Loan	100	
		120
Equity		
Share Capital	250	
Retained Earnings	1,140	1,390
Total Liabilities and Equity		$1,510

CP 2–12 continued

Sabre Travels Inc.
Statement of Changes in Equity
For the Year Ended January 31, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$ 250	$ -0-	$ 250
Net Income	-0-	1,140	1,140
Ending Balance	$ 250	$1,140	$1,390

CP 2-13 Return to Question

1.

Cash

Jan. 1	10,000	Jan. 5	200
11	1,300	4	4,000
		30	1,800
	11,300		6,000
Bal.	5,300		

Accounts Payable

		Jan. 28	450

Share Capital

		Jan.1	10,000

Service Revenue

		Jan. 11	1,300
		31	1,600
		Bal.	2,900

Accounts Receivable

Jan. 31	1,600		

Rent Expense

Jan.5	200		

Unused Supplies

Jan.9	4,000	Jan.31	200
Bal.	3,800		

Truck Operation Expense

Jan.28	450		

Salaries Expense

Jan.30	1,800		

Supplies Expense

Jan.31	200		

CP 2–13 continued

2.

Elgert Corporation
Trial Balance
January 31,2011

	Accounts Balances	
	Debit	*Credit*
Cash	$5,300	
Accounts Receivable	1,600	
Unused Supplies	3,800	
Accounts Payable		$450
Share Capital		10,000
Service Revenue		2,900
Rent Expense	200	
Truck Operation Expense	450	
Salaries Expense	1,800	
Supplies Expense	200	
	$13,350	$13,350

3.

Elgert Corporation
Income Statement
For the Month Ended January 31, 2011

Revenue		
Services		$2,900
Expenses		
Rent	$200	
Truck Operation	450	
Salaries	1,800	
Supplies	200	
Total Expenses		2,650
Net Income		$ 250

CP 2–13 continued

3. (continued)

Elgert Corporation
Statement of Changes in Equity
For the Month Ended January 31, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$ 0	$ 0	$ 0
Shares Issued	10,000	0	10,000
Net Income	0	250	250
Ending Balance	$10,000	$ 250	$10,250

Elgert Corporation
Balance Sheet
At January 31,2011

	Assets	
Cash		$ 5,300
Accounts Receivable		1,600
Unused Supplies		3,800
Total Assets		$10,700
	Liabilities	
Accounts Payable		$450
	Equity	
Share Capital	$10,000	
Retained Earnings	250	10,250
Total Liabilities and Equity		$10,700

AP 2–1

Return to Question

1.

Chipcura Repairs Corporation
Trial Balance
At November 30, 2011

	Account Balances	
	Debit	*Credit*
Cash	$ 2,000	
Accounts Receivable	6,000	
Unused Supplies	500	
Equipment	3,500	
Truck	8,000	
Bank Loan		$ 4,500
Accounts Payable		5,000
Salaries Payable		1,000
Share Capital		8,000
Repair Revenue		8,350
Advertising Expense	500	
Commissions Expense	1,500	
Rent Expense	700	
Salaries Expense	3,000	
Supplies Expense	250	
Truck Operation Expense	900	
	$26,850	$26,850

AP 2–1 continued

2. and 3.

Chipcura Repairs Corporation
Income Statement
For the Month Ended November 30, 2011

Revenue		
Repair Revenue		$8,350
Expenses		
Advertising	$ 500	
Commissions	1,500	
Rent	700	
Salaries	3,000	
Supplies	250	
Truck Operation	900	
Total Expenses		6,850
Net Income		$1,500

Chipcura Repairs Corporation
Balance Sheet
At November 30, 2011

Assets		
Cash		$ 2,000
Accounts Receivable		6,000
Unused Supplies		500
Equipment		3,500
Truck		8,000
Total Assets		$20,000
Liabilities		
Bank Loan	$ 4,500	
Accounts Payable	5,000	
Salaries Payable	1,000	10,500
Equity		
Share Capital	8,000	
Retained Earnings	1,500	9,500
Total Liabilities and Equity		$20,000

Chipcura Repair Corporation
Statement of Changes in Equity
For the Month Ended November 30, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$ -0-	$ -0-	$ -0-
Shares Issued	8,000	-0-	8,000
Net Income	-0-	1,500	1,500
Ending Balance	$8,000	$1,500	$9,500

AP 2–2 Return to Question

1. McRann Auto Repairs Corporation

GENERAL JOURNAL Page 1

Date	Description	F	Debit	Credit
July				
a.	Cash	101	3,000	
	Share Capital	320		3,000
	To record issuance of shares.			
b.	Truck	184	7,000	
	Cash	101		1,000
	Accounts Payable	210		6,000
	To record purchase of truck for $1,000 and remainder on account.			
c.	Accounts Receivable	110	2,500	
	Repair Revenue	450		2,500
	To record billings to customer.			
d.	Unused Supplies	173	500	
	Accounts Payable	668		500
	To record purchases of supplies on account.			
e.	Cash	101	1,500	
	Revenue	450		1,500
	To record cash collected from customers.			
f.	Rent Expense	654	400	
	Cash	101		400
	To record payment of rent.			
g.	Cash	101	1,200	
	Accounts Receivable	110		1,200
	To record collections on account.			
h.	Prepaid Insurance	161	600	
	Cash	101		600
	To record payment of insurance that occurs more than one month.			
i.	Accounts Payable	210	300	
	Cash	101		300
	To record payment on account.			
j.	Cash	101	2,000	
	Accounts Receivable	110		2,000
	To record collection on account.			

AP 2-2 continued

McRann Auto Repairs Corporation
General Journal Page 2

Date	Description	F	Debit	Credit
July k.	Accounts Payable	210	1,100	
	Cash	101		1,100
	To record payment on account.			
l.	Salaries Expense	656	3,200	
	Cash	101		3,200
	To record payment of salaries.			
m.	Accounts Receivable	110	3,500	
	Repair Revenue	450		3,500
	To record billings to customers.			
n.	Insurance Expense	631	50	
	Prepaid Insurance	161		50
	To record expired portion of insurance for July.			
o.	Truck Operation Expense	670	200	
	Accounts Payable	210		200
	To record billing received for truck expenses.			
p.	Advertising Expense	610	100	
	Accounts Payable	210		100
	To record billing received for advertising.			
q.	Supplies Expense	668	150	
	Unused Supplies	173		150
	To record supplies used for July.			

AP 2–2 continued

2.

Cash No. 101

n.	3,000	b.	1,000
e.	1,500	f.	400
g.	1,200	h.	600
j.	2,000	i.	300
		k.	1,100
		l.	3,200
	7,700		6,600
Bal.	1,100		

Accounts Receivable No. 110

c.	2,500	g.	1,200
m.	3,500	j.	2,000
	6,000		3,200
Bal.	2,800		

Prepaid Insurance No. 161

h.	600	n.	50
Bal.	550		

Unused Supplies No. 173

d.	500	q.	150
Bal.	350		

Truck No. 184

b.	7,000		

Accounts Payable No. 210

i.	300	b.	6,000
k.	1,100	d.	500
		o.	200
		p.	100
	1,400		6,800
		Bal.	5,400

Share Capital No. 320

		a.	3,000

Repair Revenue No. 450

		c.	2,500
		e.	1,500
		m.	3,500
		Bal.	7,500

Advertising Expense No. 610

p.	100		

Insurance Expense No. 631

n.	50		

Rent Expense No. 654

f.	400		

Salaries Expense No. 656

l.	3,200		

Supplies Expense No. 668

q.	150		

Truck Operation Expense No. 760

o.	200		

AP 2–2 continued

3. McRann Auto Repairs Corporation
Trial Balance
July 31, 2011

	Account Balances	
	Debit	*Credit*
Cash	$ 1,100	
Accounts Receivable	2,800	
Prepaid Insurance	550	
Unused Supplies	350	
Truck	7,000	
Accounts Payable		$ 5,400
Share Capital		3,000
Repair Revenue		7,500
Advertising Expense	100	
Insurance Expense	50	
Rent Expense	400	
Supplies Expense	150	
Salaries Expense	3,200	
Truck Operation Expense	200	
	$15,900	$15,900

AP 2–3

Return to Question

1.

Overeen Consulting Corporation
Trial Balance
At March 31, 2011

	Account Balances	
	Debit	*Credit*
Cash	$ 1,500	
Accounts Receivable	3,000	
Equipment	2,000	
Truck	8,000	
Accounts Payable		$ 5,000
Utilities payable		3,550
Share Capital		3,000
Fees Earned		6,900
Advertising Expense	100	
Insurance Expense	50	
Rent Expense	600	
Utilities Expense	200	
Wages Expense	3,000	
	$18,450	$18,450

2.

Overeen Consulting Corporation
Income Statement
For the Month Ended March 31,2011

Revenue		
Fees Earned		$6,900
Expenses		
Advertising	$100	
Insurance	50	
Rent	600	
Utilities	200	
Wages	3,000	
Total Expenses		3,950
Net Income		$2,950

AP 2-3 continued

Overeen Consulting Corporation
Statement of Changes in Equity
For the Month Ended January 31, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$ -0-	$ -0-	$ -0-
Shares Issued	3,000	-0-	3,000
Net Income	-0-	2,950	2,950
Ending Balance	$3,000	$2,950	$5,950

3.

Overeen Consulting Corporation
Balance Sheet
At March 31,2011

Assets		
Cash		$ 1,500
Accounts Receivable		3,000
Equipment		2,000
Truck		8,000
Total Assets		$14,500
Liabilities		
Accounts Payable	$5,000	
Utilities Payable	3,550	$ 8,550
Equity		
Share Capital	3,000	
Retained Earnings	2,950	5,950
Total Liabilities and Equity		$14,500

AP 2-4 Return to

1. and 3. Question

Owens Truck Rentals Incorporated

Cash No. 101

May1	1,600	b.	500
a.	5,000	c.	1,500
i.	2,000	d.	600
		f.	3,500
	8,600		6,100
Bal.	2,500		

Prepaid Insurance No. 161

d.	600	g.	50
Bal.	550		

Unused Supplies No. 173

May.1	400	h.	200
Bal.	200		

Equipment No. 183

May.1	3,000		

Rental Trucks No. 184

May.1	7,000		
e.	5,000		
Bal.	12,000		

Accounts Payable No. 210

c.	1,500	May.1	4,000
		e.	5,000
	1,500		9,000
		Bal.	7,500

Share Capital No. 320

		May.1	8,000
		i.	2,000
		Bal.	10,000

Rental Earned No. 440

		a.	5,000

Advertising Expense No. 610

f.	300		

Insurance Expense No. 631

g.	50		

Rent Expense No. 654

b.	500		

Salaries Expense No. 656

f.	2,500		

Supplies Expense No. 668

h.	200		

Telephone Expense No. 669

f.	2,500		

Truck Operation Expense No. 670

f.	550		

AP 2–4 continued

2. Owens Truck Rentals Incorporated
General Journal Page 1

May 2011	Description	F	Debit	Credit
a.	Cash	101	5,000	
	Service Revenue	470		5,000
	To record tool rental revenue collected.			
b.	Rent Expense	654	500	
	Cash	101		500
	To record rent expense paid.			
c.	Accounts Payable	210	1,500	
	Cash	101		1,500
	To record payment made on account.			
d.	Prepaid Insurance	161	600	
	Cash	101		600
	To record payment for insurance policy.			
e	Truck	184	5,000	
	Accounts Payable	210		5,000
	To record purchase of truck on account.			
f.	Advertising Expense	610	300	
	Salaries Expense	656	2,500	
	Telephone Expense	669	150	
	Truck Operation Expense	670	550	
	Cash	101		3,500
	To record payment of expenses.			
g.	Insurance Expense	631	50	
	Prepaid Insurance	161		50
	To record expired portion of insurance related to May.			
h.	Supplies Expense	668	200	
	Unused Supplies	173		200
	To record supplies used in May.			
i.	Cash	101	2,000	
	Share Capital	320		2,000
	To record shares issued.			

AP 2–4 continued

4.

Owens Truck Rentals Incorporated
Trial Balance
At May 31, 2011

	Account Balances	
	Debit	*Credit*
Cash	$ 2,500	
Prepaid Insurance	550	
Supplies	200	
Equipment	3,000	
Trucks	12,000	
Accounts Payable		$ 7,500
Share Capital		10,000
Service Revenue		5,000
Advertising Expense	300	
Insurance Expense	50	
Rent Expense	500	
Salaries Expense	2,500	
Supplies Expense	200	
Telephone Expense	150	
Truck Operation Expense	550	
	$22,500	$22,500

5.

Owens Truck Rentals Incorporated
Income Statement
For the Month Ended May 31, 2011

Revenue		
Rent Earned		$5,000
Expenses		
Advertising	$ 300	
Insurance	50	
Rent	500	
Salaries	2,500	
Supplies	200	
Telephone	150	
Truck Operation	550	
Total Expenses		4,250
Net Income		$ 750

Owens Truck Rentals Incorporated
Balance Sheet
At May 31, 2011

Assets		
Cash		$ 2,500
Prepaid Insurance		550
Unused Supplies		200
Equipment		3,000
Trucks		12,000
Total Assets		$18,250
Liabilities		
Accounts Payable		$ 7,500
Equity		
Share Capital	10,000	
Retained Earnings	750	10,750
Total Liabilities and Equity		$18,250

AP 2–4 continued

Owens Truck Rentals Incorporated
Statement of Changes in Equity
For the Month Ended May 31,2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$8,000	$ -0-	$ 8,000
Shares Issued	2,000	-0-	2,000
Net Income	-0-	750	750
Ending Balance	$10,000	$ 750	$10,750

AP 2-5

Return to Question

1. and 3.

Oneschuk Contractors Corporation

Cash No. 101

May 1	5,000	May 1	1,500
5	250	4	50
10	1,500	15	500
18	2,000	22	3,000
		27	2,100
	8,750		7,150
Bal.	1,600		

Accounts Receivable No. 110

May 3	1,500	May 10	1,500
25	3,500		
	5,000		1,500
Bal.	3,500		

Prepaid Rent No. 162

May 1	1,500	May 31	500
Bal.	1,000		

Unused Supplies No. 173

May 2	1,000	May 31	800
Bal.	200		

Equipment No. 183

May 22	3,000		

Bank Loan No. 201

		May 18	2,000

Accounts Payable No. 210

May 15	500	May 2	1,000
		Bal.	500

Share Capital No. 320

		May 1	5,000

Repair Revenue No. 450

		May 3	1,500
		5	250
		25	3,500
		Bal.	5,250

Advertising Expense No. 610

May 4	50		

Rent Expense No. 654

May 31	500		

Supplies Expense No. 668

May 31	800		

Telephone Expense No. 668

May 27	25		

Utilities Expense No. 676

May 27	75		

Wages Expense No677

May 27	2,000		

AP 2–5 continued

2. Oneschuk Contractors Corporation

General Journal

Page 1

May 2011	Description	F	Debit	Credit
1	Cash	101	5,000	
	Share Capital	320		5,000
	To record issuance of common shares.			
1	Prepaid Rent	162	1,500	
	Cash	101		1,500
	To record three months' rent paid in advance.			
2	Unused Supplies	173	1,000	
	Accounts Payable	210		1,000
	To record purchase of supplies on account.			
3	Accounts Receivable	110	1,500	
	Repair Revenue	450		1,500
	To record billings to customers.			
4	Advertising Expense	610	50	
	Cash	101		50
	To record payment for advertising.			
5	Cash	101	250	
	Repair Revenue	450		250
	To record cash revenue collected.			
10	Cash	101	1,500	
	Accounts Receivable	110		1,500
	To record collection on account.			
15	Accounts Payable	210	500	
	Cash	101		500
	To record payment made on account.			
18	Cash	101	2,000	
	Bank Loan	201		2,000
	To record cash borrowed from bank.			
22	Equipment	183	3,000	
	Cash	101		3,000
	To record purchase of equipment.			

AP 2–5 continued

Oneschuk Contractors Corporation
General Journal
Page 2

May 2011	Description	F	Debit	Credit
25	Accounts Receivable	110	3,500	
	Repair Revenue	450		3,500
	To record billings to customers.			
27	Utilities Expense	676	75	
	Telephone Expense	669	25	
	Wages Expense	677	2,000	
	Cash	101		2,100
	To record payment of expenses.			
31	Rent Expense	654	500	
	Prepaid Rent	162		500
	To record May rent expired.			
31	Supplies Expense	668	800	
	Unused Supplies	173		800
	To record supplies used in May.			

AP 2–5 continued

4.

Oneschuk Contractors Corporation
Trial Balance
May 31, 2011

	Account Balances	
	Debit	*Credit*
Cash	$ 1,600	
Accounts Receivable	3,500	
Prepaid Rent	1,000	
Unused Supplies	200	
Equipment	3,000	
Bank Loan		$ 2,000
Accounts Payable		500
Share Capital		5,000
Repair Revenue		5,250
Advertising Expense	50	
Rent Expense	500	
Supplies Expense	800	
Telephone Expense	25	
Utilities Expense	75	
Wages Expense	2,000	
	$ 12,750	$ 12,750

4. and 5.

Oneschuk Contractors Corporation
Income Statement
For the Month Ended May 31, 2011

Revenue		
Repair Revenue		$5,250
Expenses		
Advertising	$ 50	
Rent	500	
Supplies	800	
Telephone	25	
Utilities	75	
Wages	2,000	
Total Expenses		3,450
Net Income		$1,800

Oneschuk Contractors Corporation
Balance Sheet
At May 31, 2011

Assets		
Cash		$1,600
Accounts Receivable		3,500
Prepaid Rent		1,000
Unused Supplies		200
Equipment		3,000
Total Assets		$9,300
Liabilities		
Bank Loan	$2,000	
Accounts Payable	500	$2,500
Equity		
Share Capital	5,000	
Retained Earnings	1,800	6,800
Total Liabilities and Equity		$9,300

AP 2–5 continued

Oneschuk Contractors Corporation
Statement of Changes in Equity
For the Month Ended January 31, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$ -0-	$ -0-	$ -0-
Shares Issued	5,000	-0-	5,000
Net Income	-0-	1,800	1,800
Ending Balance	$5,000	$1,800	$6,800

AP 2-6

Return to Question

1. and 3.

Cash No. 101

Dec. 1	6,000	Dec. 1	4,000
24	3,500	6	200
28	400	7	360
		14	1,500
		16	40
		27	500
		28	1,500
	9,900		8,100
Bal.	1,800		

Accounts Receivable No. 110

Dec. 3	5,000	Dec. 24	3,500
Bal.	1,500		

Prepaid Insurance No. 161

Dec. 7	360	Dec. 31	30
Bal.	330		

Unused Supplies No. 173

Dec. 5	500	Dec. 31	
Bal.	100		

Truck No. 184

Dec. 1	9,000		
2	2,000		
Bal.	11,000		

Bank Loan No. 201

		Dec. 1	5,000

Accounts Payable No. 210

Dec. 27	500	Dec. 2	2,000
		5	500
		20	350
		24	100
	500		2,950
		Bal.	2,450

Wages Payable No. 237

		Dec. 31	450

Share Capital No. 320

		Dec. 1	6,000

Service Revenue No. 470

		Dec. 3	5,000
		28	400
		Bal.	5,400

Advertising Expense No. 610

Dec. 16	40		

Insurance Expense No. 631

Dec. 31	30		

Supplies Expense No. 668

Dec. 31	400		

Truck Operation Expense No. 670

Dec. 6	200		
20	350		
24	100		
Bal.	650		

Wages Expense No. 677

Dec. 14	1,500		
28	1,500		
31	450		
Bal.	3,450		

AP 2–6 continued

2.

Sandul Snow Removal Corporation
General Journal
Page 1

Dec 2011	Description	F	Debit	Credit
1	Cash	101	6,000	
	Share Capital	320		6,000
	To record issuance of shares.			
1	Truck	184	9,000	
	Cash	101		4,000
	Bank Loan	201		5,000
	To record purchase of truck for $4,000 cash and the balance borrowed from the bank.			
2	Truck	184	2,000	
	Accounts Payable	210		2,000
	To record purchase of snowplough on account.			
3	Accounts Receivable	110	5,000	
	Service Revenue	470		5,000
	To record billing of customers for December.			
5	Unused Supplies	173	500	
	Accounts Payable	210		500
	To record purchase of supplies on account.			
6	Truck Operation Expenses	670	200	
	Cash	101		200
	To record payment of expenses.			
7	Prepaid Insurance	161	360	
	Cash	101		360
	To record payment for one-year insurance policy.			
14	Wages Expense	677	1,500	
	Cash	101		1,500
	To record payment of wages.			
16	Advertising Expense	670	40	
	Cash	101		40
	To record payment of advertising.			

AP 2–6 continued

Sandul Snow Removal Corporation
General Journal

Page 2

Dec. 2011	Description	F	Debit	Credit
20	Truck Operation Expense	670	350	
	Accounts Payable	210		350
	To record receipt of truck expenses bill.			
24	Truck Operation Expense	670	100	
	Accounts Payable	210		100
	To record purchase of tire chains on account.			
24	Cash	101	3,500	
	Accounts Receivable	110		3,500
	To record collections on account.			
27	Accounts Payable	210	500	
	Cash	101		500
	To record payment on account.			
28	Cash	101	400	
	Service Revenue	470		400
	To record revenue collected.			
28	Wages Expense	677	1,500	
	Cash	101		1,500
	To record payment of wages.			
31	Insurance Expense	631	30	
	Prepaid Insurance	161		30
	To record insurance expired in December.			
31	Supplies Expense	668	400	
	Unused Supplies	173		400
	To record supplies used in December.			
31	Wages Expense	677	450	
	Wages Payable	237		450
	To record accrual for 3 days of wages in December.			

AP 2–6 continued

4.

Sandul Snow Removal Corporation
Trial Balance
December 31, 2011

	Account Balances	
	Debit	*Credit*
Cash	$ 1,800	
Accounts Receivable	1,500	
Prepaid Insurance	330	
Unused Supplies	100	
Truck	11,000	
Bank Loan		$5,000
Accounts Payable		2,450
Wages Payable		450
Share Capital		6,000
Service Revenue		5,400
Advertising Expense	40	
Insurance Expense	30	
Supplies Expense	400	
Truck Operation Expense	650	
Wages Expense	3,450	
	$19,300	$19,300

AP 2–6 continued

5.

Sandul Snow Removal Corporation
Income Statement
For the Month Ended December 31, 2011

Revenue		
Service Revenue		$5,400
Expenses		
Advertising	$40	
Insurance	30	
Supplies	400	
Truck Operation	650	
Wages	3,450	
Total Expenses		4,570
Net Income		$ 830

Sandul Snow Removal Corporation
Balance Sheet
At December 31, 2011

Assets		
Cash		$ 1,800
Accounts Receivable		1,500
Prepaid Insurance		330
Unused Supplies		100
Truck		11,000
Total Assets		$14,730
Liabilities		
Bank Loan	$5,000	
Accounts Payable	2,450	
Wages Payable	450	7,900
Equity		
Share Capital	6,000	
Retained Earnings	830	6,830
Total Liabilities and Equity		$14,730

Sandul Snow Removal Corporation
Statement of Changes in Equity
For the Month Ended January 31, 2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$ -0-	$ -0-	$ -0-
Shares Issued	6,000	-0-	6,000
Net Income	-0-	830	830
Ending Balance	$6,000	$ 830	$6,830

AP 2-7

Return to Question

1. and 3.

John Saul Corporation

Cash No. 101

Nov. 30	25,200	Dec.2	200
Dec. 3	700	4	500
8	20,000	11	5,000
10	1,500	15	1,000
		16	600
		20	15,000
31	400	24	50
31	1,000	31	1,000
	48,800		23,350
Bal.	25,450		

Accounts Receivable No. 110

Nov. 30	12,000	Dec.3	700
Dec. 5	2,000	10	1,500
		31	400
	14,000		2,600
Bal.	11,400		

Prepaid Rent No. 162

Nov. 30	1,500	Dec.31	500
Bal.	1,000		

Land No. 180

Nov. 30	12,000		

Building No. 181

Nov. 30	24,000		

Furniture No. 182

Nov. 30	9,000		

Equipment No. 183

Nov. 30	75,000		
Dec. 4	500		
11	25,000		
Bal.	100,500		

Truck No. 184

Nov. 30	3,500		

Accounts Payable No. 210

Dec. 2	200	Nov. 30	4,000
16	600	Dec. 11	20,000
20	20,000	30	100
	20,800		24,100
		Bal.	3,300

Note Payable No. 220

		Dec. 20	5,000

Unearned Revenue No. 249

		Dec. 31	1,000

Share Capital No. 320

		Nov. 30	158,200
		Dec. 8	20,000
		Bal.	178,200

Service Revenue No. 470

		Dec.5	2,000

Rent Expense No. 654

Dec.31	500		

Salaries Expense No. 656

Dec. 15	1,000		
31	1,000		
Bal.	2,000		

Telephone Expense No. 669

Dec. 30	100		

Utilities Expense No. 676

Dec. 24	50		

AP 2–7 continued

2.

John Saul Corporation
General Journal
Page 1

Dec. 2011		F	*Debit*	*Credit*
2	Accounts Payable	210	200	
	Cash	101		200
	To record payment of account.			
3	Cash	101	700	
	Accounts Receivable	110		700
	To record collection of account.			
4	Equipment*	183	500	
	Cash	101		500
	To record purchase of equipment.			
5	Account Receivable	110	2,000	
	Service Revenue	470		2,000
	To record service revenue earned.			
8	Cash	101	20,000	
	Share Capital	320		20,000
	To record issuance of share capital.			
10	Cash	101	1,500	
	Accounts Receivable	110		1,500
	To record collection of account.			
11	Equipment	183	25,000	
	Cash	101		5,000
	Accounts Payable			20,000
	To record purchase of equipment.			
15	Salaries Expense	656	1,000	
	Cash	101		1,000
	To record salaries for the period.			
16	Accounts Payable	210	600	
	Cash	101		600
	To record payment of account.			

*This amount may be considered immaterial and therefore written off as an expense. In that case, the net loss would be increased by $500 and total assets, retained earnings, and total liabilites and equity decreased by $500.

AP 2-7 continued

John Saul_Corporation
General Journal
Page 2

Dec. 2011		*F*	*Debit*	*Credit*
20	Accounts Payable	210	20,000	
	Cash	101		15,000
	Note Payable	220		5,000
	To record partial payment of a liability and issuance of a note for the balance.			
24	Utilities Expense	676	50	
	Cash	101		50
	To record utilities expense.			
30	Telephone Expense	669	100	
	Accounts Payable	210		100
	To record bill received.			
31	Cash	101	400	
	Accounts Receivable	110		400
	To record collection of an account.			
31	Salaries Expense	656	500	
	Cash	101		500
31	Rent Expense	654	1,000	
	Prepaid Rent	162		1,000
	To record rent for month.			
31	Cash	101	1,000	
	Unearned Revenue	249		1,000
	To record cash received for services to be performed next period.			

AP 2–7 continued

4.

John Saul Corporation
Trial Balance
December 31, 2011

	Account Balances	
	Debit	*Credit*
Cash	$ 25,450	
Accounts Receivable	11,400	
Prepaid Rent	1,000	
Land	12,000	
Building	24,000	
Furniture	9,000	
Equipment	100,500	
Truck	3,500	
Accounts Payable		$ 3,300
Note Payable		5,000
Unearned Revenue		1,000
Share Capital		148,200
Retained Earnings		30,000
Service Revenue		2,000
Rent Expense	500	
Salaries Expense	2,000	
Telephone Expense	100	
Utilities Expense	50	
	$189,500	$189,500

5.

John Saul Corporation
Income Statement
For the Month Ended Dec.31,2011

Revenue		
Service		$2,000
Expense		
Rent	$ 500	
Salaries	2,000	
Telephone	100	
Utilities	50	
Total Expense		2,650
Net Loss		$(650)

AP 2-7 continued

John Saul Corporation
Statement of Changes in Equity
For the Month Ended Dec 31,2011

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$ 158,200	$ -0-	$158,200
Shares Issued	20,000	-0-	20,000
Net Loss	-0-	(650)	(650)
Ending Balance	$178,200	$ (650)	$177,550

John Saul Corporation
Balance Sheet
At December 31,2011

Assets		
Cash		$ 25,450
Accounts Receivable		11,400
Prepaid Rent		1,000
Land		12,000
Building		24,000
Furniture		9,000
Equipment		100,500
Truck		3,500
Total Assets		$186,850
Liabilities		
Accounts Payable	$ 3,300	
Note Payable	5,000	
Unearned Revenue	1,000	$ 9,300
Equity		
Share Capital	178,200	
Retained Earnings (Deficit)	(650)	177,550
Total Liabilities and Equity		$186,850

CHAPTER 3

Financial Accounting and the Operating Cycle

CP 3–1 Return to Question

1. and 3.

Graham Corporation
General Ledger

ASSETS = LIABILITIES + EQUITY

ASSETS

Interest Receivable

(a) 110	

Prepaid Insurance

1,800	
	(b) 1,200
Bal. 600	

LIABILITIES

Interest Payable

	(c) 90

Salaries Payable

	(d) 450

Unearned Rent

	700
(e) 500	
	Bal. 200

EQUITY

Interest Earned

	(a) 110

Rent Earned

	(e) 500

Insurance Expense

(b) 1,200	

Interest Expense

(c) 90	

Salaries Expense

(d) 450	

CP 3–1 continued

2. Graham Corporation

GENERAL JOURNAL

Page 1

Date	Description	F	Debit	Credit
	<u>Adjusting Entries</u>			
a.	Interest Receivable		110	
	Interest Earned			110
b.	Insurance Expense		1,200	
	Prepaid Insurance			1,200
c.	Interest Expense		90	
	Interest Payable			90
d.	Salaries Expense		450	
	Salaries Payable			450
e.	Unearned Rent		500	
	Rent Earned			500

4.

Interest Earned	$ 110
Rent Earned	500
Insurance Expense	1,200
Interest Expense	90
Salaries Expense	450

CP 3-2

Return to Question

1.

Hynes Corporation

Cash	No. 101
750	50
950	150
90	50
	24
	20
	70

Accounts Receivable	No. 110
228	90

Prepaid Insurance	No. 161
24	(a) 2

Unused Office Supplies	No. 170
50	(c) 25

Unused Repair Supplies	No. 171
145	(d) 80

Furniture	No. 182
150	

Accumulated Depreciation - Furniture	No. 191
	(b) 2

Accounts Payable	No. 210
70	145

Share Capital	No. 320
	400

Retained Earnings	No. 340
	350

Repair Revenue	No. 450
	950
	228

Depreciation Expense—Furniture	No. 621
(b) 2	

Insurance Expense	No. 631
(a) 2	

Office Supplies Expense	No. 650
(c) 25	

Rent Expense	No. 654
50	

Repair Supplies Expense	No. 655
(d) 80	

Telephone Expense	No. 669
20	

CP 3-2 continued

2. Hynes Corporation
General Journal
Page 1

	Date	Description	F	Debit	Credit
		Adjusting Entries			
a.	Dec. 31	Insurance Expense	631	2	
		Prepaid Insurance	161		2
		To record expiry of prepaid insurance.			
b.	31	Depreciation Expense—Furniture	621	2	
		Accumulated Depreciation—Furniture	191		2
		To record depreciation.			
c.	31	Office Supplies Expense	650	25	
		Unused Office Supplies	170		25
		To record use of office supplies.			
d.	31	Repair Supplies Expense	655	80	
		Unused Repair Supplies	171		80
		To record use of supplies.			

CP 3-3 Return to Question

1.

Lauer Corporation

	Trial Balance			Adjustments			Adjusted Trial Balance	
	Dr.	*Cr.*		*Dr.*		*Cr.*	*Dr.*	*Cr.*
Cash	$ 4,000						$ 4,000	
Accounts Receivable	5,000						5,000	
Prepaid Insurance	3,600				(a)	$ 300	3,300	
Prepaid Rent	1,000				(b)	500	500	
Truck	6,000						6,000	
Accumulated Depreciation—Truck					(c)	1,500		$ 1,500
Accounts Payable		$7,000			(d)	400		7,400
Salaries Payable					(e)	1,000		1,000
Unearned Rent		1,200	(f)	$ 600				600
Share Capital		2,700						2,700
Revenue		25,000						25,000
Rent Earned					(f)	600		600
Advertising Expense	700						700	
Commissions Expense	2,000						2,000	
Truck Operation Expense			(c)	1,500			1,500	
Insurance Expense			(a)	300			300	
Interest Expense	100		(d)	400			500	
Rent Expense	5,500		(b)	500			6,000	
Salaries Expense	8,000		(e)	1,000			9,000	
Totals	$35,900	$35,900		$4,300		$4,300	$38,800	$38,800

CP 3-3 continued

2.

Lauer Corporation
General Journal

	Date	Description	F	Debit	Credit
		<u>Adjusting Entries</u>			
a.	Dec.31	Insurance Expense	631	300	
		Prepaid Insurance	131		300
		To record expiry of prepaid insurance.			
b.	31	Rent Expense	654	500	
		Prepaid Rent	162		500
		To record expiry of prepaid rent.			
c.	31	Depreciation Expense	624	1,500	
		Accumulated Depreciation—Truck	194		1,500
		To record truck depreciation.			
d.	31	Interest Expense	632	400	
		Accounts Payable	210		400
		To accrue interest.			
e.	31	Salaries Expense	656	1,000	
		Salaries Payable	226		1,000
		To accrue unpaid salaries.			
f.	31	Unearned Rent	248	600	
		Rent Earned	440		600
		To record expiry of unearned rent.			

CP 3-4

Return to Question

a.	Insurance Expense	7.	Prepaid Insurance
b.	Rent Earned	10.	Unearned Rent
c.	Prepaid Rent	6.	Rent Expense
d.	Interest Payable	9.	Interest Expense
e.	Interest Receivable	8.	Interest Earned
f.	Fees Earned	4.	Unearned Fees
g.	Unused Supplies	2.	Supplies Expense
h.	Unearned Commissions	1.	Commissions Earned
i.	Salaries Payable	3.	Salaries Expense
j.	Depreciation Expense	5.	Accumulated Depreciation

CP 3-5 Return to Question

1. General Journal

	Date 2011	Description	F	Debit	Credit
a.	Dec. 31	Rent Expense	654	200	
		Prepaid Rent	162		200
		To adjust prepaid rent account to the proper balance.			
b.	31	Office Supplies Expense	650	400	
		Unused Office Supplies	170		400
		To record the ending balance of supplies on hand.			
c.	31	Income Taxes Expense	830	5,000	
		Income Taxes Payable	260		5,000
		To record income taxes for the period.			
d.	31	Unearned Commissions	242	1,000	
		Commissions Earned	226		1,000
		To record the proper balance in the Unearned Commissions account.			
e.	31	Salaries Expense	656	300	
		Salaries Payable	226		300
		To accrue salaries for the period.			

2. Assets would be overstated by $600 (a: 200+b: 400)
   Liabilities would be understated by $4,300 (c: 5,000-d: 1,000+e: 300)
   Revenue would be understated by $1,000 (d)
   Expenses would be understated by $5,900 (a: 200+b: 400+c: 5,000+e: 300)
   Equity would be overstated by $4,900 (600+4,300), while net income would be overstated by $4,900 (1,000-5,900).

CP 3-6 Return to Question

Bernard Inc.
General Journal

	Date 2011	Description	F	Debit	Credit
a.	Dec.31	Advertising Expense	610	500	
		Prepaid Advertising	160		500
		To record the expired portion of advertising for the period.			
b.	31	Supplies Expense	668	400	
		Unused Supplies	173		400
		To record the remaining amount of supplies on hand.			
c.	31	Depreciation Expense—Equipment	623	250	
		Accumulated Depreciation—Equipment	193		250
		To record the depreciation for the period.			
d.	31	Maintenance Expense	641	200	
		Telephone Expense	669	100	
		Utilities Expense	676	400	
		Commissions Expense	615	800	
		Accounts Payable	210		1,500
		To record expenses incurred but not yet paid for the period.			
e.	31	Salaries Expense	656	700	
		Salaries Payable	226		700
		To record salaries accrued for the period.			
f.	31	Unearned Subscriptions	250	5,000	
		Subscription Revenue	480		5,000
		To record subscriptions earned for the period.			

CP 3-7 Return to Question

Armstrong Corp.
General Journal

Date 2011		Description	F	Debit	Credit
a.	Jun. 30	Office Supplies Expense	650	135	
		Unused Office Supplies	170		135
		To record office supplies used during period.			
b.	30	Depreciation Expense-Truck	624	400	
		Accumulated Depreciation-Truck	194		400
		To record truck depreciation for the period.			
c.	30	Insurance Expense	631	240	
		Prepaid Insurance	161		240
		To record the portion of insurance expired for the period.			
d.	30	Interest Expense	632	100	
		Interest Payable	222		100
		To record interest payable for the period.			
e.	30	Unearned Rent	248	500	
		Rent Earned	440		500
		To record the portion of rent earned for the period.			

CP 3-8

Return to Question

2011				
Dec. 31	Depreciation Expense—Truck	624	1,200	
	Accumulated Depreciation—Truck	194		1,200
	To record additional truck depreciation for the year ($2,500 – 1,300)			

$$\frac{\$10{,}000}{4 \text{ years}} = \$2{,}500/\text{year}$$

CP 3-9

Return to Question

Interest expense for the year should be $12,000 x 10% = $1,200. The needed adjusting entry is:

2011				
Dec. 31	Interest Expense	632	100	
	Interest Payable	222		100
	To record interest accrued at December 31, 2011 ($1,200 – 1,100).			

CP 3-10

Return to Question

1.

Wolfe Corporation
General Journal

Page 1

Date 2011		Description	F	Debit	Credit
		<u>Adjusting Entries</u>			
a.	Dec. 31	Insurance Expense	631	600	
		Prepaid Insurance	161		600
		To record expiry of 6 months insurance.			
b.	31	Supplies Expense	668	200	
		Unused Supplies	173		200
		To adjust supplies on hand to physical count.			
c.	31	Telephone Expense	669	50	
		Accounts Payable	210		50
		To record account payable at year end.			

CP 3-10 (continued)

2. and 4.

Wolfe Corporation

Cash No.101

Bal.	2,700		

Accounts Receivable No.110

Bal.	2,000		

Prepaid Insurance No.161

Bal.	1,200	(a)	600
Bal.	600		

Unused Supplies No.173

Bal.	700	(b)	200
Bal.	500		

Accounts Payable No.210

		(c)	50

Share Capital No.320

		Bal.	3,800

Retained Earnings No.340

		(f)	1,950
		Bal.	1,950

Income Summary No.360

(e)	5,800	(d)	7,750
(f)	1,950		
Bal.	0		

Repair Revenue No.450

(d)	7,750	Bal.	7,750
		Bal.	0

Advertising Expense No.610

Bal.	200	(e)	200
Bal.	0		

Insurance Expense No.631

(a)	600	(e)	600
Bal.	0		

Salaries Expense No.656

Bal.	4,500	(e)	4,500
Bal.	0		

Supplies Expense No.668

(b)	200	(e)	200
Bal.	0		

Telephone Expense No.669

Bal.	250		
(c)	50		
Bal.	300	(e)	300
Bal.	0		

CP 3–10 continued

3.

Wolfe Corporation
General Journal
Page 2

	Date 2011	Description	F	Debit	Credit
		Closing Entries			
d.	Dec. 31	Repair Revenue	450	7,750	
		Income Summary	360		7,750
e.	31	Income Summary	360	5,800	
		Advertising Expense	610		200
		Insurance Expense	631		600
		Salaries Expense	656		4,500
		Supplies Expense	668		200
		Telephone Expense	669		300
f.	31	Income Summary	360	1,950	
		Retained Earnings	340		1,950

5.

Wolfe Corporation
General Journal
Page 3

	Date 2011	Description	F	Debit	Credit
		Reversing Entries			
g.	Jan. 1	Accounts Payable	210	50	
		Telephone Expense	669		50
		To reverse adjusting entry c.			

AP 3–1 Return to Question

Gabel Inc.
General Journal

	Dec. 2011	Description	F	Debit	Credit
		Adjusting Entries			
a.	Dec. 31	Insurance Expense	631	200	
		Prepaid Insurance	161		200
		To record expiry of prepaid insurance.			
b.	31	Supplies Expense	668	450	
		Unused Supplies	173		450
		To adjust unused supplies to count at year-end.			
c.	31	Depreciation Expense—Truck	624	1,200	
		Accumulated Depreciation—Truck	194		1,200
		To record truck depreciation.			
d.	31	Salaries Expense	656	100	
		Salaries Payable	226		100
		To record unpaid salaries at year end.			
e.	31	Unearned Fees	244	4,000	
		Fees Earned	420		4,000
		To record fees earned.			
f.	31	Income Taxes Expense	830	3,500	
		Income Taxes Payable	260		3,500
		To record income taxes expense.			
g.	31	Other Revenue	460	5,000	
		Unearned Revenue	249		5,000
		To record unearned portion of other revenues.			
h.	31	Commissions Expense	615	1,500	
		Accounts Payable	210		1,500
		To accrue commissions at year end.			
i.	31	Interest Expense	632	50	
		Interest Payable	222		50
		To record interest payable at year- end.			

AP 3–2 Return to Question

Inaknot Insurance Corporation
General Journal

	Dec. 2011	Description	F	Debit	Credit
		<u>Adjusting Entries</u>			
a.	Dec. 31	Unused Supplies	173	200	
		Supplies Expense	668		200
b.	31	Insurance Expense	631	450	
		Prepaid Insurance	161		450
c.	31	Depreciation Expense—Truck	624	1,500	
		Accumulated Depreciation—Truck	194		1,500
		($18,000 x 6/72 mos. = $1,500)			
d.	31	Unearned Commissions Revenue	242	1,500	
		Commissions Earned	410		1,500
e.	31	Salaries Expense	656	200	
		Salaries Payable	226		200
f.	31	Accounts Receivable	110	300	
		Rent Earned	440		300
g.	31	Advertising Expense	610	300	
		Accounts Payable	210		300

AP 3–3 Return to Question

Langford Limited
General Journal

Dec. 2011		Description	F	Debit	Credit
		Adjusting Entries			
a.	Dec. 31	Interest Receivable	112	40	
		Interest Earned	430		40
b.	31	Rent Expense	654	800	
		Prepaid Rent	162		800
c.	31	Interest Expense	632	50	
		Interest Payable	222		50
d.	31	Unearned Subscriptions Revenue	250	6,000	
		Subscription Revenue	480		6,000
e.	31	Prepaid Insurance	161	1,200	
		Insurance Expense	631		1,200
f.	31	Salaries Expense	656	1,000	
		Salaries Payable	226		1,000
g.	31	Unused Supplies	173	100	
		Supplies Expense	668		100
h.	31	Utilities Expense	676	200	
		Accounts Payable	210		200

AP 3–4 Return to Question

Trebell Ltd.
General Journal

Dec. 2011		Description	F	Debit	Credit
		Adjusting Entries			
a.	Dec. 31	Prepaid Rent	162	400	
		Rent Expense	654		400
b.	31	Interest Expense	632	150	
		Interest Payable	222		150
c.	31	Unused Supplies	173	300	
		Supplies Expense	668		300
d.	31	No adjustment is necessary.			
e.	31	Prepaid Advertising	160	400	
		Advertising Expense	610		400
f.	31	Depreciation Expense—Equipment	623	100	
		Accumulated Depreciation—Equipment	193		100
		($6,000 x 6/60 mos. = $600 – 500 = $100)			
g.	31	Rent Earned	440	2,500	
		Unearned Rent Revenue	248		2,500
h.	31	Insurance Expense	631	100	
		Prepaid Insurance	161		100
i.	31	Utilities Expense	676	225	
		Utilities Payable	236		225

AP 3–5 Return to Question

1.

Sellit Realty Corporation
General Journal

Page 1

Dec. 2011		Description	F	Debit	Credit
		Adjusting Entries			
a.	Dec. 31	Rent Expense	654	400	
		Prepaid Rent	162		400
b.	31	Unused Supplies	173	100	
		Supplies Expense	668		100
c.	31	Depreciation Expense- Equipment	623	500	
		Accumulated Depreciation-Equipment	193		500
		($3,000 x 6/36 mos. = $500)			
d.	31	Wages Expense	677	300	
		Wages Payable	237		300
e.	31	Commissions Earned	410	2,500	
		Unearned Commissions Revenue	242		2,500
f.	31	Interest Expense	632	150	
		Interest Payable	222		150

AP 3–5 continued

2.

Sellit Realty Corporation
Adjusted Trial Balance
December 31, 2011

	Account Balances	
	Debit	*Credit*
Cash	$ 1,500	
Accounts Receivable	7,000	
Prepaid Rent	800	
Unused Supplies	200	
Equipment	3,000	
Accumulated Depreciation- Equipment		$ 500
Accounts Payable		6,000
Interest Payable		150
Wages Payable		300
Unearned Commissions Revenue		5,500
Share Capital		500
Commissions Revenue		17,500
Advertising Expense	850	
Commissions Expense	3,600	
Depreciation Expense	500	
Interest Expense	700	
Rent Expense	4,800	
Supplies Expense	600	
Wages Expense	6,900	
	$30,450	$30,450

3.

Sellit Realty Corporation
General Journal

Page 2

Jan. 2012	Description	F	Debit	Credit
	Reversing Entries			
Jan. 1	Wages Payable		300	
	Wages Expense			300
1	Interest Payable		150	
	Interest Expense			150

Return to Question

AP 3-6

1., 3., 4., and 6.

Scuttlebutt Corporation

Cash			No.101
(a)	10,000	(d)	500
(e)	12,000	(f)	3,850
(g)	5,000	(h)	3,250
		(i)	2,000
		(j)	3,250
	27,000		12,850
Bal.	14,150		

Prepaid Advertising			No.160
(d)	500	(l)	250
Bal.	250		

Unused Supplies			No.173
(c)	750	(n)	650
Bal.	100		

Equipment			No.183
(b)	6,000		

Accumulated Depreciation Equipment			No.193
		(q)	100

Accounts Payable			No.210
(h)	3,250	(b)	6,500
		(c)	750
		(k)	200
		(o)	200
	3,250		7,150
		Bal.	3,900

Salaries Payable			No.226
		(p)	600

Unearned Subscriptions Revenue			No.250
(m)	4,000	(e)	12,000
		Bal.	8,000

Share Capital			No.320
		(a)	10,000

Other Revenue			No.460
		(g)	5,000

Subscription Revenue			No.480
		(m)	4,000

Advertising Expense			No.610
(l)	250		

Commissions Expense			No.615
(o)	200		

Depreciation Expense-Equipment			No.623
(q)	100		

Rent Expense			No.654
(f)	500		

Salaries Expense			No.656
(f)	3,000		
(j)	3,000		
(p)	600		
Bal.	6,600		

Supplies Expense			No.668
(i)	2,000		
(n)	650		
Bal.	2,650		

Telephone Expense			No.669
(f)	350		
(j)	250		
Bal.	600		

Utilities Expense			No.676
(k)	200		

AP 3–6 continued

2.

Scuttlebutt Corporation
General Journal

June 2011		Description	F	Debit	Credit
a.	Jun. 1	Cash	101	10,000	
		Share Capital	320		10,000
b.	1	Equipment	183	6,000	
		Accounts Payable	210		6,000
c.	2	Unused Supplies	173	750	
		Accounts Payable	210		750
d.	3	Prepaid Advertising	160	500	
		Cash	101		500
e.	5	Cash	101	12,000	
		Unearned Subscription Revenue	250		12,000
f.	14	Telephone Expense	669	350	
		Rent Expense	654	500	
		Salaries Expense	656	3,000	
		Cash	101		3,850
g.	16	Cash	101	5,000	
		Other Revenue	460		5,000
h.	18	Accounts Payable	210	3,250	
		Cash	101		3,250
i.	20	Supplies Expense	668	2,000	
		Cash	101		2,000
j.	28	Telephone Expense	669	250	
		Salaries Expense	656	3,000	
		Cash	101		3,250
k.	20	Utilities Expense	676	200	
		Accounts Payable	210		200

AP 3–6 continued

5. Scuttlebutt Corporation
General Journal

June 2011		Description	F	Debit	Credit
		Adjusting Entries			
l.	Jun. 30	Advertising Expense	610	250	
		Prepaid Advertising	160		250
m.	30	Unearned Subscription Revenue	250	4,000	
		Subscription Revenue	480		4,000
n.	30	Supplies Expense	668	650	
		Unused Supplies	173		650
o.	30	Commissions Expense	615	200	
		Accounts Payable	210		200
p.	30	Salaries Expense	656	600	
		Salaries Payable	226		600
q.	30	Depreciation Expense—Equipment	623	100	
		Accumulated Depreciation—Equipment	193		100
		($6,000 x 1/60 mos. = $100)			

AP 3–6 continued

7.

Scuttlebutt Corporation
Adjusted Trial Balance
June 30, 2011

	Account Balances	
	Debit	*Credit*
Cash	$14,150	
Prepaid Advertising	250	
Unused Supplies	100	
Equipment	6,000	
Accumulated Depreciation—Equipment		$ 100
Accounts Payable		3,900
Salaries Payable		600
Unearned Subscription Revenue		8,000
Share Capital		10,000
Other Revenue		5,000
Subscription Revenue		4,000
Advertising Expense	250	
Commissions Expense	200	
Depreciation Expense—Equipment	100	
Rent Expense	500	
Salaries Expense	6,600	
Supplies Expense	2,650	
Telephone Expense	600	
Utilities Expense	200	
	$31,600	$31,600

Return to Question

AP 3-7

1., 3., 4., and 6.

Rigney Productions Corporation

Cash			No.101
Bal.	50,000	(a)	15,000
(f)	6,000	(c)	7,200
(h)	600	(d)	10,000
		(e)	1,200
		(g)	1,500
		(i)	6,000
	56,600		40,900
Bal.	15,700		

Temporary Investments			No.106
(d)	10,000		

Interest Receivable			No.116
(m)	100		

Prepaid Insurance			No.161
(e)	1,200	(n)	100
Bal.	1,100		

Prepaid Rent			No.162
(g)	1,500	(p)	500
Bal.	1,000		

Unused Supplies			No.173
(b)	750	(k)	500
Bal.	250		

Equipment			No.183
(c)	7,200		

Truck			No.184
(i)	6,000		

Accumulated Depreciation-Equipment			No.192
		(l)	200

Accumulated Depreciation-Truck			No.194
		(r)	125

Accounts Payable			No210
	(b)		750

Salaries Payable			No.226
		(j)	1,000

Unearned Rent Revenue			No.248
(q)	300	(h)	600
		Bal.	300

Unearned Subscriptions Revenue			No.250
(o)	500	(f)	6,000
		Bal.	5,500

Share Capital			No.320
		Bal.	50,000

Interest Earned			No.430
		(m)	100

Rent Earned			No.440
		(q)	300

Subscription Revenue			No.480
		(o)	500

Depreciation Expense Equipment			No.622
(l)	200		

Depreciation Expense Truck			No.624
(r)	125		

Insurance Expense			No.631
(n)	100		

Rent Expense			No.654
(p)	500		

Salaries Expense			No.656
(a)	15,000		
(j)	1,000		
Bal.	16,000		

Supplies Expense			No.668
(k)	500		

AP 3–7 continued

2. Rigney Productions Corporation

General Journal

Page 1

Jan. 2011		Description	F	Debit	Credit
a.	Jan.	Salaries Expense	656	15,000	
		Cash	101		15,000
b.		Unused Supplies	173	750	
		Accounts Payable	210		750
c.		Equipment	183	7,200	
		Cash	101		7,200
d.		Temporary Investments	106	10,000	
		Cash	101		10,000
e.		Prepaid Insurance	161	1,200	
		Cash	101		1,200
f.		Cash	101	6,000	
		Unearned Subscriptions Revenue	250		6,000
g.		Prepaid Rent	162	1,500	
		Cash	101		1,500
h.		Cash	101	600	
		Unearned Rent Revenue	248		600
i.		Truck	184	6,000	
		Cash	101		6,000

AP 3–7 continued

5. Rigney Productions Corporation
General Journal
Page 2

Jan. 2011		Description	F	Debit	Credit
		<u>Adjusting Entries</u>			
j.	Jan. 31	Salaries Expense	656	1,000	
		Salaries Payable	226		1,000
k.	31	Supplies Expense	668	500	
		Unused Supplies	173		500
l.	31	Depreciation Expense—Equipment	623	200	
		Accumulated Depreciation—Equipment	193		200
		($7,200 x 1/36 mos. = $200)			
m.	31	Interest Receivable	112	100	
		Interest Earned	430		100
n.	31	Insurance Expense	631	100	
		Prepaid Insurance	161		100
o.	31	Unearned Subscriptions Revenue	250	500	
		Subscription Revenue	480		500
p.	31	Rent Expense	654	500	
		Prepaid Rent	162		500
q.	31	Unearned Rent Revenue	248	300	
		Rent Earned	440		300
r.	31	Depreciation Expense—Truck	624	125	
		Accumulated Depreciation—Truck	194		125
		($6,000 x 1/48 mos. = $125)			

AP 3–7 continued

7.

Rigney Productions Corporation
Adjusted Trial Balance
January 31, 2011

	Account Balances	
	Debit	*Credit*
Cash	$15,700	
Temporary Investments	10,000	
Interest Receivable	100	
Prepaid Insurance	1,100	
Prepaid Rent	1,000	
Unused Supplies	250	
Equipment	7,200	
Truck	6,000	
Accumulated Depreciation—Equipment		$ 200
Accumulated Depreciation—Truck		125
Accounts Payable		750
Salaries Payable		1,000
Unearned Rent Revenue		300
Unearned Subscriptions Revenue		5,500
Share Capital		50,000
Interest Earned		100
Rent Earned		300
Subscription Revenue		500
Depreciation Expense—Equipment	200	
Depreciation Expense—Truck	125	
Insurance Expense	100	
Rent Expense	500	
Salaries Expense	16,000	
Supplies Expense	500	
	$58,775	$58,775

CHAPTER 4
Accounting for the Sale of Goods

CP 4–1

Return to Question

1.

	2014	*2013*	*2012*	*2011*
Sales	$10,000	$9,000	$8,000	$7,000
Cost of Goods Sold	7,500	6,840	6,160	[b] 5,460
Gross Profit	2,500	2,160	1,840	[a] $1,540
Gross Profit Percentage	25%	24%	23%	22%

[a] $7,000 x .22 = $1,540

[b] $7,000 – 1,540 = $5,460

2. Gross profit percentages are increasing steadily each year, as are sales. These are healthy trends.

CP 4–2 Return to Question

Reber Corp.
General Journal

Date 2014	Description	F	Debit	Credit
Jul. 6	Merchandise Inventory	150	600	
	Accounts Payable	210		600
	To record purchase of inventory on account.			
9	Accounts Payable	210	200	
	Merchandise Inventory	150		200
	To record returns made on goods purchased.			
15	Accounts Payable	210	400	
	Cash	101		396
	Purchases Discounts	559		4
	To record payment made within discount period [($600 – 200) x 1% = $4].			

CP 4–3 Return to Question

Boucher Ltd.
General Journal

Date 2015	Description	F	Debit	Credit
Jun. 1	Merchandise Inventory	150	1,200	
	Accounts Payable	210		1,200
	To record inventory purchase.			
3	Accounts Receivable	110	1,500	
	Sales	500		1,500
	Cost of Goods Sold	570	1,200	
	Merchandise Inventory	150		1,200
	To record sale to Wright Inc.: terms 2/10, net 30.			
8	Sales Returns and Allowances	508	800	
	Accounts Receivable	110		800
	Merchandise Inventory	150	600	
	Cost of Goods Sold	570		600
	To record merchandise returned.			
13	Sales Discounts	509	14	
	Cash	101	686	
	Accounts Receivable	110		700
	To record payment received and discount taken [($1,500 – 800) x 2% = $14].			

CP 4–4

Return to Question

1. Horne Inc.:

May 5	Accounts Receivable	4,000	
	Sales		4,000
	Cost of Goods Sold	2,500	
	Merchandise Inventory		2,500
	To record sale on account to Sperling.		
May 7	Sales Returns and Allowances	500	
	Accounts Receivable		500
	Merchandise Inventory	300	
	Cost of Goods Sold		300
	To record return of items from Sperling.		
May 15	Cash	3,430	
	Sales Discounts	70	
	Accounts Receivable		3,500
	To record payment by Sperling: discount applied.		
Dec. 31	Cost of Goods Sold	100	
	Merchandise Inventory		100
	To adjust the Merchandise Inventory account at year-end to physical count ($3,000 – 2,500 + 300 = $800 per records - $700 per count = $100 adjustment needed for shrinkage.)		

2. Sperling Renovations Ltd:

May 5	Merchandise Inventory	4,000	
	Accounts Payable		4,000
	To record purchase on account from Horne.		
May 7	Accounts Payable	500	
	Merchandise Inventory		500
	To record return of merchandise to Horne.		
May 15	Accounts Payable	3,500	
	Merchandise Inventory	70	
	Cash		3,430
	To record payment to Horne: discount taken.		

CP 4–5

Return to Question

1.

Sales		$72,000
Less: Sales Returns and Allowances		(2,000)
Net Sales		70,000
Cost of Goods Sold		50,000
Gross Profit		20,000
Other Expenses		
Advertising	$1,500	
Commissions	4,000	
Delivery	500	
Depreciation – Equipment	500	
Insurance	1,000	
Rent	2,500	
Salaries	5,000	15,000
Net Income		$ 5,000

2. Gross profit percentage = $20,000/70,000 = 28.6%

CP 4–6

Return to Question

(a)

Dec. 31	Sales	500	72,000	
	Income Summary	360		72,000
	To close all income statement accounts with credit balances to the Income Summary account.			

(b)

Dec. 31	Income Summary	360	67,000	
	Advertising Expense	610		1,500
	Commissions Expense	615		4,000
	Cost of Goods Sold	570		50,000
	Delivery Expense	620		500
	Depreciation Expense – Equip.	623		500
	Insurance Expense	631		1,000
	Rent Expense	654		2,500
	Salaries Expense	656		5,000
	Sales Returns and Allowances	508		2,000
	To close all income statement accounts with debit balances to the Income Summary account.			

(c)

Dec. 31	Income Summary	360	5,000	
	Retained Earnings	340		5,000
	To close the Income Summary account to the Retained Earnings account.			

CP 4–7

Return to Question

Opening Inventory + Purchases + Transportation-In = Cost of Goods Available
Cost of Goods Available - Ending Inventory = Cost of Goods Sold

A. ? + $1,415 + $25 = $1,940
Opening Inventory = $500

$1,940 = $340 = ?
Cost of Goods Sold = $1,600

B. $184 + ? + $6 = $534
Purchases = $344

$534 - $200 = ?
Cost of Goods Sold = $334

C. $112 + $840 + $15 = ?
Cost of Goods Available = $967

$967 - $135 = ?
Cost of Goods Sold = $832

D. $750 + $5,860 + ? = $6,620
Transportation-In = $10

$6,620 - ? = $5,740
Ending Inventory = $880

CP 4–8

Return to Question

Opening Inventory	$ 375
Purchases	$2,930
Purchases Discounts	(5)
Purchases Returns and Allowances	(20)
Transportation-In	105
Goods Available for Sale	3,010
Less: Ending Inventory	(440)
Cost of Goods Sold	$2,945

CP 4–9

Return to Question

1.

	A	*B*	*C*	*D*
Sales (a)	$300	$150	$300[8]	$ 90
Opening Inventory	80[1]	40	40	12
Purchases	240	120[6]	220[7]	63
Cost of Goods Available	320	160[5]	260	75[9]
Less: Ending Inventory	(120)[3]	(60)	(60)	(15)
Cost of Goods Sold	200[2]	100	200	60
Gross Profit (b)	$100	$ 50[4]	$100	$ 30[10]
Gross Profit percentage (a/b)	33%	33%	33%	33%

[1] $320 – 240 = $80

[2] $300 – 100 = $200

[3] $320 – 200 = $120

[4] $150 – 100 = $50

[5] $100 + 60 = $160

[6] $160 – 40 = $120

[7] $260 – 40 = $220

[8] $100 + 200 = $300

[9] $12 + 63 = $75

[10] $90 – 60 = $30

2. All the companies have the same gross profit percentage. It is difficult to differentiate performance on this basis alone.

CP 4–10

Return to Question

1.

Sales		$25,000
Less: Sales Discounts		(400)
Sales Returns and Allowances		(2,000)
Net Sales		22,600
Cost of Goods Sold:		
Purchases	20,000	
Purchases Returns and Allowances	(1,000)	
Purchases Discounts	(300)	
Transportation-In	500	
Cost of Goods Available for Sale	19,200	
Less: Ending Inventory	(7,900)	
Cost of Goods Sold		11,300
Gross Profit		$11,300

2. Gross profit percentage = $11,300/$22,600 = 50%

CP 4–11

Return to Question

1.

Sales		$72,000
Less: Sales Returns and Allowances		(2,000)
Net Sales		70,000
Cost of Goods Sold:		
Opening Inventory	$ 6,000	
Purchases	35,000	
Purchase Returns and Allowances	(2,000)	
Transportation-In	1,000	
Cost of Goods Available for Sale	40,000	
Less: Ending Inventory	(10,000)	
Cost of Goods Sold		30,000
Gross Profit		40,000
Other Expenses:		
Advertising	1,500	
Commissions	4,000	
Delivery	500	
Depreciation – Equipment	500	
Insurance	1,000	
Rent	2,500	
Salaries	5,000	15,000
Net Income		$25,000

2. Gross profit percentage = $40,000/70,000 = 57.1%

CP 4–12

Return to Question

(a)

Dec. 31	Merchandise Inventory (ending)	150	10,000	
	Sales	500	72,000	
	Purchase Returns and Allowances	558	2,000	
	Income Summary	360		84,000
	To close all income statement accounts with credit balances to the Income Summary account and record ending inventory balance.			

(b)

Dec. 31	Income Summary	360	59,000	
	Merchandise Inventory (opening)			6,000
	Advertising Expense	610		1,500
	Commissions Expense	615		4,000
	Delivery Expense	620		500
	Depreciation Expense – Equip.	623		500
	Insurance Expense	631		1,000
	Purchases	550		35,000
	Rent Expense	654		2,500
	Salaries Expense	656		5,000
	Sales Returns and Allowances	508		2,000
	Transportation-In	560		1,000
	To close all income statement accounts with debit balances to the Income Summary account and remove opening inventory from the Merchandise Inventory account.			

(c)

Dec. 31	Income Summary	360	15,000	
	Retained Earnings	340		15,000
	To close the Income Summary account to the Retained Earnings account.			

CP 4–13

Return to Question

1.		Oct.	8	Purchases	2,800	
				Accounts Payable		2,800
			12	Accounts Payable	800	
				Purchases Returns and Allowances		800
	a.	Paid on Oct. 8:				
		Oct.	8	Accounts Payable	2,800	
				Purchases Discounts		28
				Cash		2,772
	b.	Paid on Oct. 25:				
		Oct.	25	Accounts Payable	2,000	
				Cash		2,000
2.		Oct.	8	Accounts Receivable	2,800	
				Sales		2,800
			12	Sales Returns and Allowances	800	
				Accounts Receivable		800
	a.	Received Payment on Oct. 18:				
		Oct.	18	Cash	2,772	
				Sales Discounts	28	
				Accounts Receivable		2,800
	b.	Received Payment on Oct. 25:				
		Oct.	25	Cash	2,000	
				Accounts Receivable		2,000

AP 4–1 Return to Question

1.

Pike Corporation
General Journal

	Date 2011	Description	F	Debit	Credit
a.		No entry required			
b.	Dec. 31	Merchandise Inventory	150	200,000	
		Accounts Payable	210		200,000
		Accounts Payable	210	100,000	
		Cash	101		98,000
		Merchandise Inventory	150		2,000
c.	31	Merchandise Inventory	150	8,000	
		Cash	101		8,000
d.	31	Cash	101	3,920	
		Merchandise Inventory	150	80	
		Merchandise Inventory	150		4,000
e.	31	Accounts Receivable	110	20,000	
		Sales	500		20,000
		Cost of Goods Sold	570	14,000	
		Merchandise Inventory	150		14,000
f.	31	Sales Returns and Allowances	508	2,750	
		Accounts Receivable	110		2,750
		Merchandise Inventory	150	2,000	
		Cost of Goods Sold	570		2,000
g.	31	Accounts Receivable	110	2,750	
		Cash	101		2,750
h.	31	Cost of Goods Sold	570	80	
		Merchandise Inventory	150		80
		Shrinkage calculated as:			

Merchandise Inventory

May 1	100,000	2,000	b.
b.	200,000	4,000	d.
c.	8.000	14,000	e.
d.	80		
f.	2,000		
	310,080	20,000	
Unadj. Bal.	290,080		
		80	h.
Adj. Bal.	290,000		

AP 4-1 continued

2.

Pike Corporation
Income Statement
For the Year Ended December 31, 2011

Sales	$20,000
Less: Sales Returns and Allowances	(2,750)
Net Sales (a)	17,250
Cost of Goods Sold	12,080
Gross Profit (b)	5,170
Gross profit percentage (b/a)	30%

3.

Date 2011		Closing Entries	F	Debit	Credit
		(a)			
Dec.	31	Sales	500	20,000	
		Income Summary	360		20,000
		(b)			
	31	Income Summary	360	14,830	
		Sales Returns and Allowances	508		2,750
		Cost of Goods Sold	570		12,080
		(c)			
	31	Income Summary	360	5,170	
		Retained Earnings	340		5,170

AP 4–2 Return to Question

Simple Products Inc.
General Journal

Page 1

Date 2011	Description	F	Debit	Credit
Apr. 1	Cash	101	3,000	
	Share Capital	320		3,000
	To record issue of shares to Ross Sims.			
1	Merchandise Inventory	150	4,000	
	Accounts Payable	210		4,000
	To record purchase for terms 2/10, n/30 from Springfield Wholesalers Inc.			
1	Accounts Receivable	110	3,000	
	Sales	500		3,000
	Cost of Goods Sold	570	2,000	
	Merchandise Inventory	150		2,000
	To record sale to Authentic Products Corp. for terms 2/10, n/30.			
2	Cash	101	500	
	Sales	500		500
	Cost of Goods Sold	270	400	
	Merchandise Inventory	150		400
	To record sale to Georges Pierre Ltd.			
2	Merchandise Inventory	150	750	
	Accounts Payable	210		750
	To record purchase for terms n/30 from White Whale Wholesalers, Ltd.			
2	Accounts Receivable	110	1,200	
	Sales	500		1,200
	Cost of Goods Sold	570	800	
	Merchandise Inventory	150		800
	To record Sales on account to Champagne Stores Inc. for terms 2/10, n/30.			
5	Cash	101	1,470	
	Sales Discount	509	30	
	Accounts Receivable	110		1,500
	To record receipt of cash from Authentic Products Corp.			
8	Cash	101	1,176	
	Sales Discount	509	24	
	Accounts Receivable	110		1,200
	To record cash collected from Champagne Stores Inc.			
9	Accounts Payable	210	4,000	
	Cash	101		3,920
	Merchandise Inventory	150		80
	To record cash payment to Springfield Wholesalers Inc.			
10	Merchandise Inventory	150	2,000	
	Accounts Payable	210		2,000
	To record Purchases from Ritz Distributors Inc. for terms 2/15, n/30.			

AP 4–2 continued

Simple Products Inc.
General Journal

Page 2

Date 2012	Description	F	Debit	Credit
Apr. 11	Accounts Receivable	110	500	
	Sales	500		500
	Cost of Goods Sold	570	300	
	Merchandise Inventory	150		300
	To record sale to Premier Sales Inc. for terms 2/10, n/30.			
12	Sales Returns and Allowances	508	100	
	Accounts Receivable	110		100
	Merchandise Inventory	150	80	
	Cost of Goods Sold	570		80
	To record return of merchandise from Premier Sales Inc.			
15	Accounts Payable	210	150	
	Merchandise Inventory	150		150
	To record return of merchandise to White Whale Wholesalers, Ltd.			
15	Merchandise Inventory	150	1,500	
	Accounts Payable	210		1,500
	To record purchase from Breakwater Distributors Inc. for terms 2/10, n/30.			
19	Merchandise Inventory	150	1,250	
	Accounts Payable	210		1,250
	To record purchase from Brown Gull Sales, Ltd. for terms n/30.			
20	Accounts Receivable	110	2,000	
	Sales	500		2,000
	Cost of Goods Sold	570	1,700	
	Merchandise Inventory	150		1,700
	To record sale to Salari Corp. for terms 2/10, n/30.			
20	Cash	101	392	
	Sales Discounts	509	8	
	Accounts Receivable	110		400
	To record cash received from Premier Sales Inc.			
22	Accounts Payable	210	2,000	
	Cash	101		1,960
	Merchandise Inventory	150		40
	To record payment to Ritz Distributors Inc.			
24	Accounts Payable	210	1,500	
	Cash	101		1,470
	Purchases Discounts	559		30
	To record payment to Breakwater Distributors Inc.			

AP 4–2 continued

Simple Products Inc.
General Journal
Page 3

Date 2012	Description	F	Debit	Credit
27	Accounts Receivable	110	800	
	Sales	500		800
	Cost of Goods Sold	570	500	
	Merchandise Inventory	150		500
	To record sale to Rook Emporium Corp. for terms 2/10, n/30.			
30	Delivery Expense	620	200	
	Cash	101		200
	To record payment to Rapide Delivery Inc. for deliveries made to customers.			
30	Merchandise Inventory	150	500	
	Cash	101		500
	To record payment to Fast Forwarders Ltd. for transportation to warehouse.			
	Adjusting Entry			
30	Cost of Goods Sold	570	80	
	Merchandise Inventory	150		80
	To record shrinkage as follows:			

Merchandise Inventory

Apr. 1	4,000	2,000	Apr. 1
2	750	400	2
10	2,000	800	2
12	80	80	9
15	1,500	300	11
19	1,250	150	15
30	500	1,700	20
		40	22
		30	24
		500	27
	10,080	6,000	
Unadj. Bal.	4,080		
		80	Adjust.
Adj. Bal.	4,000		

AP 4–3 Return to Question

Wheaton Wholesalers Inc.
General Journal

Page 1

Date 2011	Description	F	Debit	Credit
Mar. 1	Cash	101	410,000	
	Share Capital	320		410,000
	To record issue of shares for cash to Michael Wheaton.			
1	Equipment	183	4,000	
	Cash	101		4,000
	To record payment to Scotia Fixtures Inc.			
1	Merchandise Inventory	150	2,100	
	Accounts Payable	210		2,100
	To record purchase from Midlife Stores Corp. for terms 2/10, n/30.			
2	Accounts Receivable	110	2,000	
	Sales	500		2,000
	Cost of Goods Sold	570	1,500	
	Merchandise Inventory	150		1,500
	To record sale to Timmins Centres, Ltd. for terms 2/10, n/30.			
2	Cash	101	300	
	Sales	500		300
	Cost of Goods Sold	570	200	
	Merchandise Inventory	150		200
	To record cash sale to Clayton David Inc.			
3	Merchandise Inventory	150	500	
	Accounts Payable	210		500
	To record purchase from Speedy Sales Co. for terms 1/10, n/30.			
4	Accounts Receivable	110	2,500	
	Sales	500		2,500
	Cost of Goods Sold	570	2,000	
	Merchandise Inventory	150		2,000
	To record Sales to Northern Warehouse for terms 2/10, n/30.			
4	Sales Returns and Allowances	508	200	
	Accounts Receivable	110		200
	Merchandise Inventory	150	120	
	Cost of Goods Sold	570		120
	To record return of merchandise from Timmins Centres, Ltd.			

AP 4–3 continued

Wheaton Wholesalers Inc.
General Journal

Page 2

Date 2011	Description	F	Debit	Credit
Mar. 5	Merchandise Inventory	150	1,400	
	Accounts Payable	210		1,400
	To record purchase from St Jean Wholesalers Corp. for terms n/30.			
6	Accounts Payable	210	100	
	Merchandise Inventory	150		100
	To record return of merchandise to Midlife Stores Corp.			
6	Accounts Receivable	110	1,500	
	Sales	500		1,500
	Cost of Goods Sold	570	900	
	Merchandise Inventory	150		900
	To record sale to Sault Rapids Corp. for terms 2/10, n/30.			
7	Merchandise Inventory	150	600	
	Accounts Payable	210		600
	To record purchase from Trent Stores Corporation for terms 2/15, n/30.			
8	Cash	101	1,764	
	Sales Discounts	509	36	
	Accounts Receivable	110		1,800
	To record cash received from Timmins Centres, Ltd.			
10	Accounts Payable	210	500	
	Cash	101		495
	Merchandise Inventory	150		5
	To record payment to Speedy Sales Co.			
11	Cash	101	7,500	
	Bank Loan	201		7,500
	To record cash received as a demand loan from Second National Bank.			
12	Prepaid Rent	162	1,000	
	Cash	101		1,000
	To record rent payment for March and April to Peace Realty Corp.			
12	Accounts Receivable	110	700	
	Sales	500		700
	Cost of Goods Sold	570	400	
	Merchandise Inventory	150		400
	To record sale to James Bay Distributors Inc. for terms 2/10, n/30.			

AP 4–3 continued

Wheaton Wholesalers Inc.
General Journal

Date 2011	Description	F	Debit	Credit
Mar. 13	Cash	101	2,450	
	Sales Discounts	509	50	
	Accounts Receivable	110		2,500
	To record cash received from Northern Warehouse.			
15	Commissions Expense	615	350	
	Cash	101		350
	To record payment of commissions to Mitch Michaels for March 1–15.			
15	Accounts Payable	210	1,000	
	Cash	101		1,000
	To record payment to Midlife Stores Corporation on account.			
15	Merchandise Inventory	150	1,000	
	Accounts Payable	210		1,000
	To record purchase from Lilydale Products, Ltd. for terms 2/15, n/30.			
18	Accounts Payable	210	300	
	Cash	101		294
	Merchandise Inventory	150		6
	To record payment to Trent Stores Corporation on account.			
19	Cash	101	100	
	Sales	500		100
	Cost of Goods Sold	570	70	
	Merchandise Inventory	150		70
	To record cash sale to Margaret Smith.			
20	Merchandise Inventory	150	1,200	
	Accounts Payable	210		1,200
	To record purchase from Delta Centres Inc. for terms n/30.			
20	Merchandise Inventory	150	400	
	Cash	101		400
	To record purchase from Copeland Distributors Inc.			
20	Accounts Receivable	110	600	
	Sales	500		600
	Cost of Goods Sold	570	350	
	Merchandise Inventory	150		350
	To record sale of merchandise to Amigo Inc. for terms 2/10, n/30.			

AP 4–3 continued

Wheaton Wholesalers Inc.
General Journal

Page 4

Date 2011	Description	F	Debit	Credit
Mar. 21	Accounts Payable	210	700	
	Cash	101		700
	To record payment on account to St Jean Wholesalers Corp.			
22	Cash		101	500
	Accounts Receivable	110		500
	To record cash receipt on account from Sault Rapids Inc.			
23	Prepaid Insurance	161	2,400	
	Cash	101		2,400
	To record payment to Tri City Insurance, Ltd. for a one–year policy effective March 1.			
24	Merchandise Inventory	150	300	
	Cash	101		300
	To record cash purchase from Buster's Emporium.			
25	Accounts Receivable	110	1,400	
	Sales	500		1,400
	Cost of Goods Sold	570	1,100	
	Merchandise Inventory	150		1,100
	To record sale to Pinehurst Novelties Inc. for terms 2/10, n/30.			
26	Merchandise Inventory	150	700	
	Accounts Payable	210		700
	To record purchase from Tres Bon Markets, Ltd. for terms 2/10, n/30.			
30	Delivery Expense	620	500	
	Cash	101		500
	To record payment to Shelby Corp. for deliveries.			
30	Commissions Expense	615	400	
	Cash	101		400
	To record payment of commissions to Mitch Michaels for March 16–30.			

AP 4–3 continued

Wheaton Wholesalers Inc.
General Journal

Page 4

Date 2011	Description	F	Debit	Credit
Mar. 30	Telephone Expense	669	75	
	Cash	101		75
	To record payment to PhoneU for March telephone bill.			
30	Advertising Expense	610	250	
	Cash	101		250
	To record payment to Vision Visuals, Ltd. for advertising materials.			
	<u>Adjusting Entries</u>			
31	Insurance Expense	631	200	
	Prepaid Insurance	161		200
	To record expiry of insurance during March.			
31	Rent Expense	654	500	
	Prepaid Rent	162		500
	To record expiry of March rent payment.			
31	Depreciation Expense- Equipment	623	33	
	Accumulated Depreciation- Equipment	193		33
	To record depreciation for March ($4,000/10 years X1/12 mos.=$33)			
31	Cost of Goods Sold	570	189	
	Merchandise Inventory	150		189
	To record shrinkage as follows:			

Merchandise Inventory

Mar. 1	2,100	1,500	Mar. 2
3	500	200	2
4	120	2,000	4
5	1,400	100	6
7	600	900	6
15	1,000	5	10
20	1,200	400	12
20	400	6	18
24	300	70	19
26	700	350	20
		1,100	25
	8,320	6,631	
Unadj. Bal.	1,689		
		189	Adjust.
Adj. Bal.	1,500		

AP 4–4

Return to Question

James Services Ltd.
Partial Income Statement
For the Year Ended December 31, 2017

Sales	$43,000
Less: Sales Returns and Allowances	(660)
Sales Discounts	(340)
Net Sales	42,000
Cost of Goods Sold	31,000
Gross Profit	$11,000

AP 4–5

Return to Question

1.

Van Loo Merchants Inc.
General Journal

	Date 2012	Description	F	Debit	Credit
		Adjusting Entries			
a.	Dec. 31	Rent Expense		300	
		Prepaid Rent			300
		To record rent expired for December 2012.			
b.	31	Interest Expense		100	
		Interest Payable			100
		To record accrued interest on the bank loan for December 2012.			
c.	31	Depreciation Expense – Furniture		500	
		Accumulated Depreciation			500
		To record depreciation on the office furniture for 2012.			
d.	31	Telephone Expense		50	
		Accounts Payable			50
		To accrue telephone expense for December 2012.			
e.	31	Insurance Expense		100	
		Prepaid Insurance			100
		To record expiry of insurance applicable to December 2012.			
f.	31	Cost of Goods Sold		1,000	
		Merchandise Inventory			1,000
		To record shrinkage and adjust ending inventory to actual ($11,000 – 10,000 = $1,000)			

AP 4–5 continued

2.

Van Loo Merchants Inc.
Adjusted Trial Balance
December 31, 2012

	Account Balances	
	Dr.	*Cr.*
Cash	$ 1,500	
Accounts Receivable	5,000	
Merchandise Inventory	10,000	
Prepaid Insurance	1,200	
Prepaid Rent	300	
Furniture	12,500	
Accumulated Depreciation - Furniture		$ 500
Bank Loan		10,000
Accounts Payable		8,400
Interest Payable		100
Income Taxes Payable		3,600
Share Capital		3,000
Retained Earnings		1,400
Sales		75,000
Sales Returns and Allowances	2,250	
Sales Discounts	750	
Cost of Goods Sold	47,000	
Advertising Expense	1,800	
Commissions Expense	7,200	
Delivery Expense	1,600	
Depreciation Expense	500	
Income Taxes Expense	3,600	
Insurance Expense	1,200	
Interest Expense	1,300	
Rent Expense	3,600	
Telephone Expense	600	
Utilities Expense	100	
Total Debits and Credits	$102,000	$102,000

AP 4–5 continued

3.

Van Loo Merchants Inc.
Income Statement
For the Year Ended December 31, 2012

Sales		$75,000
Less: Sales Returns and Allowances		(2,250)
Sales Discounts		(750)
Net Sales		72,000
Cost of Goods Sold		47,000
Gross Profit		25,000
Other Expenses:		
Advertising	$1,800	
Commissions	7,200	
Delivery	1,600	
Depreciation – Furniture	500	
Income Taxes	3,600	
Insurance	1,200	
Interest	1,300	
Rent	3,600	
Telephone	600	
Utilities	100	21,500
Net Income		$ 3,500

Van Loo Merchants Inc.
Statement of Changes in Equity
For the Year Ended December 31, 2012

	Share Capital	*Retained Earnings*	*Total*
Opening Balance	$3,000	$ 1,400	$4,400
Net Income		3,500	3,500
Ending Balance	$3,000	$4,900	$7,900

AP 4–5 continued

Van Loo Merchants Inc.
Balance Sheet
At December 31, 2012

Assets		
Cash		$ 1,500
Accounts Receivable		5,000
Merchandise Inventory		10,000
Prepaid Insurance		1,200
Prepaid Rent		300
Furniture	$12,500	
Less: Acc. Dep'n	500	12,000
		$30,000
Liabilities		
Bank Loan		10,000
Accounts Payable		8,400
Income Taxes Payable		3,600
Interest Payable		100
		22,100
Shareholders' Equity		
Share Capital	3,000	
Retained Earnings	4,900	7,900
		$30,000

AP 4–5 continued

4.

Van Loo Merchants Inc.
General Journal

Date 2012		Description	F	Debit	Credit
		Closing Entries			
a.	Dec. 31	Sales	500	75,000	
		Income Summary	360		75,000
		To close all credit balance accounts to the Income Summary account.			
b.	31	Income Summary	360	71,500	
		Sales Returns and Allowances	508		2,250
		Sales Discounts	509		750
		Cost of Goods Sold	570		47,000
		Advertising Expense	610		1,800
		Commissions Expense	615		7,200
		Delivery Expense	620		1,600
		Depreciation Expense – Furniture	622		500
		Income Taxes Expense	830		3,600
		Insurance Expense	631		1,200
		Interest Expense	632		1,300
		Rent Expense	654		3,600
		Telephone Expense	669		600
		Utilities Expense	676		100
		To close all debit balance accounts to the Income Summary account.			
c.	31	Income Summary	360	3,500	
		Retained Earnings	340		3,500
		To close the Income Summary account to Retained Earnings.			

AP 4–6 Return to Question

1.

Marlin Corporation
General Journal

	Date 2011	Description	F	Debit	Credit
a.		No entry required			
b.	Dec. 31	Purchases	550	200,000	
		Accounts Payable	210		200,000
		Accounts Payable	210	100,000	
		Cash	101		98,000
		Purchases Discounts	559		2,000
c.	31	Transportation-In	560	8,000	
		Cash	101		8,000
d.	31	Cash	101	3,920	
		Purchases Discounts	559	80	
		Purchases Returns and Allowances	558		4,000
e.	31	Accounts Receivable	110	20,000	
		Sales	500		20,000
f.	31	Sales Returns and Allowances	508	2,750	
		Accounts Receivable	110		2,750
g.	31	Accounts Receivable	110	2,750	
		Cash	101		2,750
h.	31	No entry required			

AP 4-6 continued

2.

Marlin Corporation
Partial Income Statement
For the Year Ended December 31, 2011

Cost of Goods Sold:	
Opening Inventory	$100,000
Purchases	200,000
Less: Purchases Returns and Allowances	(4,000)
Purchases Discounts	(1,920)
Add: Transportation-In	8,000
Cost of Goods Available for Sale	302,080
Ending Inventory	(80,000)
Cost of Goods Sold	$222,080

1.

Date 2011		Description	F	Debit	Credit
		Closing Entries			
Jan.	1	Merchandise Inventory	150	80,000	
		Purchases Returns and Allowances	558	4,000	
		Purchases Discounts	559	1,920	
		Income Summary	360		85,920
	1	Income Summary	360	310,750	
		Merchandise Inventory	150		100,000
		Sales Returns and Allowances	508		2,750
		Purchases	550		200,000
		Transportation-In	560		8,000

AP 4–7 Return to Question

Ample Products Inc.
General Journal

Page 1

Date 2011	Description	F	Debit	Credit
Apr. 1	Cash	101	3,000	
	Share Capital	320		3,000
	To record issue of shares to Ross Ample.			
1	Purchases	550	4,000	
	Accounts Payable	210		4,000
	To record purchase for terms 2/10, n/30 from Springfield Wholesalers Inc.			
1	Accounts Receivable	110	3,000	
	Sales	500		3,000
	To record sale to Authentic Products Corp. for terms 2/10, n/30.			
2	Cash	101	500	
	Sales	500		500
	To record sale to Georges Pierre Ltd.			
2	Purchases	550	750	
	Accounts Payable	210		750
	To record purchase for terms n/30 from White Whale Wholesalers, Ltd.			
2	Accounts Receivable	110	1,200	
	Sales	500		1,200
	To record Sales on account to Champagne Stores Inc. for terms 2/10, n/30.			
5	Cash	101	1,470	
	Sales Discount	509	30	
	Accounts Receivable	110		1,500
	To record receipt of cash from Authentic Products Corp.			
8	Cash	101	1,176	
	Sales Discount	509	24	
	Accounts Receivable	110		1,200
	To record cash collected from Champagne Stores Inc.			
9	Accounts Payable	210	4,000	
	Cash	101		3,920
	Purchases Discount	559		80
	To record cash payment to Springfield Wholesalers Inc.			
10	Purchases	550	2,000	
	Accounts Payable	210		2,000
	To record Purchases from Ritz Distributors Inc. for terms 2/15, n/30.			
11	Accounts Receivable	110	500	
	Sales	500		500
	To record sale to Premier Sales Inc. for terms 2/10, n/30.			

AP 4–7 continued

Ample Products Inc.
General Journal
Page 2

Date 2012	Description	F	Debit	Credit
Apr. 12	Sales Returns and Allowances	508	100	
	Accounts Receivable	110		100
	To record return of merchandise from Premier Sales Inc.			
15	Accounts Payable	210	150	
	Purchases Returns and Allowances	558		150
	To record return of merchandise to White Whale Wholesalers, Ltd.			
15	Purchases	550	1,500	
	Accounts Payable	210		1,500
	To record purchase from Breakwater Distributors Inc. for terms 2/10, n/30.			
19	Purchases	550	1,250	
	Accounts Payable	210		1,250
	To record purchase from Brown Gull Sales, Ltd. for terms n/30.			
20	Accounts Receivable	110	2,000	
	Sales	500		2,000
	To record sale to Salari Corp. for terms 2/10, n/30.			
20	Cash	101	392	
	Sales Discounts	509	8	
	Accounts Receivable	110		400
	To record cash received from Premier Sales Inc.			
22	Accounts Payable	210	2,000	
	Cash	101		1,960
	Purchases Discounts	559		40
	To record payment to Ritz Distributors Inc.			
24	Accounts Payable	210	1,500	
	Cash	101		1,470
	Purchases Discounts	559		30
	To record payment to Breakwater Distributors Inc.			
27	Accounts Receivable	110	800	
	Sales	500		800
	To record sale to Rook Emporium Corp. for terms 2/10, n/30.			
30	Delivery Expense	620	200	
	Cash	101		200
	To record payment to Rapide Delivery Inc. for deliveries made to customers.			
30	Transportation-In	560	500	
	Cash	101		500
	To record payment to Fast Forwarders Ltd. for transportation to warehouse.			

AP 4–8 Return to Question

City Retailers Inc.
General Journal

Page 1

Date 2011	Description	F	Debit	Credit
Mar. l	Cash	101	410,000	
	Share Capital	320		410,000
	To record shares issued to Michael Smith.			
1	Equipment	183	4,000	
	Cash	101		4,000
	To record payment to Scotia Fixtures Inc.			
1	Purchases	550	2,100	
	Accounts Payable	210		2,100
	To record purchase from Midlife Stores Corp. for terms 2/10, n/30.			
2	Accounts Receivable	110	2,000	
	Sales	500		2,000
	To record sale to Timmins Centres, Ltd. for terms 2/10, n/30.			
2	Cash	101	300	
	Sales	500		300
	To record cash sale to Clayton David Inc.			
3	Purchases	550	500	
	Accounts Payable	210		500
	To record purchase from Speedy Sales Co. for terms 1/10, n/30.			
4	Accounts Receivable	110	2,500	
	Sales	500		2,500
	To record Sales to Northern Warehouse for terms 2/10, n/30.			
4	Sales Returns and Allowances	508	200	
	Accounts Receivable	110		200
	To record return of merchandise from Timmins Centres, Ltd.			
5	Purchases	550	1,400	
	Accounts Payable	210		1,400
	To record purchase from St Jean Wholesalers Corp. for terms n/30.			
6	Accounts Payable	210	100	
	Purchases Returns and Allowances	558		100
	To record return of merchandise to Midlife Stores Corp.			

AP 4–8 continued

City Retailers Inc.
General Journal Page
2

Date 2011	Description	F	Debit	Credit
Mar. 6	Accounts Receivable	110	1,500	
	Sales	500		1,500
	To record sale to Sault Rapids Corp. for terms 2/10, n/30.			
7	Purchases	550	600	
	Accounts Payable	210		600
	To record purchase from Trent Stores Corporation for terms 2/15, n/30.			
8	Cash	101	1,764	
	Sales Discounts	509	36	
	Accounts Receivable	110		1,800
	To record cash received from Timmins Centres, Ltd.			
10	Accounts Payable	210	500	
	Cash	101		495
	Purchases Discount	559		5
	To record payment to Speedy Sales Co.			
11	Cash	101	7,500	
	Bank Loan	201		7,500
	To record cash received as a demand loan from Second National Bank.			
12	Prepaid Rent	162	1,000	
	Cash	101		1,000
	To record rent payment for March and April to Peace Realty Corp.			
12	Accounts Receivable	110	700	
	Sales	500		700
	To record sale to James Bay Distributors Inc. for terms 2/10, n/30.			
13	Cash	101	2,450	
	Sales Discounts	509	50	
	Accounts Receivable	110		2,500
	To record cash received from Northern Warehouse.			
15	Commissions Expense	615	350	
	Cash	101		350
	To record payment of commissions to Mitch Michaels for March 1–15.			
15	Accounts Payable	210	1,000	
	Cash	101		1,000
	To record payment to Midlife Stores Corporation on account.			

AP 4–8 continued

City Retailers Inc.
General Journal

Page 3

Date 2011	Description	F	Debit	Credit
Mar. 15	Purchases	550	1,000	
	Accounts Payable	210		1,000
	To record purchase from Lilydale Products, Ltd. for terms 2/15, n/30.			
18	Accounts Payable	210	300	
	Cash	101		294
	Purchases Discounts	559		6
	To record payment to Trent Stores Corporation on account.			
19	Cash	101	100	
	Sales	500		100
	To record cash sale to Margaret Smith.			
20	Purchases	550	1,200	
	Accounts Payable	210		1,200
	To record purchase from Delta Centres Inc. for terms n/30.			
20	Purchases	550	400	
	Cash	101		400
	To record purchase from Copeland Distributors Inc.			
20	Accounts Receivable	110	600	
	Sales	500		600
	To record sale of merchandise to Amigo Inc. for terms 2/10, n/30.			
21	Accounts Payable	210	700	
	Cash	101		700
	To record payment on account to St Jean Wholesalers Corp.			
22	Cash	101	500	
	Accounts Receivable	110		500
	To record cash receipt on account from Sault Rapids Inc.			
23	Prepaid Insurance	161	2,400	
	Cash	101		2,400
	To record payment to Tri City Insurance, Ltd. for a one–year policy effective March 1.			
24	Purchases	550	300	
	Cash	101		300
	To record cash purchase from Buster’s Emporium.			

AP 4–8 continued

City Retailers Inc.
General Journal
Page 4

Date 2011	Description	F	Debit	Credit
Mar. 25	Accounts Receivable	110	1,400	
	Sales	500		1,400
	To record sale to Pinehurst Novelties Inc. for terms 2/10, n/30.			
26	Purchases	550	700	
	Accounts Payable	210		700
	To record purchase from Tres Bon Markets, Ltd. for terms 2/10, n/30.			
30	Delivery Expense	620	500	
	Cash	101		500
	To record payment to Shelby Corp. for deliveries.			
30	Commissions Expense	615	400	
	Cash	101		400
	To record payment of commissions to Mitch Michaels for March 16–30.			
30	Telephone Expense	669	75	
	Cash	101		75
	To record payment to PhoneU for March telephone bill.			
30	Advertising Expense	610	250	
	Cash	101		250
	To record payment to Vision Visuals, Ltd. for advertising materials.			
	Adjusting Entries			
31	Insurance Expense	631	200	
	Prepaid Insurance	161		200
	To record expiry of insurance during March.			
31	Rent Expense	654	500	
	Prepaid Rent	162		500
	To record expiry of March rent payment.			
31	Depreciation Expense- Equipment	623	33	
	Accumulated Depreciation- Equipment	193		33
	To record depreciation for March ($4,000/10 years X1/12 mos. = $33)			

AP 4–9

Return to Question

George Services Ltd.
Partial Income Statement
For the Year Ended December 31, 2017

Sales		$34,000
Less: Sales Returns and Allowances		(660)
Sales Discounts		(340)
Net Sales		33,000
Cost of Goods Sold:		
Opening Inventory	$ 6,000	
Purchases	24,000	
Less: Purchases Returns and Allowances	(1,760)	
Purchases Discounts	(240)	
Add: Transportation-In	1,000	
Cost of Goods Available for Sale	29,000	
Less: Ending Inventory	(7,000)	
Cost of Goods Sold		22,000
Gross Profit		$11,000

AP 4–10 Return to Question

1.

Niven Shops Inc.
General Journal

	Date 2012	Description	F	Debit	Credit
		<u>Adjusting Entries</u>			
a.	Dec. 31	Rent Expense		600	
		Prepaid Rent			600
		To record rent expired for December 2012.			
b.	31	Interest Expense		100	
		Interest Payable			100
		To record accrued interest on the bank loan for December 2012.			
c.	31	Depreciation Expense – Equipment		1,000	
		Accumulated Depreciation– Equipment			1,000
		To record depreciation on the office furniture for 2012.			
d.	31	Commission Expense		500	
		Accounts Payable			500
		To accrue commission expense for December 2012.			
e.	31	Insurance Expense		200	
		Prepaid Insurance			200
		To record expiry of insurance applicable to December 2012.			
f.	31	Unused Supplies		1,700	
		Supplies Expense			1,700
		To record unused supplies on hand at year-end.			
g.		No entry required. Adjusted through closing entries.			

AP 4–10 continued

2.

Niven Shops Inc.
Adjusted Trial Balance
At December 31, 2012

	Account Balances	
	Dr.	*Cr.*
Cash	$ 2,000	
Accounts Receivable	4,000	
Merchandise Inventory – Jan. 1, 2012	40,000	
Prepaid Insurance	2,400	
Prepaid Rent	1,200	
Unused Supplies	2,000	
Equipment	35,000	
Accumulated Depreciation - Equipment		$13,000
Bank Loan		15,000
Accounts Payable		4,500
Income Taxes Payable		3,600
Interest Payable		100
Share Capital		5,000
Retained Earnings		10,000
Sales		140,000
Sales Returns and Allowances	3,250	
Sales Discounts	750	
Purchases	80,000	
Purchases Returns and Allowances		9,400
Purchases Discounts		600
Transportation-In	2,000	
Advertising Expense	3,800	
Commissions Expense	4,700	
Supplies Expense	3,900	
Depreciation Expense – Equipment	1,000	
Income Taxes Expense	3,600	
Insurance Expense	1,300	
Interest Expense	1,300	
Rent Expense	3,900	
Telephone Expense	3,100	
Utilities Expense	2,000	
Total Debits and Credits	$201,200	$201,200

AP 4–10 continued

3.

Niven Shops Inc.
Income Statement
For the Year Ended December 31, 2012

Sales		$140,000
Less: Sales Returns and Allowances		(3,250)
Sales Discounts		(750)
Net Sales		136,000
Cost of Goods Sold:		
Opening Inventory	$40,000	
Purchases	80,000	
Less: Purchases Returns and Allows.	(9,400)	
Purchasese Discounts	(600)	
Transportation-In	2,000	
Cost of Goods Available for Sale	112,000	
Less: Ending Inventory	(35,000)	
Cost of Goods Sold		77,000
Gross Profit		59,000
Other Expenses:		
Advertising	3,800	
Commissions	4,700	
Supplies	3,900	
Depreciation – Equipment	1,000	
Income Taxes	3,600	
Insurance	1,300	
Interest	1,300	
Rent	3,900	
Telephone	3,100	
Utilities	2,000	28,600
Net Income		$30,400

Niven Shops Inc.
Statement of Changes in Equity
For the Year Ended December 31, 2012

	Share Capital	*Retained Earnings*	*Total*
Opening Balance	$5,000	$10,000	$15,000
Net Income		30,400	30,400
Ending Balance	$5,000	$40,400	$45,400

AP 4–10 continued

Niven Shops Inc.
Balance Sheet
At December 31, 2012

Assets		
Cash		$ 2,000
Accounts Receivable		4,000
Merchandise Inventory		35,000
Prepaid Insurance		2,400
Prepaid Rent		1,200
Unused Supplies		2,000
Equipment	$35,000	
Less: Acc. Dep'n	13,000	22,000
		$68,600
Liabilities		
Bank Loan		15,000
Accounts Payable		4,500
Income Taxes Payable		3,600
Interest Payable		100
		23,200
Shareholders' Equity		
Share Capital	5,000	
Retained Earnings	40,400	45,400
		$68,600

AP 4–10 continued

4.

Niven Shops Inc.
General Journal

Date 2012		Description	F	Debit	Credit
		Closing Entries			
a.	Dec. 31	Sales	500	120,000	
		Merchandise Inventory (ending)	150	35,000	
		Purchases Returns and Allowances	558	9,400	
		Purchases Discounts	559	600	
		Income Summary	360		165,000
		To close all credit balance accounts to the Income Summary account and to record ending inventory balance.			
b.	31	Income Summary	360	154,600	
		Merchandise Inventory (opening)	150		40,000
		Sales Returns and Allowances	508		3,250
		Sales Discounts	509		750
		Purchases	550		80,000
		Transportation-In	560		2,000
		Advertising Expense	610		3,800
		Commissions Expense	615		4,700
		Supplies Expense	668		3,900
		Depreciation Expense – Equipment	623		1,000
		Income Taxes Expense	830		3,600
		Insurance Expense	631		1,300
		Interest Expense	632		1,300
		Rent Expense	654		3,900
		Telephone Expense	669		3,100
		Utilities Expense	676		2,000
		To close all debit balance accounts to the Income Summary account and reverse opening inventory balance.			
c.	31	Income Summary	360	10,400	
		Retained Earnings	340		10,400
		To close the Income Summary account to the Retained Earnings account.			

CHAPTER 5

Assigning Costs to Merchandise

CP 5–1

Return to Question

	2012 Statements				2013 Statements			
Errors	*Open Invent.*	*End Invent.*	*2012 Total Assets*	*2012 Net Income*	*Open Invent.*	*End Invent.*	*2013 Total Assets*	*2013 Net Income*
1. Goods purchased in 2012 were included in December 31 inventory, but the transaction was not recorded until early 2013.	*0*	*0*	*0*	+	*0*	*0*	*0*	-
2. Goods purchased in 2013 were included in December 31, 2012 inventory, and the transaction was recorded in 2012.	*0*	+	+	*0**	+	*0*	*0*	*0*
3. Goods were purchased in 2012 and the transaction recorded in that year; however, the goods were not included in the December 31 inventory as they should have been.	*0*	-	-	-	-	*0*	*0*	+
4. Goods purchased in 2012 were excluded from December 31 inventory, and the transaction was recorded early in 2013.	*0*	-	-	*0*	-	*0*	*0*	*0*

* The effects of this error cancel each other out, so net income is not affected in either 2012 or 2013.

CP 5–2

Return to Question

1. a. Ending inventory for 2017 was understated by $2,000. Instead of being $5,000, it should have been $7,000. Thus, cost of goods sold should have been $18,000 and gross profit, $12,000. Because of this mistake, the 2018 opening inventory was also understated by $2,000, causing cost of goods sold to be understated by $2,000 and gross profit overstated by $2,000 It should have been $15,000.

   b. The 2019 ending inventory was overstated by $5,000. It should have been $10,000. Thus, cost of goods sold should have been $30,000 and gross profit, $20,000.

2. For 2017, the merchandise inventory on the balance sheet was understated by $2,000. Thus, the total assets were $2,000 less than they should have been. For 2018, there is no effect on the balance sheet, as the error is in opening inventory. For 2019, the ending inventory in the balance sheet is overstated by $5,000, which means that total assets were overstated by $5,000.

CP 5–3

Return to Question

1. FIFO:

		Purchased (Sold)				*Balance*				
				Unit				*Unit*		*Total*
Date		*Units*		*Cost*	*COGS*	*Units*		*Cost*		*Cost*
Jan. 1	Opening Inventory					100	x	$1	=	$100
7	Purchase #1	10	x	$2		100	x	1		
						10	x	2		120
9	Sale #1	(80)	x	1	($80)	20	x	1		
						10	x	2		40
21	Purchase #2	20	x	3		20	x	1		
						10	x	2		100
						20	x	3		
24	Sale #2	(20)	x	1						
		(10)	x	2	(70)	**10**	**x**	**3**		**30**
		(10)	x	3						
	Total COGS				**$150**					

2. LIFO:

		Purchased (Sold)				*Balance*				
				Unit				*Unit*		*Total*
Date		*Units*		*Cost*	*COGS*	*Units*		*Cost*		*Cost*
Jan. 1	Opening Inventory					100	x	$1	=	$100
7	Purchase #1	10	x	$2		100	x	1		
						10	x	2		120
9	Sale #1	(10)	x	2						
		(70)	X	1	($90)	30	x	1		30
21	Purchase #2	20	x	3		30	x	1		
						20	x	3		90
24	Sale #2	(20)	x	3						
		(20)	x	1	(80)	**10**	**x**	**1**		**10**
	Total COGS				**$170**					

CP 5–4

Return to Question

1. FIFO

		Purchased (Sold)				*Balance*				
Date		*Units*		*Unit Cost*	*COGS*	*Units*		*Unit Cost*		*Total Cost*
Jan. 1	Opening Inventory					2,000	x	$0.50	=	$1,000
5	Sale #1	(1,200)	x	$0.50	($600)	800	x	.50		400
6	Purchase #1	1,000	x	2.00		800	x	.50		
						1,000	x	2.00		2,400
10	Purchase #2	500	x	1		800	x	.50		
						1,000	x	2.00		2,900
						500	x	1.00		
16	Sale #2	(800)	x	.50						
		(1,000)	x	2.00	(2,600)	300	x	1.00		300
		(200)	x	1.00						
21	Purchase #2	1,000	x	2.50		300	x	1.00		
						1,000	x	2.50		$2,800

a.	Jan. 5	Accounts Receivable	110	6,000	
		Sales	550		6,000
		Cost of Goods Sold	570	600	
		Merchandise Inventory	150		600
		To record Jan. 5 sales; COGS at FIFO.			

b.	Jan. 16	Accounts Receivable	110	12,000	
		Sales	550		12,000
		Cost of Goods Sold	570	2,600	
		Merchandise Inventory	150		2,600
		To record Jan. 16 sales; COGS at FIFO.			

c. Per the above table, there are 1,300 units on hand: 300 @ $1; 1,000 @ $2.50, for a total ending inventory cost of $2,800.

CP 5-4 (continued)

2. Weighted Average (answers may vary depending on rounding assumptions)

		Purchased (Sold)					*Balance*				
Date		*Units*		*Unit Cost*		*COGS*	*Units*		*Unit Cost*		*Total Cost*
Jan. 1	Opening Inventory						2,000	x	$0.50	=	$1,000
5	Sale #1	(1,200)	x	$0.50		**($600)**	800	x	.50		400
6	Purchase #1	1,000	x	2.00			1,800	x	1.33[1]		2,400
10	Purchase #2	500	x	1			2,300	x	1.26[2]		1,900
16	Sale #2	(2,000)	x	1.26	=	**(2,520)**	1,300		1.26		380
21	Purchase #2	1,000	x	2.50			1,300	x	2.21[3]		**$2,880**

[1] [$400 + (1,000 x $2)]/(800 + 1,000) = $1.33/unit (rounded)

[2] [$2,400 + (500 x 1)]/(1,800 + 500) = $1.26/unit (rounded)

[3] [$380 + (1,000 x 2.50)]/(300 + 1,000) = $2.21/unit (rounded)

a.

Jan. 5	Accounts Receivable	110	6,000	
	Sales	550		6,000
	Cost of Goods Sold	570	600	
	Merchandise Inventory	150		600
	To record Jan. 5 sales; COGS at weighted average.			

b.

Jan. 16	Accounts Receivable	110	12,000	
	Sales	550		12,000
	Cost of Goods Sold	570	2,520	
	Merchandise Inventory	150		2,520
	To record Jan. 16 sales; COGS at weighted average.			

c. Per the above table, there are 1,300 units on hand @ $2.21, for a total ending inventory cost of $2,880.

CP 5–5

Return to Question

1. a. FIFO

		Purchased (Sold)				*Balance*				
				Unit				*Unit*		*Total*
Date		*Units*		*Cost*	*COGS*	*Units*		*Cost*		*Cost*
May 1	Opening Inventory					100	x	$1	=	$100
5	Sale #1	(80)	x	$1	($80)	20	x	1		20
6	Purchase #1	200	x	2		20	x	1		
						200	x	2		420
12	Purchase #2	125	x	3		20	x	1		
						200	x	2		795
						125	x	3		
13	Sale #2	(20)	x	1						
		(200)	x	2	(660)	45	x	3		135
		(80)	x	3						
19	Purchase #3	350	x	2		45	x	3		
						350	x	2		835
29	Purchase #4	150	x	1		45	x	3		
						350	x	2		985
						150	x	1		
30	Sale #3	(45)	x	3						
		(350)	x	2	(840)	145	x	1		**$145**
		(5)	x	1						
	Total COGS				$1,580					

CP 5-5 (continued)

1. b. LIFO

		Purchased (Sold)				Balance				
Date		*Units*		*Unit Cost*	*COGS*	*Units*		*Unit Cost*		*Total Cost*
May 1	Opening Inventory					100	x	$1	=	$100
5	Sale #1	(80)	x	$1	($80)	20	x	1		20
6	Purchase #1	200	x	2		20	x	1		
						200	x	2		420
12	Purchase #2	125	x	3		20	x	1		
						200	x	2		795
						125	x	3		
13	Sale #2	(125)	x	3						
		(175)	x	2	(725)	20	x	1		
		(80)	x	3		25	X	2		70
19	Purchase #3	350	x	2		20	x	1		
						375	x	2		770
29	Purchase #4	150	x	1		170	x	1		
						375	x	2		920
30	Sale #3	(375)	x	2						
		(25)	x	1	(775)	145	x	1		**$145**
	Total COGS				$1,580					

1. c. Weighted average (answers may vary depending on rounding assumptions)

		Purchased (Sold)				Balance				
Date		*Units*		*Unit Cost*	*COGS*	*Units*		*Unit Cost*		*Total Cost*
May 1	Opening Inventory					100	x	$1	=	$100.00
5	Sale #1	(80)	x	$1.00	($ 80)	20	x	1		20.00
6	Purchase #1	200	x	2.00		220	x	1.91[1]		420.00
12	Purchase #2	125	x	3.00		345	x	2.30[2]		795.00
13	Sale #2	(300)	x	2.30	(690)	45	x	2.30		105.00
19	Purchase #3	350	x	2		395	x	2.04[3]		805.00
29	Purchase #4	150	x	1		545	x	1.75[4]		955.00
30	Sale #3	(400)	x	1.75	(700)	145	x	1.75		**$255.00**
	Total COGS				$1,470					

[1] [$20 + (200 x $2)]/(20 + 200) = $1.91/unit (rounded)

[2] [$420.00 + (125 x 3)]/(220 + 125) = $2.30/unit (rounded)

[3] [$105.00 + (350 x 2)]/(45 + 350) = $2.04/unit (rounded)

[4] [805.00 + (150 x 1)]/(395 + 150) = $1.75/unit (rounded)

CP 5-5 (continued)

2.

	FIFO	*LIFO*	*Wtd. Avg.*
Sales	$3,900	$3,900	$3,900
Cost of Goods Sold	(1,580)	(1,580)	(1,470)
Gross Profit	$2,320	$2,320	$2,430

3. The weighted average inventory cost flow assumption maximises net income ($2,430) and ending inventory ($253.75).

CP 5–6

Return to Question

4	Matches actual flow of goods with actual flow of costs in all cases
2	Matches new costs with new sales prices
1	Matches old costs with new sales prices
1	Results in the lowest net income in periods of falling prices
2	Best matches current costs with current revenues
3,4	Does not assume any particular flow of goods
1	Best suited for situations in which inventory consists of perishable goods
2	Not accepted under International Financial Accounting Standards
1	Values inventory at approximate replacement cost

CP 5–7

Return to Question

1. LCNRV on a unit–by–unit basis:
   (2 x $50) + (3 x $75) + (4 x $20) = $405

2. LCNRV on a group inventory basis:
   (2 x $50) + (3 x $150) + (4 x $25) = $650
   (2 x $60) + (3 x $75) + (4 x $20) = $425

   Therefore, LCNRV = $425

CP 5–8

Return to Question

	1	2	3	4
Opening Inventory	$ 0	$3,000	$1,000	$2,000
Purchases	5,000	5,000	5,000	5,000
Ending Inventory	(2,000)	(4,000)	(1,500)	(0)
Cost of Goods Sold	$3,000	$4,000	$4,500	$7,000

Return to Question

CP 5–9

1. FIFO/periodic:

	Goods on Hand			–	Goods Sold			=	Ending Inventory		
	Quantity	Unit Cost	Total Cost		Quantity	Unit Cost	Total Cost		Quantity	Unit Cost	Total Cost
Balance (Jan. 1)	100	$1	$100		100	$1	$100				
Purchase #1	10	1	10		10	1	10				
Purchase #2	20	2	40		20	2	40				
Purchase #3	30	3	90		30	3	90				
Purchase #4	40	4	160		40	4	160				
Purchase #5	50	5	250						50	$5	250
	250		$650		200		$400		50		$250

2. LIFO/periodic:

	Goods on Hand			–	Goods Sold			=	Ending Inventory		
	Quantity	Unit Cost	Total Cost		Quantity	Unit Cost	Total Cost		Quantity	Unit Cost	Total Cost
Balance (Jan. 1)	100	$1	$100		50	$1	$ 50		50	$1	$ 50
Purchase #1	10	1	10		10	1	10				
Purchase #2	20	2	40		20	2	40				
Purchase #3	30	3	90		30	3	90				
Purchase #4	40	4	160		40	4	160				
Purchase #5	50	5	250		50	5	250				
	250		$650		200		$600		50		$ 50

CP 5–10

Return to Question

1. LIFO Ending Inventory:

2,000 units @ $0.50 = $1,000
500 units @ $2.00 = 1,000
2,500 $2,000

2. FIFO Ending Inventory:

1,000 units @ $2.00 = $2,000
500 units @ $1.00 = 500
1,000 units @ $2.50 = 2,500
2,500 $5,000

3. Weighted average Ending Inventory:

2,000 units @ $0.50 = $1,000
1,000 units @ $2.00 = 2,000
500 units @ $1.00 = 500
1,000 units @ $2.50 = 2,500
4,500 $6,000

Weighted Average Cost = $6,000/4,500 units x 2,500 units = $3,333 (rounded)

CP 5-10 (continued)

4. LIFO Cost of Goods Sold:

500 units @ $2.00 = $1,000
500 units @ $1.00 = 500
1,000 units @ $2.50 = 2,500
2,000 $4,000

5. FIFO Cost of Goods Sold: 2,000 units @ $0.50 = $1,000

6. Weighted average Cost of Goods Sold:

2,000 units @ $0.50 = $1,000
1,000 units @ $2.00 = 2,000
500 units @ $1.00 = 500
1,000 units @ $2.50 = 2,500
4,500 $6,000

Weighted Average Cost = $6,000/4,500 units x 2000 units = $2,667 (rounded)

CP 5–11

Return to Question

1. a. FIFO: Ending Inventory = (150 x $3) + (50 x $2) = $550

   b. LIFO: Ending Inventory = (100 x $1) + (100 x $1) = $200

   c. Weighted Average: (100 x $1) + (200 x $1) + (125 x $2) + (350 x $2) + (150 x $3) = $1,700/925 = $1.84/unit (rounded)

   Ending Inventory = $1.84 x 200 = $368

2.

	FIFO		*LIFO*		*Wtd. Avg.*	
Sales		$1,500		$1,500		$1,500
Cost of Goods Sold:						
Opening Inventory	$ 100		$ 100		$ 100	
Purchases	1,600		1,600		1,600	
Cost of Goods Available for Sale	1,700		1,700		1,700	
Less: Ending Inventory	(550)		(200)		(368)	
Cost of Goods Sold		1,150		1,500		1,332
Gross Profit		$ 350		$ 0		$ 168

CP 5–12

Return to Question

1.

Sales		$300,000	100%
Cost of Goods Sold:			
Opening Inventory	$ 80,000		
Purchases	150,000		
Cost of Goods Available	230,000		
Ending Inventory (estimated)	(c)		
Cost of Goods Sold		(b)	66 2/3%
Gross Profit		(a)	33 1/3%

(a) Gross Profit = 33 1/3% of Sales
= 33 1/3% x $300,000
= $100,000

(b) Cost of Goods Sold = Sales - Gross Profit
= $300,000 - 100,000
= $200,000

(c) Estimated Ending Inventory
= Cost of Goods Available - Total Cost of Goods Sold
= $230,000 - $200,000
= $30,000

2. Balton lost about $30,000 of inventory in the fire and is claiming $45,000. This does not seem reasonable.

CP 5–13

Return to Question

1.

	At Retail				*At Cost*			
Sales			$ 276,000				$ 276,000	
Cost of Goods Sold:								
Opening Inventory	$ 78,000				$ 26,000			
Purchases	282,000				90,000			
Transportation-in	—				4,000			
Cost of Goods Available for Sale	360,000	(a)			120,000			
Less: Ending Inventory	(84,000)	(c)			(28,000)	(d)		
Cost of Goods Sold			276,000	(b)			92,000	(e)
Gross Profit			$ 0				$ 184,000	(f)

2. Mark-up = $276,000/92,000 = 300%.

CP 5–14

Return to Question

The estimated ending inventory at cost is $25,000, calculated as follows:

	At Retail		*At Cost*	
Sales (given)		$ 250,000		$ 250,000
Cost of Goods Sold:				
Opening Inventory	$ 20,000		$ 10,000	
Purchases	280,000		140,000	
Cost of Goods Available for Sale	300,000 (a)		150,000	
Less: Ending Inventory	(50,000) (c)		**(25,000)** (d)	
Cost of Goods Sold		250,000 (b)		125,000
Gross Profit		$ 0		$ 125,000

AP 5–1

Return to Question

1. a. The partial income statement and general ledger account, correctly stated, should show:

Merchandise Inventory			
Op. Bal.	12,000		
2016 Purch.	30,000	32,000	2016 COGS
2016 Bal.	**10,000**		
2017 Purch.	30,000	35,000	2017 COGS
2017 Bal.	**5,000**		

	2016	*2017*
Sales	$50,000	$50,000
COGS	32,000	35,000
Gross Profit	$18,000	**$15,000**

b. The partial income statement and general ledger account, incorrectly stated, actually shows:

Merchandise Inventory			
Op. Bal.	12,000		
2016 Purch.	30,000		
Inv. Adj.	3,000	32,000	2016 COGS
2016 Bal.	**13,000**		
2017 Purch.	30,000		
Inv. Adj	1,000	35,000	2017 COGS
2017 Bal.	**9,000**		

	2016	*2017*
Sales	$50,000	$50,000
COGS	29,000	34,000
Gross Profit	$21,000	**$16,000**

The difference in 2017 gross profit is a $1,000 overstatement ($16,000 vs. $15,000).

AP 5–2

Return to Question

1. a. FIFO

		Purchased (Sold)					*Balance*				
				Unit					*Unit*		*Total*
Date		*Units*		*Cost*		*COGS*	*Units*		*Cost*		*Cost*
Jan. 1	Opening Inventory						200	x	$1	=	$ 200
Jan. 25	Sale #1	(150)	x	$1	=	($150)	50	x	1	=	50
Apr. 15	Purchase #1	200	x	2			50	x	1		
							200	x	2	=	450
May 25	Sale #2	(50)	x	1							
		(100)	x	2	=	(250)	100	x	2	=	200
Oct. 16	Purchase #2	300	x	5			100	x	2		
							300	x	5	=	1,700
Oct. 25	Sale #3	(100)	x	2							
		(200)	x	5	=	(1,200)	100	x	5	=	**$500**
	Total COGS					**$1,600**					

1. b. LIFO

		Purchased (Sold)					*Balance*				
				Unit					*Unit*		*Total*
Date		*Units*		*Cost*		*COGS*	*Units*		*Cost*		*Cost*
Jan. 1	Opening Inventory						200	x	$1	=	$ 200
Jan. 25	Sale #1	(150)	x	$1	=	($150)	50	x	1	=	50
Apr. 15	Purchase #1	200	x	2			50	x	1		
							200	x	2	=	450
May 25	Sale #2	(150)	x	2	=	(300)	50	X	1		
							50	x	2	=	150
							50	x	1		
Oct. 16	Purchase #2	300	x	5			50	x	2	=	1,650
							300	X	5		
Oct. 25	Sale #3	(300)	x	5	=	(1,500)	50	X	1		
							50	x	2	=	**$150**
	Total COGS					**$1,950**					

AP 5–2 (continued)

1. c. Weighted Average

		Purchased (Sold)					*Balance*				
Date		*Units*		*Unit Cost*		*COGS*	*Units*		*Unit Cost*		*Total Cost*
Jan. 1	Opening Inventory						200	x	$1.00	=	$200
Jan. 25	Sale #1	(150)	x	$1.00	=	($150)	50	x	1.00	=	50
Apr. 15	Purchase #1	200	x	2.00			250	x	1.80[1]	=	450
May 25	Sale #2	(150)	x	1.80	=	(270)	100	X	1.80		180
Oct. 16	Purchase #2	300	x	5.00			400	x	4.20[2]	=	1,680
Oct. 25	Sale #3	(300)	x	4.20	=	(1,260)	100	X	4.20		**420**
	Total COGS					**$1,680**					

[1] [$450 + (200 x $2)]/(50 + 200) = $1.80/unit

[2] [$180 + (300 x $5)]/(100 + 300) = $4.20/unit

2. Cost of goods sold is higher under LIFO ($1,950) and lowest under FIFO ($1,680).

3. You should advise the president that use of LIFO is not allowed under GAAP, but at any rate, FIFO produces the highest ending inventory amount. Also, once an inventory cost flow assumption is adopted, it must be used consistently in future years. This minimizes the ability to manipulate ending inventory valuation through accounting policy changes, if that is the president’s desire.

AP 5–3

Return to Question

FIFO

		Purchased (Sold)					*Balance*				
Date		*Units*		*Unit Cost*		*COGS*	*Units*		*Unit Cost*		*Total Cost*
Jan. 1	Opening Inventory						25	x	$5	=	$ 125
Feb. 15	Purchase #1	15	x	$4			25	x	5		
							15	x	4	=	185
Feb. 28	Sale #1	(25)	x	5							
		(5)	x	4	=	($145)	10	x	4	=	40
Mar. 14	Purchase #2	10	x	3			10	x	4		
							10	x	3	=	70
Apr. 9	Sale #2	(10)	x	4							
		(5)	x	3	=	(55)	5	x	3	=	15
Oct. 28	Purchase #3	35	x	2			5	x	3		
							35	x	2	=	85
Dec. 4	Purchase #4	40	x	1			5	x	3		
							35	x	2	=	125
							40	x	1		
Dec. 21	Sale #3	(5)	x	3							
		(35)	x	2	=	(95)	30	x	1	=	**$30**
		(10)	x	1							
	Total COGS					**$295**					

AP 5–3 (continued)

Weighted Average

		Purchased (Sold)					Balance				
Date		Units		Unit Cost		COGS	Units		Unit Cost		Total Cost
Jan. 1	Opening Inventory						25	x	$5.00	=	$ 125
Feb. 15	Purchase #1	15	x	$4.00			40	x	4.63[1]	=	185
Feb. 28	Sale #1	(30)	x	4.63	=	($139)	10	x	4.63	=	46
Mar. 14	Purchase #2	10	x	3.00			20	x	3.80[2]	=	76
Apr. 9	Sale #2	(15)	x	3.80	=	(57)	5	x	3.80	=	19
Oct. 28	Purchase #3	35	x	2.00			40	x	2.23[3]	=	89
Dec. 4	Purchase #4	40	x	1.00			80	x	1.61[4]	=	129
Dec. 21	Sale #3	(50)	x	1.61	=	(81)	30	x	1.61	=	**$48**
	Total COGS					**$277**					

[1] [$125 + (15 x $4)]/(25 + 15) = $4.63/unit

[2] [$46 + (10 x $3)]/(10 + 10) = $3.80/unit

[3] [$19 + (35 x $2)]/(5 + 335) = $2.23/unit (rounded)

4 [$89 + (40 x $1)]/(40 + 40) = $1.61/unit (rounded)

1. a. FIFO

Dec. 21	Accounts Receivable	110	100	
	Sales	550		100
	Cost of Goods Sold	570	95	
	Merchandise Inventory	150		95
	To record Dec. 21 sales; COGS at FIFO.			

b. Weighted average

Dec. 21	Accounts Receivable	110	100	
	Sales	550		100
	Cost of Goods Sold	570	81	
	Merchandise Inventory	150		81
	To record Dec. 21 sales; COGS at weighted average.			

2. Weighted average maximises ending inventory ($48 vs. $30). FIFO removes higher-priced units from ending inventory in a period of falling prices.

3. More income taxes would be paid under weighted average because cost of goods sold is lower and thus gross profit is higher than FIFO in a period of falling prices.

AP 5–4 Return to Question

1.

Product A

		Purchased (Sold)					*Balance*				
				Unit					*Unit*		*Total*
Date		*Units*		*Cost*		*COGS*	*Units*		*Cost*		*Cost*
Jan. 1	Opening Inventory						4,000	x	$11.90	=	$47,600
Jan. 7	Purchase #1	8,000	x	$12.61			4,000	x	11.90		
							8,000	x	12.61	=	148,480
Mar. 15	Sale #1	(4,000)	x	11.90							
		(5,000)	x	12.61		($110,650)	3,000	x	12.61	=	37,830
Aug. 17	Purchases #2	12,000	x	12.84			3,000	x	12.61		
							12,000	x	12.84	=	191,910
Oct. 29	Sale #2	(3,000)	x	12.61							
		(11,000)	x	12.84	=	(179,070)	1,000	x	12.84	=	**$12,840**

Product B

		Purchased (Sold)					*Balance*				
				Unit					*Unit*		*Total*
Date		*Units*		*Cost*		*COGS*	*Units*		*Cost*		*Cost*
Jan. 1	Opening Inventory						5,000	x	$9.54	=	$47,700
Jan. 12	Purchase #1	5,000	x	$9.68			5,000	x	9.54		
							5,000	x	9.68	=	96,100
May 5	Sale #1	(1,000)	x	9.54	=	($9,540)	4,000	x	9.54		
							5,000	x	9.68	=	86,560
Oct. 23	Purchase #2	7,000	x	10.06			4,000	x	9.54		
							5,000	x	9.68	=	156,980
							7,000	x	10.06		
Dec. 27	Sale #2	(4,000)	x	9.54			1,000	x	9.68		
		(4,000)	x	9.68	=	(76,870)	7,000	x	10.06	=	**$80,100**

AP 5–4 (continued)

Product C

		Purchased (Sold)					*Balance*				
Date		*Units*		*Unit Cost*		*COGS*	*Units*		*Unit Cost*		*Total Cost*
Jan. 1	Opening Inventory						6,000	x	$14.71	=	$88,260
Jan. 4	Purchase #1	10,000	x	$14.65			6,000	x	14.71		
							10,000	x	14.65	=	234,760
July 7	Purchase #2	15,000	x	13.26	=		6,000	x	14.71		
							10,000	x	14.65	=	433,660
							15,000	x	13.26		
Aug. 4	Sale #1	(6,000)	x	14.71							
		(10,000)	x	14.65	=	(287,800)	11,000	x	13.26	=	145,860
		(4,000)	x	13.26							
Oct. 5	Sale #2	(5,000)	x	13.26	=	(66,300)	6,000	x	13.26	=	**$79,560**

2. Total Ending Inventory at December 31, 2016:

Product A	$12,840
Product B	80,100
Product C	79,560
Total	$172,500

3. Computerised accounting software would do most of the calculations otherwise done manually. Even calculating only three products' transactions by hand is tedious, error-prone, and time-consuming.

AP 5–5 Return to Question

1. a. FIFO

		Purchased (Sold)					*Balance*				
				Unit					*Unit*		*Total*
Date		*Units*		*Cost*		*COGS*	*Units*		*Cost*		*Cost*
Mar. 1	Opening Inventory						1,000	x	$11	=	$ 11,00
3	Purchase #1	1,000	x	$10			1,000	x	11		
							1,000	x	10	=	21,000
8	Sale #1	(1,000)	x	11							
		(500)	x	10	=	(16,000)	500	x	10	=	5,000
10	Purchase #2	2,000	x	9			500	x	10		
							2,000	x	9	=	23,000
15	Purchase #3	3,000	x	8			500	x	10		
							2,000	x	9	=	47,000
							3,000	x	8		
20	Sale #2	(500)	x	10							
		(2,000)	x	9	=	(43,000)	500	x	8	=	4,000
		(2,500)	x	8							
27	Purchase #4	2,000	x	10			500	x	8		
							2,000	x	10	=	24,000
29	Sale #3	(500)	x	8							
		(1,500)	x	10	=	(19,000)	500	x	10	=	**$5,000**
	Total COGS					**$78,000**					

1. b. LIFO

		Purchased (Sold)					*Balance*				
				Unit					*Unit*		*Total*
Date		*Units*		*Cost*		*COGS*	*Units*		*Cost*		*Cost*
Mar. 1	Opening Inventory						1,000	x	$11	=	$ 11,00
3	Purchase #1	1,000	x	$10			1,000	x	11		
							1,000	x	10	=	21,000
8	Sale #1	(1,000)	x	10							
		(500)	x	11	=	(15,500)	500	x	11	=	5,500
10	Purchase #2	2,000	x	9			500	x	11		
							2,000	x	9	=	23,500
15	Purchase #3	3,000	x	8			500	x	11		
							2,000	x	9	=	47,500
							3,000	x	8		
20	Sale #2	(3,000)	x	8							
		(2,000)	x	9	=	(42,000)	500	x	11	=	5,500
27	Purchase #4	2,000	x	10			500	x	11		
							2,000	x	10	=	25,500
29	Sale #3	(2,000)	x	10	=	(20,000)	500	x	11	=	**$5,500**
	Total COGS					**$77,500**					

AP 5–5 (continued)

1. c. Weighted Average

		Purchased (Sold)					*Balance*				
				Unit					*Unit*		*Total*
Date		*Units*		*Cost*		*COGS*	*Units*		*Cost*		*Cost*
Mar. 1	Opening Inventory						1,000	x	$11.00	=	$11,000
3	Purchase #1	1,000	x	$10.00			2,000	x	10.50[1]	=	21,000
8	Sale #1	(1,500)	x	10.50	=	($15,750)	500	x	10.50	=	5,250
10	Purchase #2	2,000	x	9.00			2,500	x	9.30[2]	=	23,250
15	Purchase #3	3,000	x	8.00			5,500	x	8.59[3]	=	47,250
20	Sale #2	(5,000)	x	8.59	=	(42,950)	500	x	8.59		4,300
27	Purchase #4	2,000	x	10.00			2,500	x	9.72[4]	=	24,300
29	Sale #3	(2,000)	x	9.72	=	(19,440)	500	x	9.72	=	**$4,860**
	Total COGS					**$78,140**					

[1] [$11,000 + (1,000 x $10)]/(1,000 + 1,000) = $10.50/unit

[2] [$5,250 + (2,000 x $9)]/(500 + 2,000) = $9.30/unit

[3] [$23,250 + (3,000 x $8)]/(2,500 + 3,000) = $8.59/unit (rounded)

[4] [$4,300 + (2,000 x $10)]/(500 + 2,000) = $9.72/unit

2. FIFO journal entries

Mar. 3 Merchandise Inventory 10,000
Accounts Payable
10,000

8 Accounts Receivable 22,500
Sales
22,500
Cost of Goods Sold 16,000
Merchandise Inventory
16,000
[(1,000 x $11) + (500 x $10)]

10 Merchandise Inventory 18,000
Accounts Payable
18,000

15 Merchandise Inventory 24,000
Accounts Payable
24,000

20 Accounts Receivable 100,000
Sales
100,000
Cost of Goods Sold 43,000
Merchandise Inventory
43,000
[(500 X $10) + (2,000 X $9) + (2,500 x $8)]

27 Merchandise Inventory 20,000
Accounts Payable
20,000

29 Accounts Receivable 36,000
Sales
36,000
Cost of Goods Sold 19,000
Merchandise Inventory
19,000
[(500 x $8) + (1,500 x $10)]

3.

	FIFO	*LIFO*	*Wtd. Avg.*
COGS	$78,000	$77,500	$78,140
Ending Inv.	5,000	5,500	4,860
Total	$83,000	$83,000	$83,000

All the totals are the same. Different inventory cost flow assumptions merely change the amounts allocated between cost of goods sold and ending inventory.

AP 5-6

Return to Question

a. FIFO

			Purchased		*Sold*		*Balance*		
			Units	*Unit Cost*	*Units*	*Unit Cost*	*Units*	*Unit Cost*	*Total Cost*
Jan.	1	Op. Bal.					6	$400	$2,400
	2	Sale			1	$400	5	400	2,000
	3	Purchase	2	$450			7	5x400 2x450	2,900
	7	Sale			2	400	5	3x400 2x450	2,100
	10	Sale			1	400	4	2x400 2x450	1,700
	15	Purchase	3	500			7	2x400 2x450 3x500	3,200
	20	Sale			4	2x400 2x450	3	500	1,500
	25	Purchase	1	550			4	3x500 1x550	2,050
	29	Sale			2	500	2	1x500 1x550	**1,050**

AP 5–6 (continued)

b. LIFO

		Purchased		*Sold*		*Balance*		
		Units	*Unit Cost*	*Units*	*Unit Cost*	*Units*	*Unit Cost*	*Total Cost*
Jan. 1	Op. Bal.					6	$400	$2,400
2	Sale			1	$400	5	400	2,000
3	Purchase	2	$450			7	5x400 2x450	2,900
7	Sale			2	450	5	400	2,000
10	Sale			1	400	4	400	1,600
15	Purchase	3	500			7	4x400 3x500	3,100
20	Sale			4	3x500 1x400	3	400	1,200
25	Purchase	1	550			4	3x400 1x550	1,750
29	Sale			2	1x400 1x550	2	400	**800**

c. Weighted average

		Purchased		*Sold*		*Balance*		
		Units	*Unit Cost*	*Units*	*Unit Cost*	*Units*	*Unit Cost*	*Total Cost*
Jan. 1	Op. Bal.					6	$400.00	$2,400.00
2	Sale			1	$400.00	5	400.00	2,000.00
3	Purchase	2	$450			7	414.29[1]	2,900.00
7	Sale			2	414.29	5	414.29	2,071.45
10	Sale			1	414.29	4	414.29	1,657.16
15	Purchase	3	500			7	451.02[2]	3,157.14
20	Sale			4	451.02	3	451.02	1,353.09
25	Purchase	1	550			4	475.77[3]	1,750.00
29	Sale			2	475.77	2	475.77	**951.84**

[1] (2 x $450) + (5 x $400) = $414.29/unit (rounded)
7 units

[2] (4 x 414.29) + (3 x $500) = $451.02 (rounded)
7 units

[3] (1 x $550) + (3 x $451.02) = $475.77/unit (rounded)
4 units

AP 5–6 (continued)

2. The journal entry to record the sales is the same under all three methods:

Dr.	Accounts Receivable	1,800	
Cr.	Sales		1,800

The journal entries to record the cost of goods sold for the January 29 sale are as follows:

		FIFO		LIFO		Weighted Average	
Dr.	Cost of Goods Sold	1,000[1]		950[2]		951.54[3]	
Cr.	Merchandise Inv.		1,000		950		951.54

[1] 2 x $500 = $1,000

[2] (1 x $400) + (1 x $550) = $950

[3] 2 x $475.77 = $951.54

AP 5–7

Return to Question

1.

	Units	*Cost*	*Market*	*Total Cost*	*Total Market*
Frames					
Type F–1	110	$14.25	$15.50	$ 1,567.50	$ 1,705.00
Type F–12	75	26.00	22.50	1,950.00	1,687.50
Type F–15	60	21.50	21.00	1,290.00	1,260.00
				4,807.50	4,652.50
Springs (sets)					
Type S–1	760	7.28	8.50	5,532.80	6,460.00
Type S–12	625	10.50	11.50	6,562.50	7,187.50
Type S–15	340	8.60	6.00	2,924.00	2,040.00
				15,019.30	15,687.50
				$19,826.80	$20,340.00

a. LCNRV applied to each item (choose the lower number for each item in the columns Total Cost or Total NRV):
= $1,567.50 + 1,687.50 + 1,260.00 + 5,532.80 + 6,562.50 + 2,040.00
= $18,650.30

b. LCNRV applied to each category:
= $4,652.50 + 15,019.30 = $19,671.80

c. LCNRV applied to the entire inventory:
= $19,826.80

2. When using LCNRV, method (a) yields the lowest, most conservative value for ending inventory; method (c) yields the highest value for ending inventory. Method (b) lies between (a) and (c).

AP 5–7 (continued)

As a result, in the current year, gross profit would be highest for (c) and lowest for (a), as cost of goods sold would be lowest for (c) and highest for (a), with (b) again falling somewhere in between. Method (b) would yield a gross profit $1,021.50 higher than (a) (19,671.80- 18,650.30), while (c) would yield a gross profit $155.00 higher than (b) (19,826.80-19,671.80).

In the following year, method (c) would yield the lowest gross profit, as cost of goods sold would be the highest. Method (a) would yield the highest gross profit, as cost of goods sold would be the lowest. Method (b) would again fall somewhere in between.

AP 5–8

Return to Question

			Ending Inventory		Cost of Goods Sold	
			Quantity	Total Cost	Quantity	Total Cost
1.	a.	FIFO	400	$1,600	100	$ 100
					100	100
					200	400
					300	900
					700	$1,500
	b.	LIFO	100	$ 100	300	$ 900
			100	100	400	1,600
			200	400		
			400	$600	700	$2,500
	c.	Wtd. Average	100	$ 100		
			100	100		
			200	400		
			300	900		
			400	1,600		
			1100	$3,100		

$3,100/1,100 units x 400 = $1,127$3,100/1,100 units x 700 = $1,973

d. Specific Identification	100	$ 100	100	$ 100
	300	900	200	400
			400	1,600
	400	$1,000	700	$2,100

2. When FIFO is used, a higher net income and a higher ending inventory result in a period of rising prices, as compared to LIFO. Weighted average assumptions produce results in between those of LIFO and FIFO.

AP 5–9

Return to Question

Units Purchased	4,300
Less: Units Sold	2,600
Units in Ending Inventory	1,700

1. FIFO Ending Inventory consists of:

Dec. 23	800	units @ $2.30	$ 1,840
Dec. 29	900	units @ $2.40	2,160
	1,700	units	$4,000

2. LIFO Ending Inventory consists of:

Dec. 4	1,000	units @ $2.50	$2,500
Dec. 11	700	units @ $2.60	1,820
	1,700	units	$4,320

3.Weighted average Ending Inventory consists of:

Total Cost of Purchases	(a)	$10,420
Total Units Purchased	(b)	4,300
Unit Cost	(a/b)	$2.42 per unit (rounded)
Ending Inventory		1,700 units @ $2.42 each = $4,114 approx.

AP 5-10

Return to Question

1. a. LIFO Part A Part B

	2011	2012	2013	2014 Net Income (Part 6)	2011-2014 Net Income (Part 7)
Sales	$100,000	$100,000	$100,000	$100,000	
Op. Inv.	0	9,200	9,100	10,300	
Purchases	80,000	80,000	80,000	80,000	
End. Inv.	(9,200)	(9,100)	(10,300)	0	
Cost of Goods Sold	70,800	80,100	78,800	90,300	
Gross Profit/Net Income	$ 29,200	$ 19,900	$ 21,200	$9,700	$80,000

b. Weighted Average Part A Part B

	2011	2012	2013	2014 Net Income	2011-2014 Net Income
Sales	$100,000	$100,000	$100,000	$100,000	
Op. Inv.	0	9,400	9,000	11,000	
Purchases	80,000	80,000	80,000	80,000	
End. Inv.	(9,400)	(9,000)	(11,000)	0	
Cost of Goods Sold	70,600	80,400	78,000	91,000	
Gross Profit/Net Income	$ 29,400	$ 19,600	$ 22,000	$ 9,000	$80,000

AP 5–10 (continued)

c.

	FIFO			Part A	Part B
	2011	*2012*	*2013*	*2014 Net Income*	*2011-2014 Net Income*
Sales	$100,000	$100,000	$100,000	$100,000	
Op. Inv.	0	9,600	8,800	12,000	
Purchases	80,000	80,000	80,000	80,000	
End. Inv.	(9,600)	(8,800)	(12,000)	0	
Cost of Goods Sold	70,400	80,800	76,800	92,000	
Gross Profit/Net Income	$ 29,600	$ 19,200	$ 23,200	$ 8,000	$80,000

Part A

1. FIFO shows the highest 2011 net income ($29,600).

2. Per-unit inventory costs are rising. LIFO ending inventory value is lower than FIFO ($9,200 vs. $9,600). Units left in inventory under LIFO are assumed to be the oldest; under FIFO, they are assumed to be the newest. If LIFO valuation is lower than FIFO, older units must be less expensive than newer units. Thus per-unit inventory costs must be rising.

3. LIFO shows the highest 2012 net income ($19,900).

4. Per-unit inventory costs are falling. LIFO ending inventory value is higher than FIFO ($9,100 vs. $8,800). Units left in inventory under LIFO are assumed to be the oldest; under FIFO, they are assumed to be the newest. If LIFO valuation is higher than FIFO, older units must be more expensive than newer units. Thus, per-unit inventory costs must be falling.

5. In a period of rising costs, LIFO produces highest net income and highest ending inventory values. FIFO produces the lowest net income and ending inventory values. The results are reversed in a period of falling prices. The weighted average cost flow assumption always produces results in between LIFO and FIFO calculations.

Part B

6. See above calculations.

7. Total net income for 2011 through 2014 equals $80,000 in all cases. LIFO, FIFO, and weighted average cost assumptions affect opening inventory and ending inventory, cost of goods sold, and gross profit calculations each year when prices fluctuate, but over the lifetime of a company, there is no difference in total effect.

AP 5–11

Return to Question

1. FIFO:

40	units @ $5.50	$220
10	units @ $5.60	56
50	units cost	$276

2. LIFO:

20	units @ $4.60	$ 92
30	units @ $5.00	150
50	units cost	$242

3. Weighted average:

20	units @ $4.60	$ 92
80	units @ $5.00	400
40	units @ $5.30	212
60	units @ $5.60	336
40	units @ $5.50	220
240	units cost	$1,260

Cost of 50 Units = $1,260/240 units x 50 units = $262.50

AP 5–12

Return to Question

1.

	Units	*LIFO/ Perpetual*	*FIFO/ Perpetual*	*Wtd. Avg Perpetual*
Cost of Goods Sold:				
Opening Inventory	50	$ 500	$ 500	$ 500.00
Purchases	60	720	720	720.00
	110	1,220	1,220	1,220.00
Sales	10	120[1]	100[2]	110.90[3]
	100	1,100	1,120	1,109.10
Purchases	100	1,500	1,500	1,500.00
	200	2,600	2,620	2,609.10
Sales	150	2,100[4]	1,870[5]	1,956.86[6]
Ending Inventory	50	$ 500[7]	$ 750[8]	$ 652.28[9]
Total Cost of Goods Sold		$2,220	$ 1,970	$2,067.72

AP 5–12 (continued)

2.

	Units	LIFO/ Periodic	FIFO/ Periodic	Wtd. Avg Periodic
Cost of Goods Sold:				
Opening Inventory	50	$ 500	$ 500	$ 500.00
Purchases	160	2,220	2,220	2,220.00
Cost of Goods Available	210	$2,720	$2,720	$2,720.00
Ending Inventory	50	500[10]	750[11]	647.62[12]
Total Cost of Goods Sold	160	$2,220	$1,970	$2,072.38

[1] 10@$12 = $120

[2] 10@$10 = $100

[3] $1,220 x 10units = $110.90
$652.28 (rounded)
110 units

[4] (100@$15) + (50@$12) = $2,100

[5] (40@$10) + (60@$12) + (50@$15) = $1,870

[6] $2,609.10 x 150 units = $1,956.86 (rounded)
$647.62 (rounded)
200 units

[7] 50@$10 = $500

[8] 50@$15 = $750

[9] 50@ $2609.10 =
200 units

[10] 50@$10 = $500

[11] 50@$15=$750

[12] $2,720 x 50units=

3. Using either perpetual or periodic inventory methods does not affect LIFO and FIFO calculations in this case. However, weighted average calculations differ between perpetual and periodic inventory methods because under the former, cost of goods sold is calculated each time a sale occurs. Under the periodic inventory method, the weighted average is calculated only once, at period end.

AP 5–13

Return to Question

1.

Perpetual inventory, weighted average:		Quantity	Cost	Average
Jul. 1	Op. Inv.: 100 units @ $3.15 each	100	$315.00	$3.15
12	Sold 50 units: 50 @ $3.15	(50)	(157.50)	
	Total	50	157.50	
15	Purchased 40 units @ $3.00	40	120.00	
	Total	90	277.50	$3.08 (rounded)
17	Purchased 60 units @ $2.70	60	162.00	
	Total	150	439.50	$2.93
19	Sold 30 units: 30 @ $2.93	(30)	(87.90)	
	Total	120	351.60	
26	Purchased 50 units @ $3.45	50	172.50	
	Total	170	524.10	$3.08 (rounded)
29	Sold 40 units: 40 @ $3.08	(40)	(123.20)	
	Total	130	**$400.90**	$3.08 (rounded)

AP 5–13 (continued)

2. Periodic inventory, weighted average:

	Quantity x Unit Price	Total Cost	Average
Opening Inventory	100 x $3.15	$315.00	
Purchases			
July 15	40 x $3.00	120.00	
July 17	60 x $2.70	162.00	
July 26	50 x $3.45	172.50	
Goods available for sale	250	769.50	$3.08 (rounded)
Units sold (50+30+40)	(120) x $3.08	(369.60)	
Inventory on hand	130 @ $3.08	**$399.90**	

Calculations may vary due to rounding. In this case, however, cost of goods sold and ending inventory value should be the same whether a perpetual periodic inventory system is used.

AP 5–14

Return to Question

Sales		$1,220
Less: Sales Returns and Allowances	$16	
Sales Discount	4	20
Net Sales		1,200
Cost of Goods Sold:		
Opening Inventory	100	
Purchases	700	
Less: Purchases Returns and Allowances	(20)	
Transportation-in	12	
Cost of Goods Available	792	
Ending Inventory	72 (c)	
Cost of Goods Sold		720 (b)
Gross Profit		$ 480 (a)

(a) Gross Profit = 40% x Net Sales = 40% x $1,200 = $480
(b) Cost of Goods Sold = Net Sales - Gross Profit = $1,200 - 480 = $720
(c) Ending Inventory = Goods Available for Sale - Cost of Goods Sold = $792 - 720 = $72

AP 5–15

Return to Question

1. Retail inventory method:

	At Retail				At Cost, should be		
Sales			$234,680				$234,680
Less: Sales Returns and Allowances			(3,740)				(3,740)
Net Sales			230,940				230,940
Cost of Goods Sold:							
Opening Inventory	$ 36,200				$ 24,420		
Purchases	239,800				166,770		
Less: Purchases Returns and Allow.	(3,900)				(2,830)		
Cost of Goods Available	272,100				188,360		
Ending Inventory	41,160	(b)			28,483	(c)	
Cost of Goods Sold			230,940	(a)			159,877
Gross Profit			$ 0				$71,063

(a) Cost of Goods Sold = Net Sales

(b) Ending Inventory (at retail) = Cost of Goods Available for Sale - Cost of Goods Sold
= $272,100 - 230,940
= $41,160

(c) Cost % = <u>Cost of Goods Available for Sale at Cost</u> = <u>$188,360</u> = 69.2% (rounded)
Cost of Goods Available for Sale at Retail 272,100

Estimated Ending Inventory (at cost) = Cost % x Retail Ending Inventory
= 69.2% x $41,160
= $28,483

2. Inventory Lost = Estimated Ending Inventory - Actual Inventory on Hand
= $28,483-28,303
= $180

3. Some of the inventory may have been stolen or otherwise lost. The amount of discrepancy is immaterial, however. The difference may have occurred because of a rounding error in the calculation of cost to retail percentage.

CHAPTER 6
Cash and Receivables

CP 6–1

Return to Question

Ferguson Corp.
Bank Reconciliation
At December 31, 2012

Cash per general ledger, Dec. 31		$5,005	Cash per bank statement, Dec. 31		$7,000
Add:	Note collected by bank	1,300	*Add:*	Error Fluet Inc. cheque	200
	Interest on note	25		Outstanding deposit	700
Less:	Bank service charges	(30)	*Less:*	Outstanding cheques	(1,600)
Adjusted Cash balance, Dec. 31		$6,300	Adjusted Cash balance, Dec. 31		$6,300

2012 adjusting entries:

Dec.	31	Cash	1,325	
		Note Receivable		1,300
		Interest Earned		25
		To record the note collected by the bank.		
	31	Interest and Bank Charges Expense	30	
		Cash		30
		To record service charges from the bank.		

CP 6–2

Return to Question

Gladstone Ltd.
Bank Reconciliation
At March 31, 2014

Cash per general ledger, Mar. 31		$2,531	Cash per bank statement, Mar. 31		$1,500
Add:	Error cheque No. 4302	27	*Add:*	Outstanding deposit	1,000
	Note receivable	250		Error re. global	250
	Interest on note	50			
Less:	Service charges—March	(20)	*Less:*	Outstanding cheques	(622)
	Service charges—Note	(10)			
	NSF cheque	(700)			
Adjusted cash balance, Mar. 31		$2,128	Adjusted cash balance, Mar. 31		$2,128

CP 6–2 continued

2014 adjusting entries:

Mar. 31	Cash	27	
	Office Supplies Expense		27
	To correct ck. no. 4302		
	Cash	290	
	Note Receivable		250
	Interest Earned		50
	Interest and Bank Charges Expense	10	
	To record note collected by the bank.		
	Interest and Bank Charges Expense	20	
	Cash		20
	To record service charges for March.		
	Accounts Receivable	700	
	Cash		700
	To record NSF cheque returned.		

CP 6–3

Return to Question

2013			
Mar. 1	Petty Cash	200	
	Cash		200
12	Office Supplies Expense	60	
	Maintenance Expense	35	
	Miscellaneous Selling Expense	25	
	Cash		120
18	Petty Cash	200	
	Cash		200
25	Office Supplies Expense	75	
	Delivery Expense	30	
	Cash		105
28	Cash	50	
	Petty Cash		50

CP 6–4

Return to Question

1.

2013			
Dec. 31	Bad Debt Expense	5,000	
	Allowance for Doubtful Accounts		5,000
2014			
Apr. 15	Allowance for Doubtful Accounts	700	
	Accounts Receivable		700
Aug. 8	Allowance for Doubtful Accounts	3,000	
	Accounts Receivable		3,000
Dec. 31	Bad Debt Expense	4,000	
	Allowance for Doubtful Accounts		4,000
2015			
Mar. 6	Accounts Receivable	200	
	Allowance for Doubtful Accounts		200
Sept. 4	Allowance for Doubtful Accounts	4,000	
	Accounts Receivable		4,000
Dec. 31	Bad Debt Expense	4,500	
	Allowance for Doubtful Accounts		4,500

2. Both methods are estimates and attempt to match expenses with revenues. Over time, the allowance for doubtful accounts under either method should be approximately the same. If not, management should review the percentage estimates under each method to ensure that they are reasonable.

CP 6–5

Return to Question

1. Allowance for doubtful accounts = 5% x $125,000 = $6,250

2. The Allowance for Doubtful Accounts general ledger account has a balance of $3,000 but the balance should be $6,250. The difference is the amount of the bad debt expense.

   Bad debt expense = ($6,250 - $3,000) = $3,250

3.

Impulse Inc.
Partial Balance Sheet
At December 31, 2013

Assets

Accounts Receivable	$125,000
Less: Allowance for Doubtful Accounts	6,250
Net Accounts Receivable	$118,750

CP 6–6

Return to Question

1.

Allowance for doubtful accounts, Dec. 31, 2014	$8,000
Written off in 2015	(2,400)
	5,600
Allowance for doubtful accounts, Dec. 31, 2015	(9,000)
Bad debt expense for 2015	$3,400

2.

Allowance for doubtful accounts, Dec. 31, 2015	$ 9,000
Written off in 2016	(1,000)
Recovered in 2016	300
	8,300
Allowance for doubtful accounts, Dec. 31, 2016	(10,000)
Bad debt expense for 2016	$ 1,700

CP 6–7

Return to Question

1. a.

Bad Debt Expense	15,000	
Allowance for Doubtful Accounts		15,000

(2% x $750,000 = $15,000)

b. Allowance for Doubtful Accounts = $3,000 + $15,000 = $18,000

2. a.

Bad Debt Expense	11,700	
Allowance for Doubtful Accounts		11,700

[10% x ($150,000 - 3,000)] = 14,700 - 3,000 = $11,700

b. Allowance for Doubtful Accounts = $3,000 + $11,700 = $14,700
(or 10% x ($150,000-3,000))

3. There is a difference in the estimates because different methods are used. The first method is based on a percentage of sales; the second on aging of accounts receivable.

CP 6–8

Return to Question

1. a. Bad debt expense = 2% x $200,000 = $4,000
   b. Allowance for doubtful accounts = $1,000 debit - $4,000 credit = $3,000 credit
2. a. Bad debt expense = (5% x $50,000) + $1,000 debit = $3,500
   b. Allowance for doubtful accounts = (5% x $50,000) = $2,500
3. The calculation made in question 1 above better matches revenue and expenses: the revenue (sales) is directly related to the amount that is written off as bad debt expense.

   The calculation made in question 2 above better matches accounts receivable to allowance for doubtful accounts and thus produces a better balance sheet valuation.

AP 6–1

Return to Question

1.

a	A collection of a $2,000 note receivable was not previously reported to Edison Life. This included interest earned of $50.
e	A certified cheque amounting to $500 and dated January 15 was not returned with the January bank statement.
c	The January 31 deposit of $1,000 arrived too late at the bank to be included in the January bank statement.
b	A $225 cheque from Go-Slow Truckers has been returned with the bank statement, marked NSF; this is the first knowledge Edison Life has of this.
a	A cheque received for $540 was recorded as $450 in the company records.
b	Service charges of $13 were deducted on the bank statement. These have not yet been recorded in the company records.
a	A $10,000 loan received from the bank was included in the bank statement but not in the company's general ledger.
d	A $150 December cheque had still not cleared the bank.
d	The bank credited Edison Life with a $2,000 deposit that should have been credited to Alva Life Insurance.

2.

Edison Life Ltd.
Bank Reconciliation
At January 31, 2017

Cash per general ledger, Jan. 31		$24,848	Cash per bank statement, Jan. 31		$37,850
Add: Note collected	$1,950		*Add:* Outstanding deposit		1,000
Interest on note	50				38,850
Bank loan not recorded	10,000				
Error in recording cheque	90	12,090			
		36,938			
Less: NSF cheque	225		*Less:* Outstanding cheque	$ 150	
Bank charges	13	238	Error in recording deposit	2,000	2,150
Adjusted cash balance, Jan. 31		$36,700	Adjusted cash balance, Jan. 31		$36,700

AP 6–2

Return to Question

1.

Bittman Company Ltd.
Bank Reconciliation
At December 31, 2017

Cash per general ledger, Dec. 31			$11,040	Cash per bank statement, Dec. 31			$25,430
Add:	Note collected,			*Add:*	Outstanding deposit, Dec.3	$ 1,570	
	Plus interest, less				Cheque of Pittman		
	service charge	$15,065			Company charged in error	10,000	11,570
	Cheque recorded						37,000
	in error	135	15,200				
			26,240				
Less:	Service charges	50		*Less:*	Outstanding cheques		
	NSF cheque	2,100			No. 197	4,000	
	Cheque incorrectly recorded	90	2,240		No. 199	9,000	13,000
Adjusted Cash balance, Dec. 31			$24,000	Adjusted Cash balance, Dec. 31			$24,000

2.

2017				
Dec.	31	Cash	15,065	
		Interest and Bank Charges Expense	10	
		Interest Earned		75
		Notes Receivable		15,000
		To record collection of note.		
	31	Interest and Bank Charges Expense	50	
		Cash		50
		To record bank service charges.		
	31	Cash	135	
		Accounts Payable		135
		To correct error in recording $345 cheque as $480.		
	31	Accounts Receivable	2,100	
		Cash		2,100
		To record NSF cheque.		
	31	Accounts Receivable	90	
		Cash		90
		To correct error in deposit.		

AP 6–3

Return to Question

1.

Doke Company Ltd.
Bank Reconciliation
At June 30, 2018

Cash per general ledger, Jun. 30	$1,200	Cash per bank statement, Jun. 30		$ 64
Add: Error recording cheques No.214	9	*Add:* Outstanding deposits		
	1,209	June 29	$1,000	
Deduct: Bank charges	5	June 30	200	
		Cheque of Western Co.	200	1,400
				1,464
		Deduct: Outstanding cheques		
		No. 208	80	
		No. 261	180	260
Adjusted cash balance, Jun. 30	$1,204	Adjusted cash balance, Jun. 30		$1,204

2.

Jun. 30	Interest and Bank Charges Expense	5	
	Cash		5
30	Cash	9	
	Office Supplies Expense		9

AP 6–4

Return to Question

1.

2013			
Jan. 22	Allowance for Doubtful Accounts	400	
	Accounts Receivable		400
Mar. 6	Accounts Receivable	200	
	Allowance for Doubtful Accounts		200
	Cash	200	
	Accounts Receivable		200
Jul. 4	Cash	600	
	Allowance for Doubtful Accounts	800	
	Accounts Receivable		1,400
Sep. 7	Allowance for Doubtful Accounts	700	
	Accounts Receivable		700
Dec. 31	Allowance for Doubtful Accounts	1,600	
	Accounts Receivable		1,600

AP 6–4 continued

2.

Calculation of Uncollectible Amount
December 31, 2013

Age (days)	Accounts Receivable	Estimated Loss Percentage	Estimated Uncollectible Amount
1-30	$ 40,000	2%	$ 800
31-60	24,000	4%	960
61-90	10,000	5%	500
91-120	6,000	10%	600
Over 120	20,000	50%	10,000
Totals	$100,000		$12,860

Allowance for Doubtful Accounts

	3,000	Balance at Dec. 31, 2012
	200	
400		
800		Write-offs and recovery
700		
1,600		
300		Balance before adjustment
	13,160	Adjustment needed
	12,860	Balance needed at Dec. 31, 2013

2013			
Dec. 31	Bad Debt Expense	13,160	
	Allowance for Doubtful Accounts		13,160

AP 6–5

Return to Question

Part A: 2015

1.	Dec.31 Allowance for Doubtful Accounts	2,000	
	Accounts Receivable		2,000

2\.

Calculation of Uncollectible Amount
December 31, 2014

Age (days)	*Accounts Receivable*	*Estimated Loss Percentage*	*Estimated Uncollectible Amount*
1-30	$ 100,000	2%	$ 2,000
31-60	54,000	3%	1,620
61-90	80,000	4%	3,200
91-120	60,000	25%	15,000
Over 120*	4,000	50%	2,000
Totals	$298,000		$23,820

* net of J. Nelson's balance

ADA adjusting entry required = (starting balance – accounts written off) – ending balance
= ($3,000 Cr. – 2,000 Dr.) – 23,820 Cr.
= $22,820 Cr.

Dec.31	Bad Debt Expense	22,820	
	Allowance for Doubtful Accounts		22,820

Return to Question

Part B: 2016

a.	Accounts Receivable	1,400,000	
	Sales		1,400,000
b.	Cash	1,198,000	
	Accounts Receivable		1,198,000
c.	Allowance for Doubtful Accounts	20,000	
	Accounts Receivable		20,000

d\.

Calculation of Uncollectible Amount
December 31, 2016

Age (days)	*Accounts Receivable*	*Estimated Loss Percentage*	*Uncollectible Amount*
1-30	$ 340,000	2%	$ 6,800
31-60	70,000	3%	2,100
61-90	0	4%	0
91-120	54,000	25%	13,500
Over 120	16,000	50%	8,000
Totals	$480,000		$30,400

ADA adjusting entry required = (starting balance – accounts written off) – ending balance
= ($23,820 Cr. – 20,000 Dr.) – 30,400 Cr
= $26,580 Cr.

Dec.31	Bad Debt Expense	26,580	
	Allowance for Doubtful Accounts		26,580

AP 6–6

Return to Question

a.	Allowance for Doubtful Accounts	1,200	
	Accounts Receivable		1,200
b.	Accounts Receivable	300	
	Allowance for Doubtful Accounts		300
	Cash	300	
	Accounts Receivable		300

c. ADA adjusting entries = (starting balance – accounts written off + accounts recovered) – ending balance required
= ($2,000 Cr. – 1,200 Dr.+300 Cr.) – 3,500 Cr
= $2,400 Cr.

Bad Debt Expense	2,400	
Allowance for Doubtful Accounts		2,400

AP 6–7

Return to Question

1. *Accounts Receivable*

Balance, Jan. 1	$ 265
Add: Credit sales	2,105
	2,370
Less: Cash collected	(2,025)
	345
Add: Bad debt recovered—James Walburn*	3
	348
Less: Write off bad debts	8
Balance, Dec. 31	$ 340

*Assumes $3 collected was included in $2,025 amount

ADA adjusting entry = (starting balance – accounts written off + accounts recovered) – ending balance required
= ($7 Cr. – 8 Dr. + 3 Cr.) – [(40x20%)+ {(340 – 40) x2%} Cr.]
= $12 Cr.

2.	Dec. 31	Bad Debt Expense	12	
		Allowance for Doubtful Accounts		12

3. Amount of bad debt expense on income statement $12

4.	Accounts Receivable	$340
	Less: Allowance for Doubtful Accounts	14
	Net Accounts Receivable	$326

AP 6–8

Return to Question

Calculation of Uncollectible Amount
June 30, 2017

Age (days)	Accounts Receivable	Estimated Loss Percentage	Uncollectible Amount
1-30	$300,000	0.5%	$ 1,500
31-60	25,000	4%	1,000
61-90	30,000	5%	1,500
91-120	12,500	15%	1,875
Over 120	3,000	40%	1,200
Totals	$370,500		$7,075

ADA adjusting entry= starting balance – ending balance required
= $310 Dr. – 7,075 Cr.
= $7,385 Cr. needed

Dec.31 Bad Debt Expense	7,385	
Allowance for Doubtful Accounts		7,385

AP 6–9

Return to Question

1. a.

Bad Debt Expense	2,170	
Allowance for Doubtful Accounts		2,170

Allowance for Doubtful Accounts

	250	Unadjusted balance
	2,170	Adjustment needed
	2,420	Balance needed ($60,500 x 4%)

b.

Bad Debt Expense	2,745	
Allowance for Doubtful Accounts		2,745

Balance required = Credit sales x 0.45%
= $610,000 x 0.45%
= $2,745

c.

Bad Debt Expense	3,450	
Allowance for Doubtful Accounts		3,450

Allowance for Doubtful Accounts

	250	Unadjusted balance
	3,450	Adjustment needed
	3,700	Balance needed

Method 1, based on a percentage of credit sales, best matches revenue and expenses for the period.

2. Likely, method (c) yields a more accurate valuation of accounts receivable by ageing them. Any of the methods are reasonable. Methods (a) and (c) use the balance sheet method.

AP 6–10

Return to Question

1\.

2012		Allowance for Doubtful Accounts	4,000	
		Bad Debt Expense		4,000

ADA adjusting entry = starting balance – balance required
= $10,000 Cr. – 6,000 Cr ($200,000 x 3%)
= $4,000 Dr.

2013				
	a.	Allowance for Doubtful Accounts	18,000	
		Accounts Receivable		18,000
	b.	Accounts Receivable	1,600,000	
		Sales		1,600,000
	c.	Cash	1,400,000	
		Accounts Receivable		1,400,000
	d.	Accounts Receivable	4,000	
		Allowance for Doubtful Accounts		4,000
		Cash	4,000	
		Accounts Receivable		4,000
	e.	Bad Debt Expense	18,000	
		Allowance for Doubtful Accounts		18,000

Allowance for Doubtful Accounts

	10,000	Balance at Dec. 31, 2012
4,000		Write-offs and recovery
18,000	4,000	
8,000		Balance before adjustment
	18,000	Adjustment needed
	10,000	Balance needed at Dec. 31,2013

2\.

Allowance for Doubtful Accounts

	10,000	Unadjusted balance at Dec. 31, 2012
	8,400	1% x $1,200,000 x 70% credit sales
	18,400	Balance before adjustment
18,000		Transaction (a)
	16,000	1% x $1,600,000 sales (b)
	4,000	Transaction (d)
	20,400	Balance at Dec. 31, 2013

AP 6–11

Return to Question

1.	a.	Allowance for Doubtful Accounts	50,000	
		Accounts Receivable		50,000
	b.	Accounts Receivable	30,000	
		Allowance for Doubtful Accounts		30,000
		Cash	30,000	
		Accounts Receivable		30,000
2.	a.	Bad Debt Expense	14,000	
		Allowance for Doubtful Accounts		14,000
		($2,000,000 x 70% x 1%)		
	b.	Bad Debt Expense	20,000	
		Allowance for Doubtful Accounts		20,000

Allowance for Doubtful Accounts

	30,000	Balance, Dec. 31, 2012
50,000		Write-off
	30,000	Recovery
	10,000	Unadjusted balance, Dec. 31, 2013
	20,000	Adjustment needed
	30,000	Balance needed Dec. 31, 2013

($500,000 x 6%)

c.	Bad Debt Expense	12,000	
	Allowance for Doubtful Accounts		12,000 (2)

Calculation of Uncollectible Amount
December 31, 2013

Age (days)	*Accounts Receivable*	*Estimated Loss Percentage*	*Uncollectible Amount*
1-30	$ 200,000	1%	$ 2,000
31-60	100,000	3%	3,000
61-90	50,000	4%	2,000
91-120	120,000	5%	6,000
Over 120	30,000	30%	9,000
Totals	$500,000		$22,000 (1)

Allowance for Doubtful Accounts

	30,000	Balance, Dec.31, 2012
50,000		Write-off
	30,000	Recovery
	10,000	Unadjusted balance, Dec.31, 2013
	12,000 (2)	Adjustment needed
	22,000 (1)	Balance needed, Dec.31, 2013

CHAPTER 7

The Communication of Accounting Information: The Financial Statements

AP 7–1

Return to Question

Norman Company Ltd.
Balance Sheet
At December 31, 2012

Assets		
Current		
Cash	$250	
Accounts Receivable	138	
Notes Receivable	18	
Prepaid Insurance	12	
Unused Office Supplies	70	
Total Current Assets		$ 488
Property, Plant, and Equipment		
Land	115	
Building	400	
Equipment	140	
Net Property, Plant, and Equipment		655
Total Assets		$1,143
Liabilities		
Current		
Accounts Payable	$125	
Bank Loan*	110	
Salaries Payable	14	
Total Current Liabilities		$ 249
Non-current		
Mortgage Payable*		280
Total Liabilities		529
Shareholders' Equity		
Share Capital	400	
Retained Earnings	214	
Total Shareholders' Equity		614
Total Liabilities and Shareholders' Equity		$1,143

*Alternately, with appropriate disclosure, "Borrowings"

AP 7–2

Return to Question

Washington Corporation
Balance Sheet
At October 31, 2014

	Assets	
Current		
Cash	$56	
Temporary Investments	5	
Accounts Receivable	10	
Inventories	14	
Total Current Assets		$ 85
Property, Plant, and Equipment		
Land	15	
Buildings	20	
Equipment	25	
Net Property, Plant, and Equipment		60
Total Assets		$145
	Liabilities	
Current		
Accounts Payable		$40
Non-current		
Mortgage Payable		10
Total Liabilities		50
	Shareholders' Equity	
Share Capital	$30	
Retained Earnings (balancing figure)	65	
Total Shareholders' Equity		95
Total Liabilities and Shareholders' Equity		$145

*Alternately, with appropriate disclosure, "Borrowings"

AP 7–3

Return to Question

1.

Lawson Corporation
Balance Sheet
At December 31, 2015

Assets			
Current			
Cash		$ 5,600	
Accounts Receivable		15,200	
Notes Receivable		3,000	
Merchandise Inventory		5,600	
Prepaid Insurance		400	
Unused Office Supplies		200	
Total Current Assets			$30,000
Property, Plant, and Equipment			
Land		5,000	
Building	14,000		
Less: Acc. Dep'n - Building	(1,000)	13,000	
Equipment	4,000		
Less: Acc. Dep'n – Equipment	(500)	3,500	
Net Property, Plant, and Equipment			21,500
Total Assets			$51,500
Liabilities			
Current			
Accounts Payable		$10,000	
Notes Payable		7,500	
Total Current Liabilities			$17,500
Non-current			
Mortgage Payable*			8,000
Total Liabilities			$25,500
Shareholders' Equity			
Share Capital		10,000	
Retained Earnings		16,000	
Total Shareholders' Equity			26,000
Total Liabilities and Shareholders' Equity			$51,500

*Alternately, with appropriate disclosure, "Borrowings"

2. a. Proportion of shareholder claims to total assets:

$$\frac{\text{Total Shareholders' Equity}}{\text{Total Assets}} = \frac{\$26,000}{\$51,500} = 50.5\%$$

b. Proportion of creditor claims to assets:

$$\frac{\text{Total Liabilities}}{\text{Total Assets}} = \frac{\$25,500}{\$51,500} = 49.5\%$$

3. The company is almost equally financed by creditors and investors.

AP 7–4

Return to Question

1. a.

Dark Edge Sports Inc.
Income Statement
For the Year Ended December 31, 2012

Revenue* (83,000 – 2,250 – 750)	$80,000
Cost of Materials*	(34,800)
Change in Inventories* (6,000 – 5,000)	(1,000)
Employee Benefits*	(21,600)
Depreciation*	(1,100)
Interest*	(1,300)
Income Taxes*	(2,300)
Advertising	(7,200)
Utilities	(3,600)
Other Occupancy Costs** (1,200 + 550 + 100)	(1,850)
Net Income	$5,250

*Disclosure is required regardless of materiality.

**Combined as amounts are immaterial.

b.

Dark Edge Sports Inc.
Statement of Change in Equity
For the Year Ended December 31, 2012

	Share Capital	*Retained Earnings*	*Total Equity*
Opening Balance	$3,000	$2,000	$5,000
Net Income		5,250	5,250
Dividends Declared		(600)	(600)
Ending Balance	$3,000	$6,650	$9,650

AP 7–4 continued

c.

Dark Edge Sports Inc.
Balance Sheet
At December 31, 2012

Assets		
Current		
Cash		$ 1,500
Accounts Receivable		18,700
Merchandise Inventory		5,000
Prepaid Expenses (1,300 + 600)		1,900
Total Current Assets		27,100
Property, Plant, and Equipment		
Equipment	$6,500	
Less: Accumulated Depreciation	2,000	
Net Property, Plant, and Equipment		4,500
Total Assets		$31,600
Liabilities		
Current		
Bank Loan*	$10,000	
Accounts Payable	8,350	
Income Taxes Payable	3,600	
Total Current Liabilities		$21,950
Shareholders' Equity		
Share Capital	3,000	
Retained Earnings	6,650	
Total Shareholders' Equity		9,650
Total Liabilities and Shareholders' Equity		$31,600

*Alternately, with appropriate disclosure, "Borrowings"

2.

Current Assets	$27,100
Current Liabilities	21,950
Difference	$ 5,150

3. After the $5,000 bank loan is received, both current assets and current liabilities will increase by the same amount (Debit to Cash; credit to Bank Loan). The difference will remain $5,150.

4. The company appears to have enough excess net current assets ($5,150) without the loan. More information should be requested, such as why the loan is needed. If it will be used to purchase a non-current asset like more equipment, perhaps the loan repayment terms should be extended by several years.

CHAPTER 8
Long-lived Assets

CP 8–1

Return to Question

1. Cost = $3,250 + $100 +$300 + $50 + (10% x $3,250) = $4,025. Answers may vary. The table may be recorded as a separate asset. Also, all or some of the expenditures may be considered immaterial.

2. Straight–Line Method:

		Straight–Line	*Double–Declining Balance*	
Year	1	$755*	$4,025 x 40%** =	$1,610
	2	$755	2,415 x 40% =	966
	3	$755	1,449 x 40% =	580
	4	$755	869 x 40% =	348
	5	$755	521 x 40% =	208

$$*\frac{(\$4,025 - 250)}{5 \text{ years}} = \$755$$

**(100%/5yrs. = 20% x 2 = 40%)

Under the straight-line method, each period is assumed to receive equal benefits from the use of the asset. Under the double-declining balance method, each period is charged a diminishing amount. The straight-line method would be more appropriate if the economic benefits would be used about equally over the years. The double-declining balance method would be better to use if the economic benefits were used up more in the first few years. The DDB method Is likely the better choice, given the probability of technological obsolescence of this type of asset.

CP 8–2

Return to Question

Land = $100,000/$400,000 x $300,000 = $75,000
Building = $300,000/$400,000 x $300,000 = $225,000

Land	75,000	
Building	225,000	
Cash		300,000

CP 8–3

Return to Question

1. Journal entries to record the sale on the books of:

   a. Freeman:

April 30, 2013		
Equipment	200,000	
Land		125,000
Gain on Disposal		75,000

The equipment is valued at the fair value of the asset given up.

   b. The developer:

April 30, 2013		
Land	240,000	
Equipment		325,000
Accumulated Depreciation – Equipment	80,000	
Loss on Disposal	5,000	

Calculated as:

Cost	$325,000
Accumulated cepreciation	(80,000)
Carrying amount	245,000
Proceeds (fair value of equipment)	240,000
Loss on disposal	$ 5,000

2. The land may have been zoned as agricultural land. The appraiser may have valued the land assuming no change in use would occur. The developer may anticipate that the land could be rezoned to commercial land, which should increase its value.

CP 8–4

Return to Question

1. Straight–line method:

$$\frac{(\$110{,}000 - 10{,}000)}{10 \text{ years}} = \$10{,}000 \text{ per year}$$

2011 depreciation = $10,000 x ½ = $5,000
2012 depreciation = $10,000

2. Double–declining balance method:

$$\frac{100\%}{10 \text{ years}} \text{ x } 2 = 20\%$$

2016 depreciation = $110,000 x 20% x ½ = $11,000
2017 depreciation = ($110,000 – 11,000) x 20% = $19,800

CP 8–5

Return to Question

1. Jan. 31, 2011		
Computer	3,000	
Cash		3,000
March 1, 2011		
Computer	1,000	
Cash		1,000
Apr. 1, 2012		
Computer	2,000	
Cash		2,000

Alternate interpretations are acceptable, with adequate explanation.

2. Dec. 31, 2011		
Depreciation Expense	667	
Accumulated Depreciation – Equipment		667
To record 2011 depreciation: ($3,000 + 1,000) x 1/3 yrs. X 1/2 yr.).		
Dec. 31, 2012		
Depreciation Expense	2,667	
Accumulated Depreciation – Equipment		2,667
To record 2012 depreciation:		
($3,000 + 1,000 + 2,000 - 667) x 1/2 yrs.	$2,667	

CP 8–6

Return to Question

1. Straight–line method:

Balance at end of 2017 = $110,000 – 5,000 – 10,000 = $95,000

$$\frac{\$95{,}000}{4 \text{ years}} = \$23{,}750 \text{ per year}$$

2018 depreciation = $23,750

2. Double–declining balance method:

Balance at end of 2017 = $110,000 – 11,000 – 19,800 = $79,200

$$\frac{100\%}{4 \text{ years}} \times 2 = 50\% \text{ per year}$$

2018 depreciation = $79,200 x 50% = $39,600

CP 8–7

Return to Question

Balance at January 1, 2019 = $95,000 – $23,750 = $71,250

1. Equipment sold for $60,000:

Cash	60,000	
Accumulated Depreciation	38,750	
Loss on Disposal	11,250	
Equipment		110,000

To record loss on disposal

Cost	$110,000
Acc. dep'n. ($5,000 + 10,000 + 23,750)	(38,750)
Carrying amount	71,250
Proceeds of disposal	(60,000)
Loss on disposal	$ 11,250

2. Equipment sold for $85,000:

Cash	85,000	
Accumulated Depreciation	38,750	
Equipment		110,000
Gain on Disposal		13,750

To record gain on disposal

Cost of old asset	$110,000
Acc. dep'n. ($5,000 + 10,000 + 23,750)	(38,750)
Carrying amount	71,250
Proceeds of disposal (fair value)	(85,000)
Gain on disposal	$(13,750)

3. Equipment sold for $71,250:

Cash	71,250	
Accumulated Depreciation	38,750	
Equipment		110,000

(There is no gain or loss on disposal.)

CP 8–8

Return to Question

Accumulated Depreciation	38,750	
Equipment*	145,000	
Equipment		110,000
Cash		50,000
Gain on Disposal		23,750
To record gain on disposal		

Cost of old asset	$110,000
Acc. dep'n. ($5,000 + 10,000 + 23,750)	(38,750)
Carrying amount	71,250
Proceeds of disposal (fair value)	(95,000)
Gain on disposal	$(23,750)

Cost of new asset = Cash paid** + fair value of asset traded in
= $50,000 + 95,000
= $145,000*

List price	150,000
Trade-in allowance	(100,000)
Cash paid	$50,000**

CP 8–9

Return to Question

1. Straight–line method:

$$\frac{(\$25{,}000 - 5{,}000)}{5 \text{ years}} = \$4{,}000 \text{ per year}$$

2011 depreciation = $4,000 x ½ = $2,000
2012 depreciation = $4,000

2. Usage method:

$$\frac{(\$25{,}000 - 5{,}000)}{500{,}000 \text{ km.}} = \$.04/\text{km.}$$

2011 depreciation = 120,000 km. x $.04 = $4,800
2012 depreciation = 150,000 km. x $.04 = $6,000

The ½ year rule does not apply under usage methods of calculating depreciation.

3. Double–declining balance method:

$$\frac{100\%}{5 \text{ years}} = 20\% \times 2 = 40\% \text{ per year}$$

2011 depreciation = $25,000 x 40% = $10,000 x ½ yr. = $5,000
2012 depreciation = ($25,000 – 10,000) x 40% = $6,000

CP 8–10

Return to Question

h	Battery purchased for truck
c	Cash discount received on payment for equipment
a	Commission paid to real estate agent to purchase land
c	Cost of equipment test runs
b	Cost to remodel building
b	Cost to replace manual elevator with automatic elevator
a	Cost of sewage system
c	Equipment assembly expenditure
c	Expenditures for debugging equipment
e	Installation of air–conditioner in automobile
b	Insurance paid during construction of building
a	Legal fees associated with court case to defend title to land purchased
h	Oil change for truck
a	Payment for landscaping
a	Payment to demolish a derelict building on land purchased
a	Expenditures for removal of derelict structures
h	Repair made to building after moving in
h	Repair of collision damage to truck
h	Repair of torn seats in automobile
h	Replacement of rusted fender on automobile
e	Replacement of transmission on automobile
c	Special floor foundations for installation of equipment
h	Tires purchased for truck
c	Transportation expenditures to bring equipment to plant.

Alternate answers are acceptable if suitable reasoning is presented.

CP 8–11

Return to Question

1.

Depreciation Method	*Calculation*	*Year 1*	*Year 2*	*Year 3*
A: Straight–Line	$30,000/5 = $6,000	$3,000*	$6,000	$6,000
B: Declining Balance	40%** x $30,000	$6,000***		
	40% x $24,000		$9,600	
	40% x $14,400			$5,760

*$6,000 x ½ year rule

** (100%/5 yrs.) = 20% x 2 = 40%

***$12,000 x ½ year rule

2. The comptroller may be correct in asserting that depreciation is an arbitrary allocation method based on unreliable estimates. On the other hand, some general methods of a) recognising future benefits, and b) allocating these benefits over future periods in which they are used up seem necessary to present the financial position and results of operations of an entity. Capitalising long-lived assets and deprecating them over their estimated useful lives is likely the best option. Although there are many specific techniques for calculation and allocating depreciation over future periods, the need for consistency and reliability within financial statements suggest that the technique, once chosen, should be applied in a similar manner from year to year unless circumstances change.

3. The method of depreciation chosen should be the one that best allocates the cost of the asset over its estimated useful life and over the accounting periods expected to receive benefits from its use (to best match costs with revenues earned).

CP 8–12

Return to Question

1. 2018

Jan. 1	Accumulated Depreciation — Machine 1	7,500	
	Cash	500	
	Gain on Disposal		500
	Machine 1		7,500
	To record gain on disposal		

Cost — machine 1	$7,500
Acc. dep'n. ($750* + 1,500 + 1,500 + 1,500 + 1,500 + 750*)	(7,500)
Carrying amount	-0-
Proceeds of disposal	(500)
Gain on disposal	$ (500)

* ½ year rules applies

2. 2018

Dec. 31	Depreciation Expense — Machine 2	788	
	Accumulated Depreciation — Machine 2		788

$$\text{Revised depreciation} = \frac{(\text{Remaining carrying amount} - \text{residual value})}{\text{Revised remaining useful life}}$$

$$= \frac{(\$2{,}775^* - 1{,}200)}{2 \text{ years}}$$

$$= \$788 \text{ (rounded)}$$

Cost machine 2		$7,500
Acc. dep'n.		
2013: [($7,500 – 1,200) x 1/6 yrs. = 1,050 x 1/2 yr.]	$ 525	
2014 through 2017: ($1,050/yr. x 4 yrs.)	4,200	(4,725)
Carrying amount at December 31, 2017		$2,775*

3. 2018

Dec. 31	Depreciation Expense — Machine 3	690	
	Accumulated Depreciation — Machine 3		690

$$\text{Revised depreciation} = \frac{(\text{Remaining carrying amount} - \text{residual value})}{\text{Revised remaining useful life}}$$

$$= \frac{(\$3{,}450^* - 0)}{5 \text{ years}}$$

$$= \$690$$

Cost machine 3		$7,500
Acc. dep'n.		
2013: [($7,500 – 300) x 1/8 yrs. = 900 x 1/2 yrs.]	$ 450	
2014 through 2017: ($900/yr. x 4 yrs.)	3,600	(4,050)
Carrying amount at December 31, 2017		$3,450*

CP 8–13

Return to Question

1.

Machinery cost	$15,000
Less: Acc. depreciation to Dec. 31, 2016	3,750
Carrying amount (Jan. 1, 2017)	$11,250

($11,250 – 0)/4 yrs. = $2,813 (rounded) depreciation expense each year of remaining useful life

2.

2017			
Dec. 31	Depreciation Expense—Equipment	2,813	
	Accumulated Depreciation—Equipment		2,813

3.

Accumulated Depreciation—Equipment *No. 193*

Date 2016	Description	F	Debit	Credit	DR or CR	Balance
	Bal. Fwd.				Cr	2,250
Dec. 31	Depreciation for 2016			1,500	Cr	3,750
2017						
Dec. 31	Depreciation for 2017			2,813	Cr	6,563

4. If the estimated useful life of five years was known at the time of purchase, depreciation expense would have been $1,500 in 2014 ($15,000/5 yrs. X ½ yr.) and $3,000 each subsequent year until the machinery was fully depreciated or disposed.

5. Depreciation was calculated correctly in all years based on reasonable information available at the time. The estimates were updated when more accurate information was available. As such, the financial statement information would be deemed to be reasonable even though the depreciation expense varies between 2016 and subsequent years. The amounts also may be immaterial, so differences would not affect the usefulness of the financial statements.

CP 8–14

Return to Question

1. a. Jan. 1, 2014

Truck	10,500	
Cash		10,500

To record the purchase of the truck.

b. Dec. 31, 2014

Depreciation Expense	1,575	
Accumulated Depreciation—Truck		1,575

To record 2014 depreciation expense.

c. March 1, 2015

Truck	4,000	
Truck Operation Expense	3,500	
Cash		7,500

To record truck expenditures.

d. Dec. 31, 2015

Depreciation Expense	4,160	
Accumulated Depreciation—Truck		4,160

To record 2015 depreciation expense

2015 depreciation expense is calculated as:

Year	*Carrying Amount*	*DDB Rate*	*Depreciation Expense*
2014	$10,500	40% x ½ yr.	$2,100
2015	$12,400*	40%	4,960

*($10,500 + 4,000 – 2,100) = $12,400

2.a. March 3, 2016

Depreciation Expense — Truck	1,488	
Accumulated Depreciation — Truck		1,488

To record depreciation to date of disposal [($12,400 – 4,960) x 40% x ½ yr)] = $1,488.

.b March 3, 2016

Accumulated Depreciation — Truck	8,548	
Cash	8,000	
Gain on Disposal		6,048
Truck		10,500

To record gain on disposal, as follows:

Cost — truck	$10,500
Acc. dep'n. ($2,100 + 4960 + 1,488)	(8,548)
Carrying amount	1,952
Proceeds of disposal	(8,000)
Gain on disposal	$ 6,048

CP 8–15

Return to Question

1. Jan. 1, 2014

Land	250,000	
Buildings	250,000	
Patents	100,000	
Machinery	250,000	
Goodwill	50,000	
Cash		900,000

To record purchase of Coffee Company assets.

Allocation of land and buildings purchase price:

Land $\$500,000 \times \frac{275,000}{550,000} = \$250,000$

Buildings $\$500,000 \times \frac{275,000}{550,000} = \$250,000$

2. Dec. 31, 2014

Depreciation Expense – Building	25,000[1]	
Depreciation Expense – Machinery	18,750[2]	
Amortisation Expense – Patents	2,500[3]	
Accumulated Depreciation – Building		25,000
Accumulated Depreciation – Machinery		18,750
Accumulated Amortisation – Patents		2,500

To record 2014 depreciation and amortisation expense on assets acquired from Coffee Company as follows:

[1] DDB rate: $\frac{100\%}{10 \text{ yrs.}} \times 2 = 20\%$

2014 building depreciation = $250,000 x 20% x ½ yr. = $25,000

[2] 2014 machinery depreciation

$= (\$250,000 - 25,000) \times \frac{10,000}{60,000} \times ½ \text{ yr.}$

= $18,750

[3] 2014 patent amortisation = $\frac{\$100,000}{20 \text{ yrs.}} \times ½ \text{ yr.} = \$2,500$

3. Dec. 31, 2015

Impairment Loss	12,500	
Accumulated Amortisation – Patents		12,500

To write-down patents to estimated value at December 31, 2015 as follows:

Cost	100,000
Accumulated amortisation	(7,500)*
Carrying amount	92,500
Fair value	(80,000)
Impairment loss	$12,500

*2014: ($100,000/20 yrs. x ½ yr)	=	$2,500
2015: ($100,000/20 yrs.)	=	5,000
Total		$7,500

CP 8–15 continued

4. Dec. 2, 2016

Cash	100,000	
Accumulated Depreciation – Machinery	112,500	
Loss on Disposal	37,500	
Machinery		250,000

To record sale of machinery as follows:

Cost		$250,000
Accumulated depreciation		
2014	18,750 (see above)	
2015	56,250[1]	
2016	37,500[2]	(112,500)
Carrying amount		137,500
Proceeds of disposal		(100,000)
Loss on disposal		$ 37,500

[1] $(\$250,000 - 25,000) \times \frac{15,000}{60,000} = \$56,250$

[2] $(\$250,000 - 25,000) \times \frac{20,000}{60,000} \times \frac{1}{2}\text{ yr.} = \$37,500$

AP 8-1

Return to Question

	(000s)
Cost of land:	
Purchase price	$ 55
Demolition of the old building	3
Landscaping	4
Analysis of subsoil	8
	$ 70
Cost of building:	
Construction supervision	$ 50
Analysis of the electrical system	30
Wages and materials	531
Wages of employees on construction site	460
Taxes and interest, Jul. 1, 2011–Mar. 31, 2012 (3/4 x $18) (rounded)	13
Construction materials	1,267
	$2,351
Cost of equipment:	
Planning new production process	$ 45
Prepaid taxes and interest (1/4 x $18) (rounded)	$ 5

The cost of the land should include the cost of demolishing the old building, since the land was acquired with the knowledge that these costs would be incurred.

The cost of the building should include all costs incurred to the point when it was used for production; therefore, employees' wages and property taxes are capitalised for this period.

The cost of the equipment should include all costs. The planning of the process is part of the cost of the equipment that will be used in production.

Alternate, supported arguments may also be valid.

AP 8–2

Return to Question

a.	Maintenance and Repairs	26,000	
	Cash		26,000
	To record repair costs incurred.		
b.	Plant	17,000	
	Cash		17,000
	To record overhaul costs of the plumbing system.		
c.	Storage Shed	48,000	
	Cash		48,000
	To record cost of new storage shed.		
d.	Plant (new roof)	60,000	
	Accumulated Depreciation – Plant (old roof)	5,000	
	Loss on Disposal	25,000	
	Plant		30,000
	Cash		60,000
	To record replacement of shingle roof with tile roof.		
e.	Plant (new inspections)	10,000	
	Accumulated Depreciation – Plant (old inspections)	3,000	
	Loss on Disposal	3,000	
	Plant (old inspections)		6,000
	Cash		10,000
	To record major inspection costs incurred.		

AP 8–3

1. DDB rate = 100%/5 yrs. x 2 = 40% per year

Method	*Calculation*	*2012*	*2013*	*2014*	*2015*	*2016*	*Total*
Straight–Line	$5,700/5 years	$570[1]	$1,140	$1,140	$1,140	$1,140	$5,130
Double–Dec. Bal.	40% x $6,000 x ½ yr.	$1,200[1]					
	40% x $4,800		$1,920				
	40% x $2,880			$1,152			
	40% x $1,728				$ 691		
	40% x $1,037					$415	$5,378

Return to Question

[1] ½ yr. rule applies in 2012

2. a. The advantages of the straight–line method are that it is easy to calculate and that costs are expensed evenly over the life of the asset.

   b. The advantage of the double–declining balance method is that it charges the most depreciation in the earlier years, when maintenance and repair expenses are low, then charges less depreciation when the asset has aged and usually costs more to maintain. This method keeps the total depreciation and maintenance expenses more even each year.

AP 8–4

Return to Question

1.

Method	*Depreciation Expense*			*Carrying Amount*		
	2014	*2015*	*2016*	*2014*	*2015*	*2016*
Straight–Line[1]	$12,000	$12,000	$12,000	$28,000	$16,000	$ 4,000
Double Declining[2]	26,800	8,844	356	13,200	4,356	4,000[3]
Usage[3]	14,400	7,200	3,600	25,600	18,400	14,800

[1] ($40,000 – 4,000)/3 yrs. = $12,000 per year

[2] 100% x 2 = 67% (rounded)
3 yrs.
2014: $40,000 x 67% = $26,800
2015: ($40,000 – 26,800) x 67% = $8,844
2016: ($40,000 – 26,800 – 8,844) x 67% = ~~2,919~~ $356
2016 depreciation is limited to $356, the amount that reduces carrying amount to estimated residual value.

[3] $40,000 – 4,000 = $.36 per tonne
100,000 tonnes
2014: $.36 x $40,000 = $14,400
2015: $.36 x 20,000 = $7,200
2016: $.36 x 10,000 = $3,600

2. The validity of the usage method is based on the accuracy of the estimated total units to be produced. Estimates are subject to error and may be revised. Evidence leading to a revised estimate does not render incorrect the prior estimate. The earlier financial statements are still deemed correct, if the estimates were based on the best available information at the time.

AP 8–5

Return to Question

1. Straight–line method:

Cost of equipment	$11,000
Residual value	1,000
Cost to be depreciated	$10,000

Depreciation expense = $10,000/5 yrs. = $2,000 per year

Double–declining balance method:

2016	40%[1] x $11,000	= $4,400
2017	40% x (11,000 – 4,400)	= 2,640
2018	40% x (11,000 – 4,400 – 2,640)	= 1,584
Total depreciation		= $8,624

[1] 100%/5 yrs. = 20% x 2 = 40%

2. Straight–line method:

Partial Income Statement	*2016*	*2017*	*2018*
Income before Depreciation	$30,000	$25,000	$35,000
Depreciation Expense	2,000	2,000	2,000
Income from Operations	$28,000	$23,000	$33,000

Partial Balance Sheet	*2016*	*2017*	*2018*
Equipment	$11,000	$11,000	$11,000
Less: Acc. Depreciation	2,000	4,000	6,000
Carrying Amount	$ 9,000	$7,000	$5,000

Declining balance method:

Partial Income Statement	*2016*	*2017*	*2018*
Income before Depreciation	$30,000	$25,000	$35,000
Depreciation Expense	4,400	2,640	1,584
Income from Operations	$25,600	$22,360	$33,416

Partial Balance Sheet	*2016*	*2017*	*2018*
Equipment	$11,000	$11,000	$11,000
Less: Acc. Depreciation	4,400	7,040	8,624
Carrying Amount	$ 6,600	$3,960	$2,376

1. Total depreciation expense is lowest using the straight-line method ($6,000) versus the double-declining balance method ($8,624) so using the straight-line method would produce the highest combined net incomes over the three years. However, using the DDB method produces the highest net income in 2018 ($33,416 vs. 33,000). Using the straight-line method produces the highest carrying amount at each year-end.

AP 8–6

Return to Question

1.

Cutting machine	$46,000
Transportation-in	1,200
Installation cost	2,800
Capitalised amount	$50,000

The $1,000 for alterations to the building would be added to the building's cost.

2. a. Straight-line method:

2014

Depreciation Expense	8,000[1]	
Accumulated Depreciation – Cutting Machine		8,000

[1] ($50,000 – 2,000)/3 yrs. X ½ = $8,000

2015 and 2016

Depreciation Expense	16,000	
Accumulated Depreciation – Cutting Machine		16,000

b. Declining balance method:

2014

Depreciation Expense	16,750[2]	
Accumulated Depreciation – Cutting Machine		16,750

[2] DDB rate: $\frac{100\%}{3 \text{ yrs.}}$ = 33 1/3% x 2 = 67% (rounded)

Depreciation expense = $50,000 x 67% x ½ yr. = $16,750

2015

Depreciation Expense	22,278[3]	
Accumulated Depreciation – Cutting Machine		22,278

[3] ($50,000 – 16,750) x 67% = $22,278

2016

Depreciation Expense	8,972[4]	
Accumulated Depreciation – Cutting Machine		8,972

[4] Amount needed to reduce carrying amount to $2,000 at December 31, 2016 ($50,000 – 16,570 – 22,278 – 2,000) = $8,972

3.

Depreciable cost ($50,000 – 2,000)	$48,000
Depreciation recorded in 2014	16,000
Balance for remaining four years	$32,000

Annual depreciation for the remaining four years of estimated useful life = $32,000/4 yrs. = $ 8,000 per year.

AP 8–7

Return to Question

This problem requires several assumptions, like the estimated useful life of the new engine, the treatment of the old engine in the year of replacement, and the calculation of depreciation in the year of disposal. Alternate solutions with adequately-supported assumptions are acceptable.

1.		Truck	12,000	
		Cash		12,000

To record the purchase of the truck.

2.		Depreciation Expense	1,500	
		Accumulated Depreciation – Truck		1,500

To record 2014 truck depreciation.

$12,000/800,000 kms. = $.015 per km. x 100,000 km = $1,500

3.	a.	Truck Operation Expense	800	
		Truck Engine	2,400	
		Cash		3,200

To record purchase of truck tires and cost of to rebuild the engine.

	b.	Accumulated Depreciation – Truck	1,260[1]	
		Loss on Disposal	1,140	
		Truck		2,400

To de-recognise the old truck engine based on cost of replacement.

[1] $2,400/800,000 kms. = $.003 per km.
Kilometres driven to December 31, 2014
= 100,000 + 120,000 + 80,000 + 120,000
= 420,000 km. x $.003 = $1,260

2.		Depreciation Expense – Truck	1,800[2]	
		Depreciation Expense – Truck Engine	915[3]	
		Accumulated Depreciation – Truck		1,800
		Accumulated Depreciation – Truck Engine		915

To record 2015 truck and engine depreciation.

[2] $\frac{(\$12,000 - 2,400)}{800,000 \text{ km.}} \times 150,000 \text{ km.} = \$1,800$

[3] Estimated remaining kilometres
= 800,000 – 100,000 – 120,000 – 80,000 – 120,000
= 380,000 km.

$\frac{\$2,400}{380,000 \text{ km.}} = \$.0061$ per km. x 150,000 km. = $915 (rounded)

AP 8–7 continued

3. a.

Depreciation Expense – Truck	600[4]	
Depreciation Expense – Truck Engine	316[5]	
Accumulated Depreciation – Truck		600
Accumulated Depreciation – Truck Engine		316

To record 2016 truck and engine depreciation expense in year of disposal.

[4] $\frac{(\$12,000 - 2,400)}{800,000 \text{ km.}}$ x 100,000 km. x ½ yr. = $600

[5] $\frac{\$2,400}{380,000 \text{ km.}}$ x 100,000 km. x ½ yr. = $316 (rounded)

b.

Cash (or Accounts Receivable – Other)	4,000	
Accumulated Depreciation – Truck	7,650	
Accumulated Depreciation – Truck Engine	1,231	
Truck		9,600
Truck Engine		2,400
Gain on Disposal		881

To record disposal of truck and engine and receipt of insurance proceeds as follows:

	Truck		Engine		Total
Cost		$9,600		$2,400	$12,000
Accumulated depreciation					
2011 $12,000/800,000 x 100,000 km. x ½ yr.	$ 750		$ 0		
2012 $12,000/800,000 x 120,000 km.	1,800		0		
2013 $12,000/800,000 x 80,000 km.	1,200		0		
2014 (see journal entry 2)	1,500		0		
2015 (see journal entry 4)	1,800		915		
2016 (see journal entry 5a)	600	(7,650)	316	(1,231)	(8,881)
Carrying amount		$1,950		$1,169	3,119
Proceeds of disposal					(4,000)
Gain on disposal					$ (881)

AP 8–8

Return to Question

1.

Equipment	7,500	
Accumulated Depreciation	2,000	
Loss on Disposal	400	
Equipment		6,400
Cash		3,500

To record trade-in of machine 1 for machine 2, as follows:

Cost – machine 1	$6,400
Accumulated depreciation	(2,000)
Carrying amount	4,400
Proceeds of disposal	(4,000)
Loss on disposal	$ 400

Cost of new asset = Cash paid + fair value of traded asset
= $4,000 + ($8,000 – 4,500) = $7,500

2.

Equipment No. 183

Date 2014	Description	F	Debit	Credit	DR or CR	Balance
Jan. 1	Machine 1		6,400		DR	6,400
2016						
Jan. 1	Machine 1			6,400		-0-
1	Machine 2		7,500		DR	7,500

Accumulated Depreciation—Equipment No. 193

Date 2014	Description	F	Debit	Credit	DR or CR	Balance
Dec. 31	Depreciation for 2014			1,000	CR	1,000
2015						
Dec. 31	Depreciation for 2015			1,000	CR	2,000
2016						
Jan. 1	Trade-in of machine 1		2,000			-0-

3.

2016			
Dec. 31	Equipment	500	
	Repairs and Maintenance Expense		500

To correct error in recording installation cost relating to machine 2.

AP 8–8 continued

4. Dec. 31	Depreciation Expense—Equipment	875	
	Accumulated Depreciation—Equipment		875
	To record depreciation expense for 2016 as follows:		

Cost of machine 2	$7,500
Installation costs	500
	8,000
Residual value	1,000
Depreciable cost	$7,000

Annual depreciation

$$= \frac{\text{Depreciable cost}}{\text{Estimated useful life}}$$

$$= \frac{\$7,000}{8 \text{ yrs.}} = \$875$$

Accumulated Depreciation—Equipment No. 193

Date 2014	Description	F	Debit	Credit	DR or CR	Balance
Dec. 31	Depreciation for 2014			1,000	CR	1,000
2015						
Dec. 31	Depreciation for 2015			1,000	CR	2,000
2016						
Jan. 1	Trade-in of machine 1		2,000			-0-
Dec. 31	Depreciation for 2016			875	CR	875

AP 8–9

Return to Question

1. A trademark is a symbol or a word that identifies a company or one of its products or services; its exclusive use is granted by the state. They are usually carried at cost and not amortised because they generally do not diminish in value.

2. A patent is an exclusive limited–life right granted by the state to an inventor to produce and sell an invention. All costs involved in developing or purchasing it are included in its costs. A patent is amortised over the lesser of its legal life or estimated useful life, and in a manner that best matches costs with benefits.

3. Goodwill is the value attached to the ability of an entity to make superior earnings compared to other entities in the same industry; this value is usually not recognised in the financial statements of the entity unless it is purchased, and is not amortised.

An impairment loss is recorded if a decrease in any long-lived asset's value is determined by management to have occurred.

AP 8–10

Return to Question

1.

Machine	Depreciable Amount	2014 Depreciation (1/2 year)	2015 Depreciation
A	$24,000	$1,500	$3,000
B	20,000	600 [1]	4,600 [2]
C	14,700 [3]	1,225 [5]	2,450
D	20,000 [4]	2,000 [6]	3,600 [7]

[1] $\frac{(\$23,600 - 3,600)}{50,000 \text{ units}} = \$.40$ per unit
$.40 x 3,000 units x ½ yr. = $600

[2] 2015: $.40 x 11,500 units = $4,600

[3] Machine C fair value = $\frac{\$16,000}{(\$16,000 + 20,000)} \times 34,200 = \$15,200$
$15,200 + 500 (installation) – 1,000 (residual value) = $14,700

[4] Machine D fair value = $\frac{\$20,000}{(\$16,000 + 20,000)} \times 34,200 = \$19,000$
$19,000 + 1,000 (installation) = $20,000

[5] $\frac{\$14,700}{6 \text{ yrs.}} \times ½$ yr. = $1,225

[6] DDB rate = $\frac{100\%}{10 \text{ yrs.}} = 10\% \times 2 = 20\%$
$20,000 x 20% x ½ yr. = $2,000

[7] 2015: ($20,000 – 2,000) x 20% = $3,600

2.

2015			
April	Machine C	15,200	
	Machine D	19,000	
	Cash		34,200
	To record purchase of machines.		

AP 8–10 continued

3. 2016

Dec. 31	Depreciation Expense – Machine A	3,000	
	Accumulated Depreciation – Machine A		3,000
	To record machine A depreciation expense.		
Dec. 31	Impairment Loss	7,900	
	Accumulated Depreciation – Machine A		7,900
	To reduce the carrying amount of machine A to $12,000 as follows:		

Cost		$26,400
Accumulated depreciation		
2014:	$1,500	
2015:	3,000	
2016:	3,000	(7,500)
Carrying amount		18,900
Fair value estimate ($12,000 – 1,000)		(11,000)
Impairment loss		$ 7,900

2017

March 31	Depreciation Expense – Machine A	1,100	
	Accumulated Depreciation – Machine A		1,100
	To record depreciation expense for machine A to date of disposition:		

$$\frac{\text{Revised carrying amount – revised residual amount}}{\text{Remaining useful life}}$$

$$\frac{(\$12,000 - 1,000) - 0}{5 \text{ yrs.}} \times \tfrac{1}{2} \text{ yr.} = \$1,100$$

March 31	Cash	10,000	
	Accumulated Depreciation – Machine A	16,500	
	Machine A		26,400
	Gain on Disposal		100
	To record sale of machine A as follows:		

Cost		$26,400
Accumulated depreciation		
2014:	$1,500	
2015:	3,000	
2016:	3,000	
Impairment loss	7,900	
2017:	1,100	(16,500)
Carrying amount		9,900
Proceeds of disposal		(10,000)
Gain on disposal		$ (100)

CHAPTER 9
Equity Financing

CP 9–1

Return to Question

1. Authorisation of share issue:

   Memorandum
   The company is authorised under the
   [name of legislation] to issue an unlimited
   number of common shares and 10,000, 4% preferred shares.

2. Issue of 10,000 common shares:

Intangible Assets	10,000	
Common Shares		10,000

3. Issue of 1,000 preferred shares:

Cash	3,000	
Preferred Shares		3,000

CP 9–2

Return to Question

1.

Land	500,000	
Preferred Shares		500,000

To record the purchase of a tract of land in exchange for preferred shares.

2. The credit part of the transaction would be classified on the balance sheet in the shareholders' equity section as part of share capital. The debit part of the transaction would be recorded as an asset in the property, plant, and equipment section.

CP 9–3

Return to Question

1. The average price received for each issued preferred share is $54 ($3,456/64).
2. The average price received for each issued common share is $2.10 ($1,680/800).
3. The total stated capital is $5,136 ($3,456 + 1,680).

CP 9–4

Return to Question

Dec.	Cash	30,000	
	Common Shares		30,000
	To record issue of common shares for cash.		
	Common Shares	5,000	
	Cash		5,000
	To record redemption of common shares.		
	Cash	15,000	
	Preferred Shares		15,000
	To record issue of preferred shares for cash.		
	Building	8,000	
	Cash		8,000
	To record purchase of a building for cash.		
	Land	10,000	
	Building	12,000	
	Common Shares		22,000
	To record purchase of land and building through issue of common shares.		
	Cash	7,000	
	Common Shares		7,000
	To record issue of common shares for cash.		
	Cash	4,000	
	Land		4,000
	To record sale of land for cash.		
	Preferred Shares	6,000	
	Cash		6,000
	To record redemption of preferred shares for cash.		
	Incorporation Costs	14,000	
	Preferred Shares		14,000
	To record issue of preferred shares in exchange for incorporation costs.		

CP 9–5

Return to Question

1.	May 25	Dividends Declared	100,000	
		Dividends Payable		100,000
		To record the declaration of the dividend.		
2.	June 26	Dividends Payable	100,000	
		Cash		100,000
		To record the payment of the dividend.		

CP 9–6

Return to Question

1.	Dec. 31, 2014	Retained Earnings	80,000	
		Retained Earnings – Restriction for Plant Expansion		80,000

2.

	2014
Share Capital	$ 100,000
Retained Earnings (Note X)	200,000
Total Shareholders' Equity	$300,000

Note X: On December 31, 2014 the board of directors authorised a $80,000 restriction on the retained earnings of the company for plant expansion.

3.	Jun. 30, 2015	Plant	90,000	
		Bank Loan		90,000
4.	Jul. 31, 2015	Retained Earnings – Restriction for Plant Expansion	80,000	
		Retained Earnings		80,000

CP 9–7

Return to Question

1. Since the preferred shareholders have cumulative shares, they must receive all dividends in arrears and the current dividend before the common shareholders receive any dividends.

   Dividends received by preferred shareholders
   = Dividends in arrears for one year + Dividends for current year
   = $5,000 + 5,000 = $10,000

2. Common shareholders receive the balance, or $4,000.

   Dividends received by common shareholders
   = Total dividends – Dividends received by preferred shareholders
   = $14,000 – $10,000 = $4,000

CP 9–8

Return to Question

Dividends in arrears	$ 2,000
Liquidation value	25,000
Preferred shares	$27,000

Book value of preferred shares = Preferred shares/Number of preferred shares
= $27,000/5,000
= $5.40 per preferred share

Book value of common shares = (Total shareholders' equity—Preferred shares) / Number of common shares
= ($210,000 – 27,000)/20,000
= $9.15 per common share

CP 9–9

Return to Question

1. a. Book value per preferred share = ($300 + 30)/300 shares = $1.10 per share

   b. Book value per common share = ($992 – 330)/20 shares = $33.10 per share

2. Book value per common share after split = $662/40 shares = $16.55 per share

CP 9–10

Return to Question

1. The amount of cumulative preferred dividends in arrears at December 31, 2012 does not appear as a liability. Although the dividends pertain to cumulative shares, no liability exists until such time as the board of directors *declares* a dividend. Disclosure of dividends in arrears would be made in a note to the financial statements as shown here, however.

2. The company may have sufficient retained earnings but may not have sufficient cash to pay the dividends, taking into consideration other needs of the company. Perhaps working capital is being conserved for an important investment project, for instance. The retained earnings balance may be restricted and consequently not available at present for shareholder dividends.

3.

Amount available for all dividends (1/2 x $35,000)	$17,500
Priority given to cumulative preferred shareholders	
Arrears to December, 2012	(15,000)
Preferred dividends for 2013	(5,000)
Deficiency	$(2,500)

The $2,500 deficiency in 2013 preferred dividends has to be paid in the future before any dividends are paid to common shareholders. There will be no dividends available for common shareholders at December 31, 2013 based on the projections.

CP 9–11

Return to Question

Stetson Auto Inc.
Partial Balance Sheet
As at December 31, 2011

Share Capital		
Common Shares, stated value $1		
Issued and Outstanding — 10,000 Shares		$ 10,000
Retained Earnings		
Restricted for Plant Addition	$150,000	
Unrestricted	400,000[1]	
Total Retained Earnings		550,000
Total Shareholders' Equity		$560,000

Alternately, these ending balances could be disclosed in a note to the financial statements. The partial balance sheet would just show:

Share Capital (Note X)	$ 10,000
Retained Earnings (Note Y)	550,000
Total Shareholders' Equity	$560,000

Stetson Auto Inc.
Statement of Changes in Shareholders' Equity
For the Year Ended December 31, 2011

	Share Capital	*Retained Earnings*		*Total*
		Unrestricted	*Restricted*	
Balance at Beginning of Year	$ -0-	$ -0-	$ -0-	$ -0-
Common Shares Issued (Note X)	8,000			8,000
Net Income		575,000		575,000
Cash Dividends Declared		(23,000)		(23,000)
Common Share Dividend Declared	2,000	(2,000)		-0-
Restriction for Plant Addition (Note Y)		(150,000)	150,000	-0-
Balance at End of Year	$10,000	$400,000	$150,000	$560,000

CP 9–12

Return to Question

		Total Share Capital	*Retained Earnings*
1.	Company is incorporated	x	x
2.	Issued shares with a stated value of $1	↑	x
3.	Split the common shares 2 for 1	x	x
4.	Recorded net income for the year	x	↑
5.	Reacquired common shares previously outstanding	↓	x
6.	Created a restriction on retained earnings	x	x
7.	Declared a share dividend	↑	↓
8.	Issued a share dividend	x	x
9.	Paid a cash dividend (retained earnings effect recorded when dividend declared)	x	x

CP 9–13

Return to Question

Common share dividend to be issued = (5,000 shares x 10%) x $10
= $5,000

2014			
Jan. 15	Retained Earnings	5,000	
	Common Share Dividend to be Issued		5,000
Feb. 15	Common Share Dividend to be Issued	5,000	
	Common Shares		5,000

CP 9–14

Return to Question

2013			
Apr. 1	Share Dividend Declared	15,000	
	Common Share Dividend To Be Issued		15,000
	To record the declaration of the share dividend.		
	(10,000 x 10% x $15)		
Apr. 15	Common Share Dividend To Be Issued	15,000	
	Common Shares		15,000
	To record the distribution of the dividend.		
Jun. 1	Cash Dividends Declared	22,000	
	Dividends Payable		22,000
	To record the declaration of the cash dividend.		
	[(10,000 + 1,000) x $2]		
Jun. 30	Dividends Payable	22,000	
	Cash		22,000
	To record the cash dividend payment.		
Dec. 31	Retained Earnings	37,000	
	Share Dividend Declared		15,000
	Cash Dividend Declared		22,000
	To close the Dividends Declared general ledger account to the Retained Earnings account.		

CP 9–15

Return to Question

1.

2016			
Jan. 5	Cash	150	
	Common Shares		150
	To record issue of 10 common shares for cash.		
12	Land	50	
	Buildings	100	
	Machinery	100	
	Common Shares		250
	To record issue of 50 common shares in exchange for assets.		
Feb. 28	Share Dividend Declared	42	
	Common Share Dividend to be Issued		42
	To record the share dividend [(10 + 50) x 10% = 6 shares x $7]. (An entry to record net income to date could be made, but is not necessary.)		
Mar. 15	Common Share Dividend to be Issued	42	
	Common Shares		42
	To record issue of dividend on common shares.		
Dec. 31	Income Summary	200	
	Retained Earnings		200
	To close the income summary account.		

CP 9–15 continued

Dec. 31	Cash Dividend Declared	66	
	Dividends Payable		66
	To record the cash dividend declared [(10 + 50 + 6) x $1]		
Dec. 31	Retained Earnings	108	
	Share Dividend Declared		42
	Cash Dividend Declared		66
	To close 2016 dividends to retained earnings.		

2. a.

Blitz Power Tongs Inc.
Partial Balance Sheet
At January 31, 2016

Shareholders' Equity

Common Shares, Stated Value $6.67 per share		
Authorised—Unlimited shares		
Issued and Outstanding—60 Shares	$400	
Total Shareholders' Equity	$400	

b.

Blitz Power Tongs Inc.
Partial Balance Sheet
At February 28, 2016

Shareholders' Equity

Common Shares, Stated Value $6.70 per share		
Authorised—Unlimited shares		
Issued and Outstanding—60 Shares	$400	
Common Share Dividend to be Issued – 6 Shares	42	$442
Retained Earnings		
Net Income	60	
Common Share Dividend Declared	(42)	18
Total Shareholders' Equity		$460

CP 9–15 continued

c.

Blitz Power Tongs Inc.
Partial Balance Sheet
At December 31, 2016

Shareholders' Equity

Common Shares, Stated Value $7.37 per share		
Authorised—Unlimited shares		
Issued and Outstanding—60 Shares		$442
Retained Earnings		
Net Income	$200	
Cash Dividends Declared	(66)	
Common Share Dividend Declared	(42)	92
Total Shareholders' Equity		$534

Other presentation formats and disclosure are acceptable; for instance, information other than the ending share capital and retained earnings balances at each of the three balance sheet dates could be disclosed in a note to the financial statements.

AP 9–1

Return to Question

1.	2013			
	May 1	Cash	3,000	
		Preferred Shares		3,000
		To record issue of 1,000 preferred shares for cash.		
	2	Cash	10,000	
		Common Shares		10,000
		To record issue of 2,000 common shares for cash.		
	5	Cash	3,000	
		Common Shares		3,000
		To record issue of 1,500 common shares for cash.		
	10	Land	1,000	
		Preferred Shares		1,000
		To record issue of 1,000 preferred shares for cash.		
	15	Cash	6,000	
		Preferred Shares		6,000
		To record issue of 3,000 preferred shares for cash.		
	21	Cash	15,000	
		Common Shares		15,000
		To record issue of 5,000 common shares for cash.		
	24	Preferred Shares	200	
		Cash		200
		To record re-acquisition of 100 preferred shares.		

AP 9–1 continued

2.

Parkland Dental Clinic Corporation
Partial Balance Sheet
At May 31, 2013

Shareholders' Equity

Share Capital (Note X)	$37,800

Note X

The authorised share capital of Parkland Dental Clinic Corporation consists of an unlimited number of no-par value common, voting shares and an unlimited number of 6% no-par value, non-cumulative, non-voting preferred shares. Preferred shares take precedence when dividends are declared and upon repayment of capital. Each common share represents one vote at shareholders' meetings of Parkland Dental Clinic Corporation.

During the one-month period ended May 31, 2013, 8,500 common shares were issued for an average stated value of $3.29[1] per share. This represents 100% of total common shares issued as of May 31, 2013. 10,000 preferred shares were issued for an average stated value of $2[2]. 100 preferred shares were reacquired and are held as treasury shares as of May 31, 2013. This represents 2%[3] of preferred shares issued.

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[1] [($10,000 + 3,000 + 15,000)/(2,000 + 1,500 + 5,000)] = $3.29 per share (rounded)

[2] [($3,000 + 1,000 + 6,000)/(1,000 + 1,000 + 3,000)] = $2 per share

[3] 100/(1,000 + 1,000 + 3,000) = 2%

3.

Parkland Dental Clinic Corporation
Statement of Changes in Equity
For the One-Month Period Ended May 31, 2013

	Common Shares	*Preferred Shares*	*Total*
Opening Balance	$ -0-	$ -0-	$ -0-
Shares Issued (Note X)	28,000	10,000	38,000
Shares Reacquired and Held as Treasury Shares (Note X)		(200)	(200)
Ending Balance	$28,000	$ 9,800	$37,800

AP 9–2

Return to Question

1.

2014			
Apr. 1	Memorandum		
	Authorised to issue an unlimited number of common shares.		
1	Cash	10,000	
	Common Shares		10,000
	To record issue of 5,000 common shares for cash.		
20	Land	30,000	
	Common Shares		30,000
	To record issue of 10,000 common shares to acquire land.		
25	Cash	4,000	
	Common Shares		4,000
	To record issue of 1,000 common shares for cash.		
29	Common Shares	2,750	
	Cash		2,750
	To record reacquisition of 1,000 common shares.		
30	Income Summary	5,000	
	Retained Earnings		5,000
30	Cash Dividends Declared	1,500	
	Dividends Payable		1,500
	To record cash dividends declared: [(5,000 + 10,000 + 1,000 – 1,000) x $.10 = $1,500]		

2.

Argo Software Inc.
Statement of Changes in Equity
For the One-Month Period Ended April 30, 2014

	Share Capital	*Retained Earnings*	*Total*
Opening Balance	$ -0-	$ -0-	$ -0-
Shares Issued (16,000)	44,000		44,000
Net Income		5,000	5,000
Dividends Declared		(1,500)	(1,500)
Shares Reacquired and Held as Treasury Shares (1,000)	(2,750)		(2,750)
Ending Balance	$41,250	$ 3,500	$44,750

3.

	Number of shares outstanding	*Total value of common shares on balance sheet (per above)*	*Book value per share*	*Market price per share*
Before share split	15,000	$41,250	$2.98[1]	$6
After share split	30,000	$41,250	$1.49[2]	$3

[1] ($41,250 + 3,500)/15,000 = $2.98 (rounded)
[2] ($41,250 + 3,500)/30,000 = $1.49 (rounded)

AP 9–3

Return to Question

Dawson's General Store Limited
Statement of Changes in Equity
For the Year Ended December 31, 2016

	Share Capital			*Retained Earnings*	*Total Equity*
	Common	*Preferred*	*Total*		
Opening Balance	$200,000	$700,000	$900,000	$1,000,000	$1,900,000
Shares Issued (Note X)	100,000		100,000		100,000
Net Income				200,000	200,000
Shares Reacquired and Held as Treasury Shares (Note X)		(1,400)	(1,400)		(1,400)
Cash Dividends Declared				(30,000)	(30,000)
Ending Balance	$300,000	$698,600	$998,600	$1,170,000	$2,168,600

Note X

The authorised share capital of Dawson's General Store Limited consists of an unlimited number of no-par value, voting common shares and an unlimited number of 6% no-par value, non-cumulative, non-voting preferred shares. Preferred shares take precedence when dividends are declared and upon repayment of capital. Each common share represents one vote at shareholders' meetings of Dawson's General Store Limited.

During the year ended December 31, 2016, 1,000 common shares were issued for an average stated value of $100 per share. This represents 71.4% of total common shares issued as of December 31, 2016. 200 preferred shares were reacquired and are held as treasury shares as of December 31, 2016. This represents 20% of preferred shares issued.

At December 31, 2016, dividends on preferred shares were in arrears in the amount of $111,916[1].

---

[1]

In arrears January 1, 2016	$100,000
2016 dividends owing (700,000 – 1,400) x 6%	41,916
Paid in 2016	(30,000)
In arrears December 31, 2016	$111,916

(Alternate presentation and disclosure formats are acceptable providing that information contained in the note and statement of changes in equity shown here is disclosed in some fashion.)

AP 9–4

Return to Question

1. The directors likely established a restriction on retained earnings to make the earnings otherwise unavailable for dividend distribution and inform readers of the financial statements of this situation.

2.

Retained Earnings—Restricted for Plant Expansion	200	
Retained Earnings		200
To record the end of the restriction for plant expansion.		

AP 9–5

Return to Question

1.

2014			
Feb. 15	Cash	8,000	
	Common Shares		8,000
Mar. 1	Land	40,000	
	Preferred Shares		40,000
Jun. 1	Cash Dividends Declared	6,500	
	Dividends Payable—Preferred Shares		1,500
	Dividends Payable—Common Shares		5,000
Jul. 1	Dividends Payable—Preferred Shares	1,500	
	Dividends Payable—Common Shares	5,000	
	Cash		6,500
Dec. 15	Cash Dividends Declared (5,000 x $.40)	2,000	
	Dividends Payable – Common Shares		2,000
Dec. 31	Income Summary	98,000	
	Retained Earnings		98,000
Dec. 31	Retained Earnings	8,500	
	Cash Dividends Declared		8,500
	To close dividends account ($6,500 + 2,000 = $8,500).		

AP 9–5 continued

2.

Canwest Corporation
Partial Balance Sheet
At December 31, 2014

Shareholders' Equity

Share Capital (Note X)	$ 168,000
Retained Earnings	234,500
Total Shareholders' Equity	$402,500

Note X

The authorised share capital of Canwest Corporation consists of 20,000 no-par value, voting common shares and 10,000, $1, no-par value, cumulative, non-voting preferred shares. Preferred shares take precedence when dividends are declared and upon repayment of capital. Each common share represents one vote at shareholders' meetings of Canwest Corporation.

During the year ended December 31, 2014, 1,000 common shares were issued for a stated value of $8 per share. This represents 20% of total common shares issued. 1,500 preferred shares were issued for a stated value of $26.67 per share. This represents 100% of total preferred shares issued.

3.

Canwest Corporation
Statement of Changes in Equity
For the Year Ended December 31, 2014

	Share Capital			*Retained Earnings*	*Total Equity*
	Common	*Preferred*	*Total*		
Opening Balance	$120,000	$ -0-	$120,000	$145,000	$265,000
Shares Issued	8,000	40,000	48,000		48,000
Net Income				98,000	98,000
Cash Dividends Declared				(8,500)	(8,500)
Ending Balance	$128,000	$40,000	$168,000	$234,500	$402,500

AP 9-6

Return to Question

Part A

1. Book value per share at Jan. 1, 2017 = $20,000/1,000 shares = $20

2. 2017

Jun. 1	Cash Dividends Declared	1,000	
	Dividends Payable		1,000
30	Dividends Payable	1,000	
	Cash		1,000
Dec. 31	Income Summary	5,000	
	Retained Earnings		5,000
Dec. 31	Retained Earnings	1,000	
	Cash Dividends Declared		1,000

3.

Pretty Productions Ltd.
Statement of Changes in Equity
For the Year Ended December 31, 2017

	Share Capital	*Retained Earnings*	*Total*
Opening Balance	$11,000	$9,000	$20,000
Net Income		5,000	5,000
Cash Dividends Declared		(1,000)	(1,000)
Ending Balance	$11,000	$13,000	$24,000

(This statement assumes additional note disclosure of number of shares issued and average stated value per share. Alternate presentation and disclosure formats are acceptable.)

4. Stated value per share at Dec. 31, 2017 = $11,000/1,000 shares = $11
Book value per share at Dec. 31, 2017 = $24,000/1,000 shares = $24

AP 9-6 continued

Return to Question

Part B

5. 2018

Feb. 15	Cash Dividends Declared	1,000	
	Dividends Payable		1,000
Mar. 15	Dividends Payable	1,000	
	Cash		1,000
Jun. 30	Memorandum Declared a 2–for–1 share split. Increased the number of outstanding common shares from 1,000 to 2,000.		
Jul. 23	No entry required.		
Dec. 31	Income Summary	8,000	
	Retained Earnings		8,000
Dec. 31	Retained Earnings	1,000	
	Cash Dividends Declared		1,000

6.

Pretty Productions Ltd.
Statement of Changes in Equity
For the Year Ended December 31, 2018

	Share Capital	*Retained Earnings*	*Total*
Opening Balance	$11,000	$13,000	$24,000
Net Income		8,000	8,000
Cash Dividends Declared		(1,000)	(1,000)
Ending Balance	$11,000	$20,000	$31,000

(This statement assumes additional note disclosure of number of shares issued and average stated value per share. Alternate presentation and disclosure formats are acceptable.)

7. Book value per share at Dec. 31, 2018 = $31,000/2,000 shares = $15.50

8.

	Dec. 31, 2018	*Dec. 31, 2017*
Market value	$46.50	$72
Book value	$15.50	$24
Market value/book value	3X	3X

Investors are judging the relative future profitability of Pretty Productions the same at December 31, 2017 and December 31, 2018 (market value three times book value).

AP 9–7

Return to Question

1. 2015

Mar. 15	Cash Dividends Declared	450	
	Preferred Dividends Payable		425
	Common Dividends Payable		25
	To record dividends as follows:		
	Preferred share dividends (200 x $2)	$400	
	Participating preferred dividends ($.50 x 100 x ½)	25	
	Preferred dividends payable	$425	
Apr. 30	Preferred Dividends Payable	425	
	Common Dividends Payable	25	
	Cash		450
Sep. 15	Cash Dividends Declared	600	
	Preferred Dividends Payable		500
	Common Dividends Payable		100
	To record dividends as follows:		
	Cumulative semi-annual preferred share dividends (200 x $2)		$400
	Participating preferred share dividends [($600 – 400) x ½]		100
	Preferred dividends payable		$500
Oct. 30	Preferred Dividends Payable	500	
	Common Dividends Payable	100	
	Cash		600
Dec. 15	Share Dividends Declared	180	
	Share Dividends to be Issued (100 x 10% x $18)		180
Dec. 31	Income Summary	90,000	
	Retained Earnings		90,000
Dec. 31	Retained Earnings	10,000	
	Retained Earnings – Restricted for Plant Expansion		10,000
Dec. 31	Retained Earnings	1,230	
	Cash Dividends Declared		1,050
	Share Dividends Declared		180

AP 9–7 continued

2.

First Financial Company
Statement of Changes in Equity
For the Year Ended December 31, 2015

	Share Capital				*Retained Earnings*			*Total Equity*
	Common Shares	*Common Shares to be Issued as Dividends*	*Preferred Shares*	*Total*	*Restricted for Plant Expansion*	*Un-restricted*	*Total*	
Opening Balance	$1,000	$-0-	$20,000	$21,000	$ -0-	$ 5,450	$ 5,450	$ 26,450
Net Income						90,000	90,000	90,000
Dividends Declared								
Cash						(1,050)	(1,050)	(1,050)
Common Shares		180		180		(180)	(180)	-0-
Restriction for Plant Expansion					10,000	(10,000)	-0-	-0-
Ending Balance	$1,000	$180	$20,000	$21,180	$10,000	$ 84,220	$ 94,220	$115,400

AP 9–8

Return to Question

	Assets	*Liabilities*	*Shareholders' Equity*
1. Declared of cash dividend	x	↑	↓
2. Paid the cash dividend in item 1	↓	↓	x
3. Split common shares 2:1	x	x	x
4. Declared a share dividend	x	x	x
5. Paid a share dividend	x	x	x
6. Redeemed preferred shares for cash	↓	x	↓
7. Recorded a restriction on retained earnings	x	x	x

CHAPTER 10

Partnerships

CP 10–1

Return to Question

1.

B. White and C. Green Partnership

Income Statement

For the Year Ended December 31, 2014

Sales		$322,000
Cost of Goods Sold		160,500
Gross Profit		161,500
Operating Expenses		
Rent	36,000	
Advertising	27,200	
Delivery	9,600	
Office	12,800	
Utilities	23,300	108,900
Net Income		$ 52,600

2.

B. White and C. Green Partnership

Statement of Partners' Equity

For the Year Ended December 31, 2014

	White	*Green*	*Total*
Opening Balance	$20,000	$10,000	$ 30,000
Investments	10,000	10,000	20,000
Net Income	26,300	26,300	52,600
	56,300	46,300	102,600
Less: Drawings	7,000	5,000	12,000
Ending Balance	$49,300	$41,300	$ 90,600

CP 10–1 continued

3.

B. White and C. Green Partnership
Balance Sheet

At December 31, 2014

Assets		
Current		
Cash		$41,000
Accounts Receivable		68,400
Inventory		27,000
Total Assets		$136,400
Liabilities		
Current		
Accounts Payable		$45,800
Partners' Equity		
B. White	$49,300	
C. Green	41,300	90,600
Total Liabilities and Partners' Equity		$136,400

4.

Sales	322,000	
Cost of Goods Sold		160,500
Rent		36,000
Advertising		27,200
Delivery		9,600
Office		12,800
Utilities		23,300
Income Summary		52,600
Income Summary	52,600	
B. White, Capital		26,300
C. Green, Capital		26,300
B.B. Smith, Capital	7,000	
B. White, Drawings		7,000
C. Green, Capital	5,000	
C. Green, Drawings		5,000

CP 10–2

Return to Question

1.

B. White

(A proprietorship)

Statement of Proprietor’s Equity

For the Year Ended December 31, 2014

Opening Balance	$ 30,000
Investments	20,000
Net Income	52,600
	102,600
Less: Drawings	12,000
Ending Balance	$ 90,600

2.

BW and CG Ltd.

Statement of Changes in Equity

For the Year Ended December 31, 2014

	Share Capital	*Retained Earnings*	*Total*
Opening Balance	$200	$29,800	$ 30,000
Common Shares Issued	20,000		20,000
Net Income		52,600	52,600
Dividends Declared		(12,000)	(12,000)
Ending Balance	$20,200	$70,400	$ 90,600

CP 10–3

Return to Question

1.	Income Summary	52,600	
	B. White, Capital		32,875
	C. Green, Capital		19,725

To allocate 2014 net income as follows:

White ($52,600 x 5/8)	$32,875
Green ($52,600 x 3/8)	19,725
	$52,600

CP 10–3 continued

2.

Income Summary	52,600	
B. White, Capital		37,760
C. Green, Capital		14,840

To allocate 2014 net income as follows:

	White	*Green*	*Total*
Profit to be allocated			*$52,600*
Interest allocation:			
White: $20,000 x 10%	$ 2,000		
Green: $10,000x 10%		$ 1,000	*(3,000)*
Balance			*49,600*
Salary allocation:	30,000	10,000	*(40,000)*
Balance			*9,600*
Balance allocated in profit and loss sharing ratio:			
White: $9,600 x 3/5	5,760		
Green: $9,600 x 2/5		3,840	*(9,600)*
Balance			*$ -0-*
Total allocated to partners	$37,760	$14,840	

CP 10–4

Return to Question

1.

G, Capital	30,000	
I, Capital		30,000

To record transfer of G's partnership interest to new partner I.

2.

G, Capital ($30,000 – 17,100)	12,900	
H, Capital ($10,000 – 17,100)		7,100
I, Capital		3,800
Cash		2,000

To record payment of bonus to new partner I and reallocation of partnership interest as follows:

G, Capital	$30,000
H, Capital	10,000
Bonus payment	(2,000)
Capital of new partnership	$38,000

Allocated as:

G (45%)	$17,100
H (45%)	17,100
I (10%)	3,800
	$38,000

CP 10–4 continued

3.	Land	100,000	
	G, Capital ($30,000 – 28,000)	2,000	
	H, Capital ($10,000 – 7,000)	3,000	
	I, Capital		105,000

To record contribution of assets by new partner I and reallocation of partnership interest as follows:

G, Capital	$30,000
H, Capital	10,000
I, Investment	100,000
Capital of new partnership	$140,000

Allocated as:	
G (20%)	$28,000
H (5%)	7,000
I (75%)	105,000
	$140,000

CP 10–5

Return to Question

1.	X, Capital	10,000	
	T, Capital		10,000

To record transfer of X’s partnership interest to new partner T.

2.	X, Capital	10,000	
	Y, Capital		10,000

To record transfer of X’s partnership interest to existing partner Y.

3.	X, Capital	10,000	
	Accounts Payable	2,000	
	Y, Capital		1,200
	Z, Capital		800
	Cash		5,000
	Inventory		5,000

To record dispersal of partnership net assets to withdrawing partner X and transfer of X’s partnership interest to existing partners Y and Z.

CP 10–6

Return to Question

1.

Able, Brown, and Crown
Statement of Partnership Liquidation
For the Month Ending November 30, 2012

	Cash	*Other Assets*	*Liabilities*	*Partners' Equity*		
				Able	*Brown*	*Crown*
Balance, November 1, 2012	$ 20,000	$180,000	$ 50,000	$ 37,000	$ 65,000	$ 48,000
Sale of other assets and	100,000	(180,000)				
allocation of loss ($80,000)				(32,000)	(32,000)	(16,000)
	120,000	$ -0-	50,000	5,000	33,000	32,000
Payment of liabilities	(50,000)		(50,000)			
	70,000		$ -0-			
Distribution of cash	(70,000)			(5,000)	(33,000)	(32,000)
Balance, November 30, 2012	$ -0-			$ -0-	$ -0-	$ -0-

2.

a. Loss on Sale of Other Assets	80,000	
Cash	100,000	
Other Assets		180,000
To record sale of other assets for cash.		
b. Able, Capital	32,000	
Brown, Capital	32,000	
Crown, Capital	16,000	
Loss on Sale of Other Assets		80,000
To allocate loss on sale of other assets.		
c. Accounts Payable	50,000	
Cash		50,000
To record the payment of liabilities.		
d. Able, Capital	5,000	
Brown, Capital	33,000	
Crown, Capital	32,000	
Cash		70,000
To record payment of capital accounts.		

AP 10–1

Return to Question

	A	*B*	*Total*
Profit to be allocated			*$84,667* [3]
Interest allocation:			
A: $100,000 x 10%	$10,000		
B: $70,000x 10%		$ 7,000	*(17,000)*
Balance			*67,667*
Salary allocation:	12,000	14,000	*(26,000)*
Balance			*41,667*
Balance allocated in profit and loss sharing ratio:			
A: $41,667 x 3/5	25,000 [1]		
B: $41,667 x 2/5		16,667	*(41,667)* [2]
Balance			*$ -0-*
Total allocated to partners	$47,000	$37,667	

Working up the schedule:

[1] $25,000 is equal to 3/5 of the remainder, since the remainder is split 3:2.

[2] The remainder is calculated at $41,667.

[3] The income required to have a remainder of $41,667 after payments of salary and interest amounts to $84,667.

AP 10–2

Return to Question

1.

Profit and loss sharing plan		(a) Division with profit $150,000		(b) Division with loss $25,000	
		Madge	*Ryan*	*Madge*	*Ryan*
Plan A	Salary	$10,000	$ -0-	$ 10,000	$ -0-
	Balance	70,000	70,000	(17,500)	(17,500)
	Totals	$80,000	$70,000	$ (7,500)	$(17,500)
Plan B	Salary	$10,000	$ -0-	$ 10,000	$ -0-
	Interest	5,000	20,000	5,000	20,000
	Balance	57,500	57,500	(30,000)	(30,000)
	Totals	$72,500	$77,500	$(15,000)	$(10,000)

2. Plan A likely is the better choice for Ryan. Income variability is lower and consideration is given for his significant capital contributions to the partnership.

AP 10–3

Return to Question

1.

Cash	16,000	
Howard, Capital		16,000

2.

Cogsworth, Capital	$23,000
Darwin, Capital	18,600
Existing capital	41,600
Investment by Howard	16,000
Capital of new partnership (a)	$57,600
Howard's capital (a x 1/3)	$19,200

The new partner's bonus is recorded as follows:

Cash	16,000	
Cogsworth, Capital	1,920[1]	
Darwin, Capital	1,280[2]	
Howard, Capital		19,200

[1] Bonus charged to Cogsworth: 60% x $3,200 ($19,200 – 16,000) = $1,920

[2] Bonus charged to Darwin: 40% x $3,200 = $1,280

3.

Cogsworth, Capital	$23,000
Darwin, Capital	18,600
Existing capital	41,600
Investment by Howard	16,000
Capital of new partnership (a)	$57,600
Howard's capital (a x 1/4)	$14,400

The new partner's bonus is recorded as follows:

Cash	16,000	
Cogsworth, Capital		960[1]
Darwin, Capital		640[2]
Howard, Capital		14,400

[1] Bonus to Cogsworth: 60% x $1,600 = $960

[2] Bonus to Darwin: 40% x $1,600 = $640

AP 10–4

Return to Question

A, B, C, and D
Statement of Partnership Liquidation
For the Month Ending January 31, 2013

	Cash	Other Assets	Accounts Payable	Partners' Equity			
				A	B	C	D
Balance, January 1, 2013	$ 4,000	$ 54,000	$ 20,000	$ 4,000	$ 9,600	$18,400	$ 6,000
Sale of other assets and	26,000	(54,000)					
allocation of loss ($28,000)				(11,200)	(8,400)	(5,600)	(2,800)
	30,000	$ -0-	20,000	(7,200)	1,200	12,800	3,200
Payment of liabilities	(20,000)		(20,000)				
	10,000		$ -0-				
Allocation of A's debit balance							
(B: 3/6; C: 2/6; D: 1/6)				7,200	(3,600)	(2,400)	(1,200)
				$ -0-	(2,400)	10,400	2,000
Allocation of B's debit balance							
(C: 2/3; D: 1/3)					2,400	(1,600)	(800)
					$ -0-	8,800	1,200
Distribution of cash	(10,000)					(8,800)	(1,200)
	$ -0-					$ -0-	$ -0-

CHAPTER 11

Debt Financing

CP 11–1

Return to Question

1.

	12% Bonds	Preferred Shares	Common Shares
Income before interest and income taxes	$12,000,000	$12,000,000	$12,000,000
Less: Interest expense	4,800,000 [1]	-0-	-0-
Income before income taxes	7,200,000	12,000,000	12,000,000
Less: Income taxes at 50%	3,600,000	6,000,000	6,000,000
	3,600,000	6,000,000	6,000,000
Less: Preferred dividends	-0-	4,000,000 [2]	-0-
Net available to common shareholders (a)	$3,600,000	$2,000,000	$6,000,000
Number of common shares outstanding (b)	200,000	200,000	400,000
Earnings per common share (a/b)	$18	$10	$15

[1] $40,000,000 x 12% = $4,800,000

[2] 400,000 x $100 x 10% = $4,000,000

2. Issuing bonds is the financing option that is most advantageous to the common shareholders, all other factors being considered equal. It results in higher earnings per common share. A second advantage is that bondholders normally do not have any control over the company. Issuing shares will distribute control over a larger number of shareholders and the present shareholders' control would be diluted. A third advantage is that interest expense is deductible for tax purposes, while dividends are paid out of after–tax dollars. One disadvantage, which may make one of the other options more advantageous, is that interest expense is fixed. The company may not earn enough income to cover the interest expense in any given year if bonds are issued.

CP 11–2

Return to Question

1. discount
2. premium
3. discount
4. premium
5. premium
6. discount

CP 11–3

Return to Question

1. a. The issuance of bonds:

Cash = $100,000 x 94% = $94,000
Discount = $100,000 – $94,000 = $6,000

2011				
Jan.	1	Cash	94,000	
		Discount on Bonds	6,000	
		Bonds Payable		100,000

b. The interest payment:

Jun.	30	Interest Expense	6,000	
		Cash		6,000

c. The amortisation of the discount:
Discount = $6,000/3 years x 6/12= $1,000

Jun.	30	Interest Expense	1,000	
		Discount on Bonds		1,000

2. Interest paid in cash = $100,000 x 12% = $12,000
Interest expense for 2011 = Interest + amortisation for the year
= $12,000 + $2,000 = $14,000

3. Nevada Inc.
Partial Balance Sheet
At December 31, 2011

Liabilities

Non-current*	
Bonds Payable (Note X)	$100,000
Discount on Bonds	(4,000)
Carrying Amount	$ 96,000

Note X would disclose pertinent information of the bond indenture including details of the face value and unamortised bond discount if (as here) just the carry amount is shown on the balance sheet.

* If it was (likely) known that the bonds would be called on January 1, 2012, they would be classified as current liabilities. If so, details of the redemption should be disclosed in a note to the December 31, 2011 financial statements.

4. Retirement of the bonds:

2013			
Dec. 31	Bonds Payable	100,000	
	Cash		100,000

CP 11–3 continued

5. Calling of the bonds:

2012			
Jan. 1	Bonds Payable	100,000	
	Discount on Bonds		4,000
	Cash		102,000
	Loss on Bond Retirement	6,000	

To record retirement of bonds at 102 as follows:

Face value	$100,000
Unamortised discount	(4,000)
Carrying amount	96,000
Cash paid	102,000
Loss on retirement	($6,000)

CP 11–4

Return to Question

1. a. The issuance of the bonds:
   Cash = $200,000 x 112% = $224,000

2013			
Jan. 1	Cash	224,000	
	Premium on Bonds		24,000
	Bonds Payable		200,000

   b. The interest payment:
   Interest = $200,000 x 12% x 6/12 = $12,000

Jun. 30	Interest Expense	12,000	
	Cash		12,000

   c. The amortisation of the premium:
   Premium = ($24,000/3 years) x 6/12 = $4,000

Jun. 30	Premium on Bonds	4,000	
	Interest Expense		4,000

2. Interest paid in cash = $200,000 x 12% = $24,000
   Interest expense for 2013 = Interest – amortisation for the year
   = $24,000 – ($24,000/3 years)
   = $24,000 – $8,000
   = $16,000

   These amounts are different because the amortisation of the premium, which reduces Interest Expense, does not require cash.

CP 11–4 continued

3.

Sydney Corp.
Partial Balance Sheet
At December 31, 2011

Liabilities

Non-current	
Bonds Payable	$200,000
Premium on Bonds	16,000
Carrying Amount	$216,000

4. Calling of the bonds:
Cash paid = $200,000 x 106% = $212,000

2015			
Jan. 1	Bonds Payable	200,000	
	Premium on Bonds	8,000	
	Cash		212,000
	Loss on Bond Retirement	4,000	
	To record retirement of bonds at 106 as follows:		

Face value	$200,000
Unamortised premium	(8,000)
Carrying amount	208,000
Cash paid	212,000
Loss on retirement	($4,000)

CP 11–5

Return to Question

Discount = $500 x 12/6 x 3 years = $3,000
Bonds payable = ($16,500 x 12/6 months)/12% = $275,000

2014			
Jan. 1	Discount on Bonds	3,000	
	Cash	272,000	
	Bonds Payable		275,000

CP 11–6

Return to Question

Premium = $100 x 12/6 x 3 years = $600
Bonds payable = ($18,000 x 12/6 months)/12% = $300,000

2016			
Jan. 1	Cash	300,600	
	Premium on Bonds		600
	Bonds Payable		300,000

CP 11–7

Return to Question

	CASE A	*CASE B*	*CASE C*
	A. Investors purchase the bonds at par	*B. Investors purchase the bonds at a premium*	*C. Investors purchase the bonds at a discount*
1.	The corporation receives $100,000 cash for the bonds.	The corporation receives $112,000 cash for the bonds.	The corporation receives $88,000 cash for the bonds.
2.	The corporation pays $12,000 annual interest on the $100,000 face value of the bonds.	The corporation pays $12,000 annual interest on the $100,000 face value of the bonds.	The corporation pays $12,000 annual interest on the $100,000 face value of the bonds.
3.	The following journal entry records the sale of the bonds. Cash 100,000 Bonds Payable 100,000	The following journal entry records the sale of the bonds. Cash 112,000 Premium on Bonds 12,000 Bonds Payable 100,000	The following journal entry records the sale of the bonds. Cash 88,000 Discount on Bonds 12,000 Bonds Payable 100,000
4.	June 30, 2011 The interest payment is recorded as follows: Interest Expense 6,000 Cash 6,000	June 30, 2011 The interest payment is recorded as follows: Interest Expense 6,000 Cash 6,000 Amortisation is recorded as follows: Premium on Bonds 2,000 Interest Expense 2,000	June 30, 2011 The interest payment is recorded as follows: Interest Expense 6,000 Cash 6,000 Amortisation is recorded as follows: Interest Expense 2,000 Discount on Bonds 2,000
	December 31, 2011 The interest payment is recorded as follows: Interest Expense 6,000 Cash 6,000	December 31, 2011 The interest payment is recorded as follows: Interest Expense 6,000 Cash 6,000 Amortisation is recorded as follows: Premium on Bonds 2,000 Interest Expense 2,000	December 31, 2011 The interest payment is recorded as follows: Interest Expense 6,000 Cash 6,000 Amortisation is recorded as follows: Interest Expense 2,000 Discount on Bonds 2,000

CP 11–8

Return to Question

1. The amount of cash interest paid to investors each period is constant, and based on the face value of the bond and the stated interest rate in the bond indenture. When the bond is issued at a premium, the premium must be amortised so that the carrying amount of the bond at maturity is equal to its face value. The amortisation of the premium reduces this interest expense of the corporation. When the bond is issued at a discount, the amortisation of the discount increases the interest expense recorded on the corporation's income statement.

2. The diagram shows a bond for which the straight-line method of amortisation is used, since the premium and discount are amortised by same amount as time passes (hence the term "straight-line").

CP 11–9

Return to Question

1. a. 2014

Jan.1	Cash	50,000	
	Loan Payable		50,000
	To record loan from Second Capital Bank.		

b. Jan. 1	Equipment	48,000	
	Cash		48,000
	To record purchase of equipment.		

2.

Rosedale Corp.
Loan Repayment Schedule

	A	*B*	*C*	*D*	*E*
			(D – B)		*(A – C)*
Year ended Dec. 31	*Beginning loan balance*	*(A x 6%) Interest expense*	*Reduction of loan payable*	*Total loan payment*	*Ending loan balance*
2014	$50,000	$3,000	$15,705	$18,705	$34,295
2015	34,295	2,058	16,647	18,705	17,648
2016	17,648	1,057	17,648	18,705	-0-

3. 2014			
Dec. 31	Interest Expense	3,000	
	Loan Payable	15,705	
	Cash		18,705
	To record loan payment to Second Capital Bank.		

CP 11–10

Return to Question

1. 2014			
Jan.1	Vehicle	80,000	
	Finance Lease		80,000
	To record assumption of lease with Night Leasing Ltd.		

CP 11–10 continued

2.

Day Corp.
Lease Repayment Schedule

	A	B	C	D	E
Year ended Dec. 31	Beginning lease balance	(A x 8%) Interest expense	(D – B) Reduction of finance lease	Total lease payment	(A – C) Ending lease balance
2011	$80,000	$6,400	$17,754	$24,154	$62,246
2012	62,246	4,980	19,174	24,154	43,072
2013	43,072	3,446	20,708	24,154	22,364
2014	22,364	1,790	22,364	24,154	-0-

3.

Day Corp.
Partial Balance Sheet
At December 31, 2011

Liabilities

Current	
Current Portion of Finance Lease	$19,174
Non-current	
Finance Lease (Note X)	43,072

Note X would disclose pertinent information including details of the lease repayment agreement (for example, interest rate, repayment terms, security) if just the carry amount is shown on the balance sheet as above.

CP 11–11 (Appendix)

Return to Question

1. Interest payment every 6 months = $200,000 x 12% x 1/2 = $12,000

2. Issue of $200,000 Bonds Payable for $210,152
Amortisation Table
Using Market Interest Rate of 10 Per Cent

		A	B	C	D	E
Year	Six month period ending	Beginning bond carrying amount	(½ x 10%) = 5% x A Using 10% market rate to calculate 6-month interest expense	Actual cash interest paid	(B – C) Periodic premium amort.	(A – D) Ending bond carrying amount
2011	Jun. 30	$210,152	5% x $210,152 = $10,507	$12,000	$(1,493)	$208,659
	Dec. 31	208,659	5% x 208,659 = 10,433	12,000	(1,567)	207,092
2012	Jun. 30	207,092	5% x 207,092 = 10,355	12,000	(1,645)	205,447
	Dec. 31	205,447	5% x 205,447 = 10,272	12,000	(1,728)	203,719
2013	Jun. 30	203,719	5% x 203,719 = 10,186	12,000	(1,814)	201,905
	Dec. 31	201,905	5% x 201,905 = 10,095	12,000	(1,905)	200,000

CP 11–11 continued

3.

Calculation of Effective Interest Rate

Year	*Six month period ending*	A *Bond carrying amount*	B *(½ x 10%) = 5% x A* *Using 10% market rate to calculate periodic interest expense*	*(B/A)*
2011	Jun. 30	$210,152	5% x $210,152 = $10,507	5%
	Dec. 31	208,659	5% x 208,659 = 10,433	5%
				10%
2012	Jun. 30	207,092	5% x 207,092 = 10,355	5%
	Dec. 31	205,447	5% x 205,447 = 10,272	5%
				10%
2013	Jun. 30	203,719	5% x 203,719 = 10,186	5%
	Dec. 31	201,905	5% x 201,905 = 10,095	5%
				10%

4. The financing charge remains constant from period to period under the market interest method. It would vary slightly under the straight–line method. Some may argue that the interest rate should remain constant to be theoretically correct. From a practical point of view, there may be no material difference from period to period when using the straight–line method, and the effective interest method may not be worth the calculation effort. The straight–line method is simpler to use.

AP 11–1

Return to Question

1. Comparison of financing alternatives

		12% Bonds	Common Shares	Preferred Shares
Income before interest and income taxes		$200,000	$200,000	$200,000
Less: Bond interest expense		120,000 (1)	-0-	-0-
Income before income taxes		80,000	200,000	200,000
Income taxes at 40%		32,000	100,000	100,000
Balance		48,000	100,000	100,000
Less: Preferred dividends (10,000 x $8)		-0-	-0-	80,000
Net income available to common shareholders	(a)	$ 48,000	$100,000	$ 20,000
Number of common shares outstanding	(b)	50,000	60,000	50,000
Earnings per common share (a/b)		$0.96	$1.67	$0.40

(1) $1,000,000 x 12% = $120,000

2. Based on the earnings per common share, issuing common shares is more advantageous to common shareholders, since it generates higher earnings per common share.

3. Other factors to be considered:
   a. Bondholders do not normally have control over managerial decisions. By issuing shares the present shareholders would lose some control, which would be distributed over a larger number of shareholders.

   b. Interest expense is deductible for tax purposes, while dividends are paid out of after–tax dollars.

   c. The company may not be profitable enough to be able to cover the additional annual interest expense.

AP 11–2

Return to Question

	CASE A	*CASE B*	*CASE C*
1.a. Interest payment every 6 months: ($250,000 x 12% x 1/2)	$ 15,000	$ 15,000	$ 15,000
b. Amortisation every 6 months:			
Face Value	$250,000	$250,000	$250,000
Issue Price	250,000	256,000	242,800
Premium (Discount)	$ -0-	$ 6,000	$ (7,200)
Amortisation for each of 6 periods	$ -0-	$ 1,000	$ (1,200)

AP 11–2 continued

			CASE A		*CASE B*		*CASE C*	
2. a.	Issue of bonds:							
	2014							
	Jan. 1	Cash	250,000		256,000		242,800	
		Bond Discount	—		—		7,200	
		Bond Payable		250,000		250,000		250,000
		Bond Premium		—		6,000		—
b.	Payment of interest:							
	Jun. 30	Interest Expense	15,000		15,000		15,000	
		Cash		15,000		15,000		15,000
	Amortisation:							
	Jun. 30	Interest Expense	—		—		1,200	
		Bond Discount		—		—		1,200
		Bond Premium	—		1,000		—	
		Interest Expense		—		1,000		—
c.	Payment of interest:							
	2014							
	Dec. 31	Interest Expense	15,000		15,000		15,000	
		Cash		15,000		15,000		15,000
	Amortisation:							
	Dec. 31	Interest Expense	—		—			
		Bond Discount		—		—	1,200	
		Bond Premium	—		1,000		—	1,200
		Interest Expense		—		1,000		—

3. Income statement interest expense — December 31, 2014

	CASE A	*CASE B*	*CASE C*
Interest payment	$30,000	$30,000	$30,000
Amortisation	-0-	(2,000)	2,400
Income statement interest expense	$30,000	$28,000	$32,400

This amount is not the same as the cash the company paid. When a bond is issued at a premium or a discount, the amortisation of these amounts affects the Interest Expense account.

AP 11–2 continued

4. Exercise of a call option:

	CASE A		*CASE B*		*CASE C*	
Bond Payable	250,000		250,000		250,000	
Bond Premium	—		4,000		—	
Loss on Bond Redemption	7,500		3,500		12,300	
Bond Discount		—		—		4,800
Cash ($250,000 @ 103)		257,500		257,500		257,500

To record retirement of $50,000 of 12% bonds at 102 as follows:

	Case A	*Case B*	*Case C*
Face value	$250,000	$250,000	$250,000
Unamortised premium (discount)	—	4,000	(4,800)
Carrying amount	250,000	254,000	245,200
Cash paid ($250,000 @ 103)	257,500	257,500	257,500
Gain (loss) on retirement	$ 7,500	($ 3,500)	($ 12,300)

AP 11–3

Return to Question

1.

2011			
Aug. 1	Cash	1,055,700	
	Bond Interest Payable		10,000
	Bonds Payable		1,000,000
	Premium on Bonds		45,700
	To record bond issue and accrued interest.		
	Accrued interest = $1,000,000 x 12% x 1/12 mos. = $10,000.		
Dec. 31	Interest Expense	48,080	
	Premium on Bonds	1,920	
	Bond Interest Payable		50,000
	To record accrued interest and amortisation of bond premium at year-end as follows:		
	Interest = $1,000,000 x 12% x 5/12 mos. = $50,000		
	(Technically, 151/365 days, but the difference is immaterial.)		
	Amortisation = $45,700/119 mos. x 5 mos. = $1,920		
2012			
Jan. 2	Bond Interest Payable	60,000	
	Cash		60,000
	To record payment of bond interest.		
Mar. 1	Discount on Bonds	22,400	
	Cash	997,600	
	Bond Interest Payable		20,000
	Bonds Payable		1,000,000
	To record second issue of bonds:		
	Cash = $1,000,000 x .9776 = $977,600 + 20,000 = 997,600		
	Accrued interest = $1,000,000 x 12% x 2/12 mos. = $20,000		

AP 11–3 continued

Jul. 2	Interest Expense	57,696	
	Premium on Bonds	2,304	
	Cash		60,000
	To record the interest payment and premium amortisation for the first issue of bonds.		
	Premium amortisation = $45,700/119 mos. x 6 mos. = $2,304		
Jul. 2	Bond Interest Payable	20,000	
	Interest Expense	40,800	
	Discount on Bonds		800
	Cash		60,000
	To record the interest payment and discount amortisation for the second issue of bonds.		
	Discount = $22,400/112 months x 4 months = $800		

2. Bond premium = $45,700 – ($45,700/119 months x 5 months)
   = $45,700 – $1,500 = $43,780

3. Broker Incorporated
   Partial Balance Sheet
   At December 31, 2011

Liabilities

Non-current	
Bonds Payable (Note X)	$1,000,000
Premium on Bonds	43,780
Carrying Amount	$ 956,220

Note X would disclose relevant details about the bonds, including interest rate, maturity date, and fair value of the bonds. Alternately, just carrying amounts could be shown on the balance sheet. Face value and unamortised discount amounts could be disclosed in a note to the financial statements.

4. The bonds would be valued at greater than face value by the market, though the balance sheet valuation would not change.

AP 11–3 continued

5. Cash paid = $180,000

	Jan. 2	*July 2*	*Total*
First issue	$60,000	$ 60,000	$120,000
Second issue	–	60,000	60,000
	$60,000	$120,000	**$180,000**

Interest expense reported:	
First issue $1,000,000 x 12%	$120,000
Second issue $1,000,000 x 12% x 10/12 mos.	$100,000
Premium amortisation 2 x $1,920	(3,840)
Discount amortisation 2 x $800	1,600
	$217,760
The differences are:	
Cash paid, per above	$180,000
Interest accrued on second issue ($1,000,000 x 12% x 4/12 mos.)	40,000
Bond premium/discount amortisation (net)	(2,240)
Interest reported per above	$217,760

AP 11–4

Return to Question

1.a.	2011			
	Jan. 2	Discount on Bonds	60,000	
		Cash	1,940,000	
		Bonds Payable		2,000,000
		To record issue of bonds at 97. Cash = $2,000,000 x .97 = $1,940,000		
b.	Jun. 30	Interest Expense	130,000	
		Cash		120,000
		Discount on Bonds		10,000
		To record payment of bond interest and discount amortisation. Amortisation = $60,000/3 x 6/12 mos. = $10,000 Interest = $2,000,000 x 12% x 6/12 mos. = $120,000 (Technically, 180/365 days, but difference is immaterial.)		
c.	Dec. 31	Interest Expense	130,000	
		Cash		120,000
		Discount on Bonds		10,000
		To record payment of bond interest and discount amortisation. Amortisation = $60,000/3 x 6/12 mos. = $10,000		
d.	2014			
	Jan. 2	Bonds Payable	2,000,000	
		Cash		2,000,000
		To record redemption of bonds.		

AP 11–4 continued

2. Interest paid in cash in 2011 = $2,000,000 x 12% = $240,000

3. Amortisation for 2011 = $20,000
Interest expense reported on 2011 income statement
= $240,000 cash + $20,000 amortisation = $260,000

4. Discount on bonds = $60,000 – $20,000 = $40,000

AP 11–5

Return to Question

1.a. Interest payment every 6 months:

$200,000 x 12% x 1/2	$12,000

b. Amortisation every 6 months:

Face value	$200,000
Issue price	212,000
Premium	$ 12,000
Amortisation for each of 6 periods	$ 2,000

2. *Issue of $200,000 Bonds Payable for $212,000*
Amortisation Table

		A	*B*	*C*	*D*	*E*
Year	*Six month period ending*	*Beginning bond carrying amount*	*(C + D) Periodic interest expense*	*Actual cash interest paid*	*(B – C) Periodic premium amort.*	*(A – D) Ending bond carrying amount*
2011	Jun. 30	$212,000	$10,000	$12,000	$(2,000)	$210,000
	Dec. 31	210,000	10,000	12,000	(2,000)	208,000
2012	Jun. 30	208,000	10,000	12,000	(2,000)	206,000
	Dec. 31	206,000	10,000	12,000	(2,000)	204,000
2013	Jun. 30	204,000	10,000	12,000	(2,000)	202,000
	Dec. 31	202,000	10,000	12,000	(2,000)	200,000

AP 11–5 continued

3. Jun. 30, 2011 — Payment of Interest

Interest Expense	12,000	
Cash		12,000

Jun. 30, 2011 — Amortisation of Premium

Bond Premium	2,000	
Interest Expense		2,000

4.

Providence Inc.
Partial Balance Sheet
At December 31, 2012

	2012	*2011*
Liabilities		
Current		
Bonds Payable	$200,000	$ -0-
Premium on Bonds	4,000	-0-
Carrying Amount	204,000	-0-
Non-current		
Bonds Payable (Note X)	-0-	200,000
Premium on Bonds	-0-	8,000
Carrying Amount	-0-	208,000

Note X would disclose relevant details about the bonds, including interest rate, maturity date, and fair value of the bonds at December 31 each year. Alternately, just carrying amounts could be shown on the balance sheet. Face value and unamortised discount amounts could be disclosed in a note to the financial statements.

AP 11–6

Return to Question

1.a. Difference between unamortised discounts from 2011 to 2012 = $12,000 ($51,000 – 39,000)
Amortisation per month = $12,000/12 = $1,000
Discount at date of issue, July 1, 2011
= (6 x $1,000) + 51,000 = $57,000
Accrued interest to date of issue July 1, 2011
= $750,000 x 9% x 3/12 mos. = $16,875
Original issue price = $750,000 – 57,000 + 16,875 = $709,875

b. Total discount/monthly amortisation
= $57,000/1,000 = 57 months
The maturity date will be 57 months from date of issue on July 1, 2011 or five years from date of authorisation on April 2, 2011.

2.

2011			
Jul. 1	Cash	709,875	
	Discount on Bonds	57,000	
	Bonds Payable		750,000
	Bond Interest Payable		16,875
	To record issue of bonds and accrued interest payable. ($750,000 x 9% x 3/12 mos. = $16,875)		

AP 11–6 continued

3. 2013 unadjusted interest expense = $59,625.

Comprised of:

Cash interest paid	
April 1 ($750,000 x 9% x 6/12 mos.)	$33,750
October 1 ($750,000 X 9% X 6/12 mos.)	33,750
Less Oct. 2 to Dec. 31, 2012 interest accrual	
($750,000 X 9% X 3/12 mos.)	(16,875)
Plus January 1 to October 1 discount amortisation	
($1,000 x 9 mos.)	9,000
	$59,625

The 2013 interest expense should be:

Interest: $750,000 x 9%	$67,500
Discount amortisation (12 mos. x $1,000)	12,000
Total	$79,500

The difference is $19,875, composed of:

Oct. – Dec. interest accrual ($750,000 x 9% x 3/12mos.)	$16,875
Oct. – Dec. discount amortisation (3 mos. x $1,000)	3,000
Total	$19,875

At December 31, 2013 the following journal entry is needed:

Dec. 31	Interest Expense	19,875	
	Discount on Bonds		3,000
	Bond Interest Payable		16,875
	To record accrued interest and amortisation of discount from October 31 to December 31.		

AP 11–7

Return to Question

1. a. Interest payment every 6 months

= 200,000 x 12% x 1/2	$12,000

b.

Issue price	$210,152
Face value	200,000
Premium	$ 10,152
Amortisation each of 6 periods	$ 1,692

2. *Issue of $200,000 Bonds Payable for $210,152*

Amortisation Table

		A	B	C	D	E
Year	*Six month period ending*	*Beginning bond carrying amount*	*(C + D) Periodic interest expense*	*Actual cash interest paid*	*(B – C) Periodic premium amort.*	*(A – D) Ending bond carrying amount*
2011	Jun. 30	$210,152	$10,308	$12,000	$(1,692)	$208,460
	Dec. 31	208,460	10,308	12,000	(1,692)	206,768
2012	Jun. 30	206,768	10,308	12,000	(1,692)	205,076
	Dec. 31	205,076	10,308	12,000	(1,692)	203,384
2013	Jun. 30	203,384	10,308	12,000	(1,692)	201,692
	Dec. 31	201,692	10,308	12,000	(1,692)	200,000

AP 11–7 continued

3. Calculation of financing percentage

Year	Six month period ending	A Bond carrying amount	B Six month interest expense	(B/A)
2011	Jun. 30	$210,152	$10,308	4.9%
	Dec. 31	208,460	10,308	4.9%
				9.8%
2012	Jun. 30	206,768	10,308	5.0%
	Dec. 31	205,076	10,308	5.0%
				10.0%
2013	Jun. 30	203,384	10,308	5.1%
	Dec. 31	201,692	10,308	5.1%
				10.2%

4. The effective interest rate varies from period to period under the straight–line amortisation method. Theoretically, this rate should be the same over the life of the bonds, and equal to the market rate of interest on the date of issue. From a practical point of view, there may be no material difference between straight-line and effective interest amortisation methods. The straight–line method is simpler to use.

AP 11-8

Return to Question

1.a. 2011

Jan. 1	Cash	500,000	
	Loan Payable		500,000
	To record loan from Last Chance Bank.		

b. 2011

Jan. 2	Equipment	450,000	
	Accounts Payable	50,000	
	Cash		500,000
	To record purchase of equipment and payment of creditors.		

2.

Copper Corp.
Loan Repayment Schedule

Year ended Dec. 31	A Beginning loan balance	B (A x 4%) Interest expense	C (D – B) Reduction of loan payable	D Total loan payment	E (A – C) Ending loan balance
2012	$520,000 [1]	$20,800	$166,581	$187,381	$353,419
2013	353,419	14,137	173,244	187,381	180,175
2014	180,175	7,206	180,175	187,381	-0-

[1] Accrued interest for 2011 = $500,000 x 4% = $20,000
2012 beginning loan balance = $500,000 + 20,000 = $520,000

AP 11–8 continued

3\.

2011			
Dec. 31	Interest Expense	20,800	
	Loan Payable	166,581	
	Cash		187,381
	To record the first loan payment to Last Chance Bank.		

4\.

Copper Corp.
Partial Balance Sheet
At December 31, 2011

Liabilities

Current	
Current Portion of Last Chance Bank Loan	$166,581
Non-current	
Last Chance Bank Loan (Note X)	353,419

Note X would disclose pertinent information including details of the loan repayment agreement (for example, interest rate, repayment terms, security) if just the carry amount is shown on the balance sheet as above.

Since the accrued interest to December 31, 2011 has been included in the amount of the loan to be repaid and the repayment terms, it would not be recorded separately on the balance sheet.

AP 11–9

Return to Question

1\.

2014			
Apr.1	Equipment	100,000	
	Finance Lease		80,000
	Cash		20,000
	To record purchase of equipment and assumption of lease with South Leasing Ltd.		

2\.

North Corp.
Lease Repayment Schedule

	A	*B*	*C*	*D*	*E*
Year ended Mar. 31	*Beginning lease balance*	*(A x 12%) Interest expense*	*(D – B) Reduction of finance lease*	*Total lease payment*	*(A – C) Ending lease balance*
2012	$80,000	$9,600	$23,708	$33,308	$56,292
2013	56,292	6,755	26,553	33,308	29,739
2014	29,739	3,569	29,739	33,308	-0-

AP 11–9 continued

3.

North Corp.
Partial Balance Sheet
At December 31, 2013

Liabilities

Current	
Interest Expense Payable	$2,677[1]
Finance Lease (Note X)	29,739

Note X would disclose pertinent information including details of the lease repayment agreement (for example, interest rate, repayment terms, security) if just the carry amount is shown on the balance sheet as above.

[1] Approximate accrued interest = $3,569 x 9/12 mos. = $2,677

AP 11–10

Return to Question

	CASE A	*CASE B*	*CASE C*
1.a. Interest payment every 6 months:			
$100,000 x 12% x 1/2	$ 6,000	$ 6,000	$ 6,000
b. Issue price computation:			
Present value $100,000 for 6 Periods at			
6% (0.70496)	$ 70,496		
8% (0.63017)		$63,017	
4% (0.79032)			$ 79,032
Present value $6,000 payments each period at			
6%(4.91732)	29,504		
8% (4.62288)		27,737	
4% (5.24214)			31,453
Issue price	$100,000	$90,754	$110,485

AP 11–10 continued

c. i. There is no bond premium or discount to amortise if the bonds are issued when face value interest rate equals market interest rate.

ii. Amortisation every 6 months; bonds issued when market rate is 16%:

Issue of $100,000 Bonds Payable for $90,754
Amortisation Table
Using Market Interest Rate of 16%

		A	B	C	D	E
Year	*Six month period ending*	*Beginning bond carrying amount*	*Using 8% market rate to calculate six-month interest expense* ([½ of 16% = 8%] x A)	*Actual cash interest paid*	(B - C) *Periodic discount amortisation*	(A .- D) *Ending bond carrying amount*
2014	Jun.30	$90,754	(8% x $90,754) = $7,260	$6,000	$1,260	$ 92,014
	Dec. 31	92,014	(8% x 92,014) = 7,361	6,000	1,361	93,375
2015	Jun.30	93,375	(8% x 93,375) = 7,470	6,000	1,470	94,845
	Dec. 31	94,845	(8% x 94,845) = 7,588	6,000	1,588	96,433
2016	Jun. 30	96,433	(8% x 96,433) = 7,715	6,000	1,715	98,148
	Dec. 31	98,148	(8% x 98,148) = 7,852	6,000	1,852	100,000

iii. Amortisation every 6 months; bonds issued when market rate is 8%:

		A	B	C	D	E
Year	*Six-month period ending*	*Beginning bond carrying amount*	*Using 8% market rate to calculate six-month interest expense* ([½ of 8% = 4%] x A)	*Actual cash interest paid*	(B - C) *Periodic premium amortisation*	(A - D) *Ending bond carrying amount*
2017	Jun. 30	$110,485	(4% x $110,485) = $4,419	$6,000	$1,581	$108,904
	Dec. 31	108,904	(4% x 108,904) = 4,356	6,000	1,644	107,260
2018	Jun.30	107,260	(4% x 107,260) = 4,290	6,000	1,710	105,550
	Dec. 31	105,550	(4% x 105,550) = 4,222	6,000	1,778	103,772
2019	Jun.30	103,772	(4% x 103,772) = 4,151	6,000	1,849	101,923
	Dec. 31	101,923	(4% x 101,923) = 4,077	6,000	1,923	100,000

AP 11–10 continued

2. Journal entries for 2017:

		CASE A		*CASE B*		*CASE C*	
2017							
Jan. 1	Cash	100,000		90,754		110,485	
	Bond Discount	—		9,246		—	
	Bond Payable		100,000		100,000		100,000
	Bond Premium		—		—		10,485
Jun. 30	Interest Expense	6,000		6,000		6,000	
	Cash		6,000		6,000		6,000
Jun. 30	Interest Expense	—		1,260		—	
	Bond Discount		—		1,260		—
Jun. 30	Bond Premium	—		—		1,581	
	Interest Expense		—		—		1,581
Dec. 31	Interest Expense	6,000		6,000		6,000	
	Cash		6,000		6,000		6,000
Dec. 31	Interest Expense	—		1,361		—	
	Bond Discount		—		1,361		—
Dec. 31	Bond Premium	—		—		1,644	
	Interest Expense		—		—		1,644

CHAPTER 12

Analysing Financial Information

CP 12–1

Return to Question

1. Current ratio = $\frac{\text{Current assets}}{\text{Current liabilities}}$

   The current ratio indicates how many dollars of current assets exist to pay a dollar of current liabilities. A ratio of 2 to 1 is often appropriate but this depends on the type of industry.

   2012: ($10 +35 + 200 + 600)/745 = $1.13 to 1
   2011: ($15 +35 + 150 + 400)/580 = $1.03 to 1

2. Acid–test ratio = $\frac{\text{Quick assets}}{\text{Current liabilities}}$

   The acid–test ratio indicates how many dollars of current assets excluding inventory and prepaid expenses exist to pay a dollar of current liabilities. A ratio of at least 1 to 1 is often appropriate but this depends on the type of industry.

   2012: ($10 + 35 + 200)/745 = $.33 to 1
   2011: ($15 + 35 + 150)/580 = $.34 to 1

3. Both the current and acid-test ratios are below the suggested guidelines. The company's continuing low acid-test ratio in particular suggests that it will likely have problems meeting its liabilities as they become due, and that the company may be at risk of bankruptcy.

4.

	2012	*2011*
Working capital from operations		
Accounts receivable	$200	$150
Inventory	600	400
Less: Accounts payable	(500)	(400)
	$300	$150
Net financial debt		
Borrowings	$245	$180
Less: Cash	(10)	(15)
Temporary Investments	(35)	(35)
	$200	$130

CP 12–2

Return to Question

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Net sales}}$$

2013: $63/252 = 25%
2012: $48/141 = 34%
2011: $54/120 = 45%

$$\text{Net profit ratio} = \frac{\text{Net income}}{\text{Net sales}}$$

2013: $12/252 = 4.7%
2012: $5/141 = 3.6%
2011: $15/120 = 12.5%

This company has a decreasing gross profit ratio. This significantly affects net income and the net profit ratio. Net income and the net profit ratio dipped significantly in 2012, but both have rebounded somewhat in 2013. The company may be facing significant competition in recent years; hence the overall decline in the gross profit and net profit ratios.

CP 12–3

Return to Question

$$\text{Price-earnings ratio} = \frac{\text{Market price per share}}{\text{Earnings per share}}$$

This ratio indicates the stock market's expectations of profitability for the company. A higher P/E ratio indicates that the market expects the company to be profitable despite relatively lower net income at present. On this basis, company C is preferred.

A: $35/11 = 3.2
B: $40/5 = 8
C: $90/10 = 9

$$\text{Dividend yield} = \frac{\text{Dividends per share}}{\text{Market price per share}}$$

This ratio indicates what short-term cash return shareholders might expect on their investment in common shares of the company.

A: 0
B: $4/40 = 10
C: $6/90 = 6.7

The stock market indicates that company C is expected to be relatively more profitable than A or B in the future. However, if dividend yield is important to the shareholder, then company B should be chosen. On either basis, company A does not appear to be a good investment.

CP 12–4

Return to Question

	2012 *(a)*	*2011* *(b)*	*Change* *Amount* *(a – b)*	*Change* *Percentage* *(a – b)/b*
Sales	$2,520	$1,440	$ +1,080	+75%
Cost of goods sold	1,890	960	+930	+96.9%
Gross profit	$630	$480	+150	+31.3%
Operating expenses	510	430	+80	+18.6%
Net income	$ 120	$ 50	+70	+140%

Although sales have increased, cost of goods sold has increased at a faster pace. However, operating expenses have increased at a slower pace, resulting in a substantially higher net income.

CP 12–5

Return to Question

Transaction	Ratio	Effect on Ratio *Inc.*	Effect on Ratio *Dec.*	Effect on Ratio *No Change*
Declared a cash dividend	Current ratio		X	
Wrote-off an uncollectible account receivable	Accounts receivable collection period	X		
Purchased inventory on account	Acid–test ratio		X	
Issued 10–year bonds to acquire capital assets	Return on total assets		X	
Issued additional shares for cash	Debt to equity ratio		X	
Declared a share dividend on common shares	Earnings per share			X
Restricted part of retained earnings	Return on shareholders’ equity			X
Purchased supplies on account	Current ratio		X	
Paid a short–term creditor in full	Acid–test ratio	X		
Paid an account payable, taking the cash discount	Number of days sales in inventory			X

CP 12–6

Return to Question

1.a. Return on total assets
= Income from operations
Average total assets
= [$30 + (10% x 60)]/220
= 16.4%

b. Return on shareholders’ equity
= Net income
Average shareholders’ equity
= $20/(80 + 60)
= 14.3%

c. Times interest earned ratio
= Income from operations
Interest expense
= $36/6
= 6 times

d. Earnings per share
= Net income
Number of common shares outstanding
= $20/8 shares
= $2.50

e. Number of days of sales in inventory
= Average inventory x 365 days
Cost of goods sold
= $40/50 x 365 days
= 292 days

f. Accounts receivable collection period
= Accounts receivable x 365 days
Net credit sales
= $20/100 x 365 days
= 73 days

g. Sales to total assets ratio
= Net sales
Average total assets
= $100/220
= 45%

h. Current ratio
= Current assets
Current liabilities
= ($20 + 20 + 40)/20
= 4:1

CP 12–6 continued

i. Acid-test ratio

$= \frac{\text{Quick assets}}{\text{Current liabilities}}$

= ($20 + 20)/20

= 2:1

j. Debt to equity ratio

$= \frac{\text{Total liabilities}}{\text{Shareholders' equity}}$

= $(20 + 60)/140)

= .57:1

2. The following ratios are measures of liquidity:
   - e. Number of days of sales in inventory
   - f. Accounts receivable collection period
   - h. Current ratio
   - i. Acid–test ratio

3.

Balance Sheet

Operating Capital		
Working capital from operations		
Accounts Receivable		$20
Merchandise Inventory		40
Less: Accounts Payable		(20)
		40
Plant, at carrying amount		140
Operating Capital		$180
Net Financial Debt		
Borrowings	$ 60	
Less: Cash	(20)	40
Shareholders' Equity		
Share Capital	80	
Retained Earnings	60	140
Financial Capital		$180

CP 12–6 continued

Income Statement

Sales		$100
Cost of Goods Sold		50
Gross Profit		50
Operating Expenses		14
Income from Operations		36
Less: Income Taxes		(12)
Income from Operations, after-tax		24
Interest	6	
Less: Income Tax Savings	(2)	
Net Interest Expense		4
Net Income		$20

4.

Return on Operating Capital + *Return on Leveraging* = *Return on Shareholders' Equity*

(1) (2) (3) (4) (5)

$$\left[\frac{\$24}{100} \quad x \quad \frac{\$100}{180}\right] + \left[\left[\frac{\$24}{180} \quad - \quad \frac{\$4}{40}\right] \quad x \quad \frac{\$40}{140}\right] = \frac{\$20}{140}$$

$$= \left[\ 24\% \quad x \quad .6\ \right] + \left[\ 3.3\% \quad x \quad .3\ \right] = 14.3\%$$

= **13.3%** + **1.0%** = **14.3%**

CP 12–7

Return to Question

1. Current ratio
= Current assets
Current liabilities
= Cash + accounts receivable + inventory + prepaid expenses
Current liabilities
= $300/60
= 5:1

2. Return on total assets
= Income from operations
Average total assets
= $46/620
= 7.4%

1. Sales to total assets ratio
= Net sales
Average total assets
= $240/620
= 38.7%

4. Acid-test ratio
= Quick assets
Current liabilities
= Cash + accounts receivable
Current liabilities
= ($72 + 88)/60
= 2.7:1

5. Times interest earned ratio
= Income from operations
Interest expense
= $46/8
= 5.75:1

6. Earnings per common share
= Net income – preferred share dividends
Number of common shares outstanding
= [$20 – ($60 x 10%)]/10 shares
= $1.40 per share

CP 12–7 continued

7. Accounts receivable collection period

$$= \frac{\text{Average accounts receivable}}{\text{Net credit sales}} \times 365 \text{ days}$$

= $88/(80% x $240) x 365 days

= 167 days

8. Return on shareholders' equity

$$= \frac{\text{Net income}}{\text{Shareholders' equity}}$$

$$= \frac{\text{Net income}}{\text{Preferred shares + Common shares + Retained earnings}}$$

= $20/(60 + 250 + 100)

= 4.9%

9. Scott formula

Return on Operating Capital + *Return on Leveraging* = *Return on Shareholders' Equity*

(1) (2) (3) (4) (5)

$$\left[\frac{24^{1}}{240} \times \frac{\$240}{488^{2}}\right] + \left[\left[\frac{\$24}{488} - \frac{\$4^{3}}{78^{4}}\right] \times \frac{\$78}{410^{5}}\right] = \frac{\$20}{410}$$

$$= [\ 10\% \times .49\ ] + [\ (.1\%) \times .2\ ] = 4.9\%$$

= **4.9%** + **0%** = **4.9%**

[1] $46 x (1 – .473*) = $24

[2] $620 – 72 – 60 = $488

[3] $$8 x (1 –.473) = $4

[4] $150 – 72 = $78

[5] $60 + 250 + 100 = $410

*income tax rate: $18/38 = 47.3%

CP 12–8

Return to Question

1. Current assets + capital assets = Total liabilities + shareholders' equity

Current assets + $90 =$40 + 140

Current assets = $90

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

2.5 = $90/Current liabilities

Current liabilities = $36

2. Per above: Current assets = $90; current liabilities = $36

$$\text{Acid-test Ratio} = \frac{\text{Quick current assets}}{\text{Current liabilities}}$$

Since the Acid-test Ratio is 1:1,

CP 12–8 continued

$$\text{Inventory} = \frac{\$90 - \text{inventory} + 0}{\$36}$$

Inventory = $90 – 36

Inventory = $54

3. Accounts receivable =Quick current assets – (cash + marketable securities)

   $36 – 6 = 30

   $$\text{Accounts rec. collection period} = \frac{\text{Average accounts receivable}}{\text{Net credit sales}} \text{ x } 365 \text{ days}$$

   = $30/300 x 365 days

   = 37 days

4. If gross profit is 30 per cent of sales, the cost of goods sold is 70 per cent of sales (70% x $420 = $294). Per above, inventory = $54

   $$\text{Number of days of sales in inventory} = \frac{\text{Average inventory}}{\text{Net credit sales}} \text{ x } 365 \text{ days}$$

   = $54/294 x 365 days

   = 12 days

5. Revenue operating cycle = Accounts receivable collection period + number of days of sales in inventory

   = 77 + 12 = 49 days

CP 12–9

Return to Question

l	Acid–test ratio
f	Current ratio
k	Return on shareholders’ equity
a	Times interest earned
c	Earnings per share
m	Accounts receivable collection period
d	Sales to total assets
j	Dividend yield
e	Price–to–earnings ratio
g	Number of days of sales in inventory
b	Debt to equity ratio

CP 12–9 continued

h Net profit ratio

m Accounts receivable collection period

i Return on total assets

CP 12–10

Return to Question

1.

	Transaction	Effect on Current Ratio		
		Inc.	Dec.	No Change
a.	Bought $20,000 of merchandise on account (the company uses a perpetual inventory system)		X	
b.	Sold for $10,000 cash, merchandise that cost $5,000	X		
c.	Collected a $2,500 account receivable			X
d.	Paid a $10,000 account payable	X		
e.	Wrote off a $1,500 bad debt against the allowance for doubtful accounts			X*
f.	Declared a $1 per–share cash dividend on the 10,000 outstanding common shares		X	
g.	Paid the dividend declared above	X		
h.	Borrowed $10,000 from a bank by assuming a 60–day, 10 per cent loan		X	
i.	Borrowed $25,000 from a bank by placing a 10–year mortgage on the plant	X		
j.	Used the $25,000 proceeds of the mortgage to buy additional machinery		X	

* the journal entry is Dr. Allowance for Doubtful Accounts; Cr. Accounts Receivable

2. At the end of May,

a. The current ratio was 2.15 to 1, calculated as follows:

		May 1 Bal.	*(a)*	*(b)*	*(c)*	*(d)*	*(e)*	*(f)*	*(g)*	*(h)*	*(i)*	*(j)*	*May 31 Bal.*
Current assets (given)	x	$200	+20	+10 –5	+2.5 –2.5	–10	+1.5 –1.5	–	–10	+10	+25	–25	215
Current liabilities (derived)	y	$80	+20	–	–	–10	–	+10	–10	+10	–	–	100
Current ratio	x/y	2.5											**2.15**

CP 12–10 continued

b. The acid–test ratio was 1 to 1 calculated as follows:

		May 1 Bal.	*(a)*	*(b)*	*(c)*	*(d)*	*(e)*	*(f)*	*(g)*	*(h)*	*(i)*	*(j)*	*May 31 Bal.*
Quick assets (derived)	x	$100	–	+10	+2.5 –2.5	–10	+1.5 –1.5	–	–10	+10	+25	–25	100
Current liabilities (see above)	y	$80	+20	–	–	–10	–	+10	–10	+10	–	–	100
Acid-test ratio	x/y	1.25											**1.0**

AP 12–1

Return to Question

1. Earnings per share
   = Net income – preferred share dividends / Number of common shares outstanding
   = [$61,200 – ($.12 x 10,000)]/15,000 shares
   = $3.28 per share

   Since no market price per share is given, the dividend yield is used to calculate EPS, as follows:
   Dividend yield = Dividends per common share/Market price per share
   0.275 (given) = $5/Market Price per share
   Market price per share = $18.18

2. Price–to–earnings ratio
   = Market price per share/Earnings per share
   = $18.18/3.28
   = 5.5:1

AP 12–2

Return to Question

1. Current ratio

   $= \frac{\text{Current assets}}{\text{Current liabilities}}$

   = $170/40

   = 4.25:1

2. Acid-test ratio

   $= \frac{\text{Quick assets}}{\text{Current liabilities}}$

   = $80/40

   = 2:1

3. Accounts receivable collection period

   $= \frac{\text{Average accounts receivable}}{\text{Net credit sales}} \text{ x 365 days}$

   = $60/300 x 365 days

   = 73 days

4. Number of days sales in inventory

   $= \frac{\text{Average inventory}}{\text{Cost of goods sold}} \text{ x 365 days}$

   = $90/180 x 365 days

   = 183 days

5. Debt to equity ratio

   $= \frac{\text{Total liabilities}}{\text{Shareholders' equity}}$

   = $140/140

   = 1:1

6. Net profit ratio

   $= \frac{\text{Net income}}{\text{Net sales}}$

   = $40/300

   = 13.3%

7. Income from operations

   = Net income + income taxes + interest expense

   = ($40/50%) + (8% x 100)

   = $88

   Return on total assets

   $= \frac{\text{Income from operations}}{\text{Average total assets}}$

   = $88/280

   = 31.4%

   Other ratios are acceptable if plausible.

AP 12–2 continued

8.

Crockett Corporation
Balance Sheet
At December 31, 2010

Operating Capital		
Working capital from operations		
Accounts Receivable		$60
Merchandise Inventory		90
Less: Accounts Payable		(30)
Wages Payable		(10)
		110
Capital Assets, at carrying amount		110
Operating Capital		$220
Net Financial Debt		
Bonds Payable	$100	
Less: Cash	(20)	80
Shareholders' Equity		
Common Shares	100	
Retained Earnings	40	140
Financial Capital		$220

Crockett Corporation
Income Statement
For the Year Ended December 31, 2010

Sales		$300
Cost of Goods Sold		180
Gross Profit		120
Operating Expenses		32 **
Income from Operations		88
Less: Income Taxes*		(44)
Income from Operations, after-tax		44
Interest	$8 *	
Less: Income Tax Savings	(4)	
Net Interest Expense		4
Net Income		$40

*$100 x 8% = $8

**$120 – 88 = $32

AP 12–2 continued

$$\begin{array}{ccccccccc}
\multicolumn{3}{c}{\underline{\textit{Return on Operating Capital}}} & + & \multicolumn{3}{c}{\underline{\textit{Return on Leveraging}}} & = & \underline{\textit{Return on Shareholders' Equity}} \\
(1) & & (2) & & (3) & & (4) & & (5) \\
\left[\frac{\$44}{300}\right. & \text{x} & \left.\frac{\$300}{220}\right] & + & \left[\left[\frac{\$44}{220} - \frac{\$4}{80}\right]\right. & \text{x} & \left.\frac{\$80}{140}\right] & = & \frac{\$40}{140} \\
=[\ 14.7\% & \text{x} & 1.4\ ] & + & [\ 15\% & \text{x} & .57\ ] & = & 28.6\% \\
= & \mathbf{20\%} & & + & & \mathbf{8.6\%} & & = & \mathbf{28.6\%}
\end{array}$$

AP 12–3

Return to Question

Maxim Enterprises Limited
Balance Sheet
At December 31, 2018

Assets			*Liabilities and Shareholders' Equity*		
Cash	$ 2,625	(8)	Accounts Payable	$ 4,000	(5)
Marketable Securities	375	(7)	Notes Payable	1,500	(6)
Accounts Receivable	3,000		Common Shares	3,000	(10)
Merchandise Inventory	3,000	(2)	Retained Earnings	2,000	(9)
Current Assets	9,000	(1)			
Property, Plant, and Equipment (net)	1,500	(3)			
Total Assets	$10,500	(4)	Total Liabilities and Shareholders' Equity	$10,500	(4)

Calculations:

(1) Current assets = Accounts receivable x 3
= $3,000 x 3 = $9,000

(2) Quick assets = Accounts receivable x 2
= $3,000 x 2 = $6,000

Inventory = Current assets – quick assets
= $9,000 – 6,000 = $3,000

(3) Capital assets = $3,000/2 = $1,500

(4) Total assets = Total liabilities and shareholders' equity
= $9,000 + 1,500 = $10,500

(5) Accounts payable = Current liabilities = $4,000

$$\frac{\text{Quick assets}}{\text{Current liabilities}} = 1.5$$

= 1.5/1 = $6,000/4,000

AP 12–3 continued

(6)	Total assets	$10,500
	Less: Accounts payable	(4,000)
	Shareholders' equity	(5,000)
	Notes payable	**$ 1,500**

(7) Marketable securities =
= Notes payable/4
= $1,500/4 = $375

(8) Cash = Quick current assets – marketable securities – accounts receivable
= $6,000 – 3,000 – 375 = $2,625

(9) Working capital = Shareholders' equity = $9,000 – 4,000 = $5,000
Shareholders' equity = Common shares + retained earnings
$5,000 = 1.5X + X
X = Retained earnings = $2,000

(10) Common shares = 150% x retained earnings
= 150% x $2,000 = $3,000

AP 12–4

Return to Question

1.

Erie Corp.
Vertical Analysis of Income Statements
For the Years Ended December 31, 2013 and 2012

	Year Ended December 31		*Common–Size Percentages Year Ended December 31*	
	2013	*2012*	*2013*	*2012*
Sales	$1,397	$1,122	100.0	100.0
Cost of Goods Sold	935	814	66.9	72.5
Gross Profit	462	308	33.1	27.5
Operating Expenses:				
Selling Expenses	154	121	11.0	10.8
General Expenses	88	77	6.3	6.9
Total Operating Expenses	242	198	17.3	17.7
Income from Operations	220	110	15.8	9.8
Other Revenue	4	7	0.3	0.6
Income before Interest and Income Taxes	224	117	16.1	10.4
Interest	2	9	0.1	0.8
Income before Income Taxes	222	108	16.0	9.6
Income Taxes	134	66	9.6	5.9
Net Income	$ 88	$ 42	6.4	3.7

(slight variations may occur due to rounding)

AP 12–4 continued

2. Cost of goods sold: A decrease in cost of goods sold from 72.5 per cent to 66.9 per cent accompanied by an overall increase in sales ($1,122 to $1,397) is a good development.

   Operating expenses: Although increasing in dollars, they have decreased as a percentage of sales. This situation is favourable.

   Selling and general expenses: These have, in percentage terms, remained relatively stable. This is generally a good indicator.

   Other revenue: Other revenue is independent of regular operations; a decrease is likely not problematic.

   Interest expense: This item has decreased in relative size, likely a good indicator. However, the company might be underleveraged now and able to use more debt productively.

   Income taxes: The change is unfavourable. The income tax rate is an uncontrollable factor but, with good tax planning, income taxes can be minimized.

   Net income: Overall, net income per dollar of sales has increased, again a favourable trend.

AP 12–5

Return to Question

1.

Dene Company
Balance Sheet
At December 31, 2010

Assets		
Current		
Cash	$15,000 (4)	
Accounts Receivable	50,000 (3)	
Merchandise Inventory	25,000 (2)	
Total Current Assets		$ 90,000 (1)
Property, Plant, and Equipment (net)		120,000 (9)
Total Assets		$210,000 (9)
Liabilities		
Current		$ 50,000 (1)
Shareholders' Equity		
Common Shares	112,500 (6)	
Retained Earnings	47,500 (7)	160,000 (5)
Total Liabilities and Shareholders' Equity		$210,000 (8)

AP 12–5 continued

2.

Dene Company
Income Statement
For the Year Ended December 31, 2010

Sales	$250,000	(10)
Cost of Goods Sold	125,000	(11)
Gross Profit	$125,000	(12)
Operating Expenses	109,375	(15)
Income Before Income Taxes	15,625	(14)
Income Taxes	3,125	(16)
Net Income	$ 12,500	(13)

Calculations:

(1) Working capital = $40,000
Current ratio is 1.8 to 1.
If Current liabilities = X, then
1.8X – X = $40,000
X = $40,000/0.8
Current liabilities = $50,000
Current assets = $50,000 x 1.8
= $90,000

(2) Quick current assets = 1.3 x $50,000 = $65,000
(Acid-test ratio x current liabilities)

Merchandise inventory = $90,000 – 65,000 = $25,000
(Total current assets – quick current assets)

(3) Accounts receivable = $250,000 x 73/365 days = $50,000
(Sales x accounts receivable collection period/Number of days in the year)

(4) Cash = $90,000 – 25,000 – $50,000 = $15,000
(Current assets – merchandise inventory – accounts receivable)

(5) If current liabilities to shareholders equity is 31.25% and current liabilities are $50,000 (see 1 above), shareholders equity = $50,000/.3125 = $160,000

(6) Common shares = 50,000 x $2.25 = $112,500
(Number of outstanding shares x issued value per share)

(7) Retained earnings = $160,000 – 112,500 = $47,500
(Total shareholders' equity (see (5) above) – common shares)

(8) Total liabilities and shareholders' equity
= $50,000 (see (1) above) + 160,000
= $210,000

AP 12–5 continued

(9) Total assets = Total shareholders’ equity = \$210,000 (see (8) above)
Capital assets = Total assets – current assets
= \$210,000 – 90,000 (see (1) above)
= \$160,000

(10) Sales = \$125,000/0.50 = \$250,000
(Cost of goods sold/Gross profit ratio)

(11) Number of days of sales in inventory = $\frac{\text{Average inventory}}{\text{Cost of goods sold}}$ x 365 days

73 = $\frac{\text{\$25,000 (see (2) above)}}{\text{Cost of goods sold}}$ x 365

Therefore cost of goods sold = 365/73 x \$25,000 = \$125,000

(12) Gross profit = \$250,000 – 125,000 = \$125,000
(Sales – cost of goods sold)

(13) Net income = 50,000 x \$0.25 = \$12,500
(Number of outstanding shares x earnings per share)

(14) Income before income taxes = \$12,500/.8 = \$15,625
[Net income/(1 – income tax rate)]

(15) Operating expenses = \$125,000 – 15,625 = \$109,375
(Gross profit – income before income taxes)

(16) Income taxes = \$15,625 – 12,500 = \$3,125
(Income before taxes – net income)

Alternate calculations are acceptable

AP 12–5 continued

3.

Dene Company
Balance Sheet
At December 31, 2010

Operating Capital		
Working capital from operations		
Accounts Receivable		$50,000
Merchandise Inventory		25,000
Less: Accounts Payable (50%)		(25,000)
		50,000
PPE, at carrying amount		120,000
Operating Capital		$170,000
Net Financial Debt		
Borrowings (50%)	$25,000	
Less: Cash	(15,000)	10,000
Shareholders' Equity		
Common Shares	112,500	
Retained Earnings	47,500	160,000
Financial Capital		$170,000

Dene Company
Income Statement
For the Year Ended December 31, 2010

Sales		$250,000
Cost of Goods Sold		125,000
Gross Profit		125,000
Operating Expenses		108,375
Income from Operations		16,625
Less: Income Taxes*		(3,325)
Income from Operations, after-tax		13,300
Interest	$1,000	
Less: Income Tax Savings	(200)	
Net Interest Expense		800
Net Income		$ 12,500

*$5,124/15,625 = 20%

AP 12–5 continued

$$\overbrace{\left[\overset{(1)}{\frac{\$13,300}{250,000}} \times \overset{(2)}{\frac{\$250,000}{170,000}}\right]}^{\textit{Return on Operating Capital}} + \overbrace{\left[\overset{(3)}{\left\{\frac{\$13,300}{170,000} - \frac{\$800}{10,000}\right\}} \times \overset{(4)}{\frac{\$10,000}{160,000}}\right]}^{\textit{Return on Leveraging}} = \overbrace{\overset{(5)}{\frac{\$12,500}{160,000}}}^{\textit{Return on Shareholders' Equity}}$$

$$= \left[5.3\% \times 1.5\right] + \left[(.2\%) \times .06\right] = 7.8\%$$

$$= \mathbf{7.8\%} + \mathbf{0\%} = \mathbf{7.8\%}$$

CHAPTER 13

The Statement of Cash Flows

CP 13–1

Return to Question

F	A payment of $5,000 was made on a bank loan.
O	Depreciation expense for equipment was $1,000.
F	$10,000 of share capital was issued for cash.
F	Cash dividends of $2,500 were declared and paid to shareholders.
F & I	Bonds were issued in exchange for equipment costing $7,000.
I	Land was purchased for $25,000 cash.
O	$750 of accrued salaries was paid.
F*	$5,000 was borrowed by issuing a 60–day note payable.
O	$10,000 of accounts receivable was collected.
I & F	A building was purchased for $80,000. $30,000 was paid in cash and the rest was borrowed.
I	A long-term investment in shares of another company was sold for $50,000 cash.
O & I	Equipment was sold for $6,000. The accumulated depreciation was $3,000 with an original cost of $10,000.
O	$1,200 was paid for a 12-month insurance policy in effect next year.
O	A patent was amortised for $500.
F	Bonds were issued for $50,000 cash.

*If this is considered a cash equivalent, the transaction has no cash effect and would not be reported on the statement of cash flows.

CP 13–2

Return to Question

	Operating Activities In (Out)	*Financing Activities In (Out)*	*Investing Activities In (Out)*
1. Retired $100 of bonds with cash		(100)	
2. Purchased a building for $90; $60 was loaned by a bank and the rest was paid in cash		60	(90)
3. Declared and paid cash dividends of $12 during the year		(12)	
4. Purchased equipment by issuing $20 of common shares		20	(20)
5. Paid $50 in cash to pay off a bank loan		(50)	
6. Sold land for $30 cash			30
7. Earned net income of $75	75		
8. Purchased equipment costing $15; of this, $5 was paid in cash and the rest with a 90–day note payable		10[1]	(15)
9. Amortised a patent by $2	2[2]		
10. Issued $100 of bonds and repurchased common shares		100 (100)	
11. Purchased marketable securities for $5 cash			(5)[3]
12. Sold a machine that cost $20 for $7 cash; the accumulated depreciation on it was $10	3[4]		7
13. Depreciation expense for building and equipment amounted to $8	8[2]		
14. Paid in cash the note payable from transaction 8 above.		(10)[1]	
15. Issued $20 of preferred shares for cash		20	
16. Purchased a patent for $25 cash			(25)
17. Prepaid $20 for the next two months of advertising	(2)		
18. Purchased $60 of ABC Ltd. common shares for cash.			(60)

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[1] If the note payable is considered a cash equivalent, the $10 portion of the transaction has no cash effect and would not be reported as a financing activity.

[2] This would be added back to net income to arrive at cash flow from operating activities.

[3] If Marketable Securities are considered cash and cash equivalents, this transaction would have no effect on the statement of cash flows.

CP 13–2 continued

[4] The loss on sale would be $3, calculated as:

Cost of machine	$ 20
Accumulated depreciation	(10)
Carrying amount	10
Cash proceeds	(7)
Loss on sale	$ 3

The journal entry to record the sale would be:

Dr.	Cash	7	
Dr.	Accumulated Depreciation – Machine	10	
Dr.	Loss on Sale	3	
Cr.	Machine		20

On the SCF, a $7 debit would be recorded as an inflow when calculating cash flow from investing activities. The $3 loss (also a debit) would be added back to net income to arrive at cash flow from operating activities.

CP 13–3

Return to Question

Cash Flow			
↑	↓	No Effect	
X			1. Earning net income for the year
	X		2. Redemption of bonds payable
	X		3. Purchase of inventory
X	X		4. Issuing common shares for equipment
X			5. Issuing bonds for cash
		X	6. Declaring a cash dividend
X			7. Collection of an account receivable
	X		8. Payment of an account payable
	X		9. Purchase of land for cash
X			10. Issuing common shares for cash
		X	11. Reclassifying long-term liabilities as current liabilities for the amount to be repaid in cash next year
	X		12. Payment of a cash dividend declared last year
		X	13. Decrease in market value of marketable securities
		X	14. Calculated amount owing for income taxes.

AP 13–1

Return to Question

There has been no change in cash and cash equivalents during the year. The demand bank loan would be considered “negative cash” since it is due on demand by the creditor.

Opening cash and cash equivalents ($50 – 50)	$ -0-
Change in cash and cash equivalents during the year	-0-
Ending cash and cash equivalents ($100 – 100)	$ -0-

AP 13–2

Return to Question

1.

Dr. Amortisation of Leasehold Improvement Expense (income statement)	20	
Cr. Accumulated Amortisation —Leasehold Improvements (balance sheet)		20

The entry has no cash effect. As a result, the $20 amortisation expense will be added back to net income to arrive at cash flow from operating activities.

2.

Dr. Cash	14	
Dr. Loss on Sale of Investment	18	
Cr. Investment		32

Cash increases by $14, the amount of the sale proceeds as denoted by the debit to Cash in the above entry. However, this does not represent cash flow from operating activities. The sale of investments is an investing activity because it affects a non-current assets account.

The $18 loss on sale is included in the calculation of net income. Since it (a) does not represent actual cash inflow ($14 is the related cash inflow) and (b) is not related to an operating activity, its effect on net income is added back when deriving cash flow from operating activities on the SCF.

3.

Net Income	$ 47
Items Not Affecting Cash Flow	
Amortisation of Leasehold Improvements	20
Loss on Sale of Investment	18
Cash Flow from Operating Activities	$ 85

Note that the $14 from the sale of the investment will be shown as a cash inflow in the Investing Activities section of the SCF.

AP 13–3

Return to Question

Net Income	$170
Add (Deduct) Changes in Non-cash Working Capital	
Decrease in Accounts Receivable	7
Decrease in Inventory	9
Decrease in Prepaid Insurance	4
Cash Flow from Operating Activities	$190

AP 13–4

Return to Question

Operating Activities:	
Income before Income Taxes	$240
Income Taxes Paid ($100 + 9)*	(109)
Add (Deduct) Changes in Non-cash Working Capital	
Decrease in Accounts Payable	(6)
Cash Flow from Operating Activities	$125

*Besides the income taxes expense of $100 paid in cash, the related income taxes payable account has decreased by $9 during the year. This would have required an additional $9 of cash, and is considered an operating activity.

AP 13–5

Return to Question

1. The equipment's carrying amount at the start of the year was $400. No depreciation was claimed during the year according to the income statement. A $500 gain was realised when the equipment was sold per the income statement. The equipment therefore must have sold for $900 cash ($400 + 500).

2. The journal entry to record the sale of the equipment would have been:

Dr Cash		900	
Dr. Accumulated Depreciation		600	
Cr.	Equipment		1,000
Cr.	Gain on Sale of Equipment		500

The only cash effect of this transaction is the receipt of $900 from the sale of the equipment. The gain on sale needs to be deducted from net income to arrive at cash flow from operating activities (which will be $0), since it (a) is not related to an operating activity, and (b) does not represent actual cash flow.

AP 13–5 continued

3.

Cash Flow from Operating Activities:	
Net Income	$ 500
Item Not Affecting Cash Flow	
Gain on Sale of Equipment	(500)
	$ -0-
Cash Flow from Investing Activities:	
Proceeds from Sale of Equipment	$ 900

AP 13–6

Return to Question

Cash Flow from Financing Activities:	
Proceeds from Mortgage ($2,000 – 1,600)	$ 400
Preferred Shares Issued ($1,300 – 800)	500
Common Shares Issued ($200 – 150)	50
	$ 950

AP 13–7

Return to Question

1. Each of these two transactions consists of cash inflow from financing activity (shares issued; proceeds from loan) and a cash outflow from investing activity (purchase of machinery). They should be reported as such on the SCF.
2. Cash flow table:

	Balance		*Change*		*Cash Effect*		*Activity*
	2012	*2011*	*Dr.*	*Cr.*	*Inflow*	*Outflow*	
Cash	22	20	2		To be		C&CE
Marketable Securities	30	38		8			C&CE
Merchandise Inventory	110	104	6			6	Operating
Prepaid Expenses	16	6	10			10	Operating
Land	-0-	20		(a) 20	(a) 24		Investing
						(a) 4	Operating
Building	240	180	60			60	Investing
Machinery	124	80	80			80	Investing
				(b) 36	(b) 4		Operating
					(b) 14		Investing
Accum. Dep'n	(78)	(80)	(b) 18				
				16	16		Operating
Patents	8	10		2	2		Operating
Accounts Payable	(16)	(24)	8			8	Operating
Dividends Payable	(26)	(18)		8	8		Financing
Income Taxes Payable	(4)	(6)	2			2	Operating
Borrowings	(70)	(60)		10	10		Financing
Common Shares	(300)	(240)		60	60		Financing
Retained Earnings	(56)	(30)		26	48		Operating
						22	Financing
	-0-	-0-	186	186	186	192	

$6 net cash outflow

(a) The journal entry to record the sale of land would be:

Dr.	Cash (Investing activity)	24	
Cr.	Land		20
Cr.	Gain on Sale (Operating activity)		4

(b) The journal entry to record the sale of machinery would be:

Dr.	Cash (Investing activity)	14	
Dr.	Accumulated Depreciation	18	
Dr.	Loss on Sale of Machinery	4	
Cr.	Machinery		36

AP 13–7 continued

3. Statement of cash flows:

Sovereign Corporation
Statement of Cash Flows
For the Year Ended December 31, 2012

Operating Activities		
Income before Income Taxes [$48 (NI) + 4 (Gain) + 12 (Inc. Taxes)]		$ 64
Income Taxes Paid ($12 + 2)		(14)
Items not Affecting Cash Flow		
Depreciation and Amortisation Expense ($2 + 16)		18
Gain on Sale of Land		(4)
Net Changes in Non-cash Working Capital ($6 + 10 + 8)		(24)
Cash Flow from Operating Activities		40
Investing Activities		
Proceeds from Sale of Land	$ 24	
Proceeds from Sale of Machinery	14	
Purchase of Building	(60)	
Purchase of Machinery	(80)	
Cash Flow used by Investing Activities		(102)
Financing Activities		
Loan Proceeds	10	
Common Shares Issued	60	
Payment of Dividends*	(14)	
Cash Flow from Financing Activities		56
Net Decrease in Cash and Cash Equivalents		(6)
Cash and Cash Equivalents at Beginning of Year ($20 + 38)		58
Cash and Cash Equivalents at End of Year		$ 52
Represented by:		
Cash		$ 22
Marketable Securities		30
		$ 52

*Dividends payable at start of year (given)	$18
Dividends declared (given)	22
	40
Dividends paid (derived)	14
Dividends payable at end of year (given)	$26

4. Net income was $48. Cash flow from operating activities was slightly lower ($40), mainly due to changes in non-cash working capital accounts. Given the $102 net investing activities, it appears that there is a significant renewal of capital assets occurring. This has been financed chiefly by issuing shares and assuming more loans, and by cash generated from operating activities.

AP 13–8

Return to Question

1. Significant financing and investing activities that are equal and offsetting are still included on the statement of cash flows. For instance, common shares were issued to purchase equipment. Debt was issued directly to the sellers of the capital assets. However, these transactions must still be shown as both investing and financing activities on the statement of cash flows.

2. Cash flow table:

	Balance		*Change*		*Cash Effect*		*Activity*
	2012	*2011*	*Dr.*	*Cr.*	*Inflow*	*Outflow*	
Cash	11	10	1				C&CE
Marketable Securities	24	19	5		To be		C&CE
Demand Bank Loan	(2)	(3)	1				C&CE
Merchandise Inventory	53	52	1			1	Operating
Prepaid Expenses	1	3		2	2		Operating
Investments	-0-	10		(a) 10	(a) 16		Investing
						(a) 6	Operating
PPE (net)	147	95			3		Operating
			52			55	Investing
Accounts Payable	(8)	(12)	4			4	Operating
Notes Payable	(48)	(39)		9	9		Financing
Common Shares	(150)	(120)		30	30		Financing
Retained Earnings	(28)	(15)		13	24		Operating
						11	Financing
	-0-	-0-	64	64	84	77	

$7 net cash inflow

(a) The journal entry to record the sale of investments would be:

Dr.	Cash (Investing activity)	16	
Cr.	Non-current Investments		10
Cr.	Gain on Sale (Operating activity)		6

AP 13–8 continued

3. Statement of cash flows:

Cambria Corporation
Statement of Cash Flows
For the Year Ended December 31, 2012

Operating Activities		
Net Income		$ 24
Items not Affecting Cash Flow		
Depreciation Expense		3
Gain on Sale of Investments		(6)
Net Changes in Non-cash Working Capital ($2 – 1 – 4)		(3)
Cash Flow from Operating Activities		18
Investing Activities		
Proceeds from Sale of Investments	$ 16	
Purchase of Building and Equipment	(55)	
Cash Flow used by Investing Activities		(39)
Financing Activities		
Note Payable Proceeds	9	
Common Shares Issued	30	
Payment of Dividends	(11)	
Cash Flow from Financing Activities		28
Net Increase in Cash and Cash Equivalents		7
Cash and Cash Equivalents at Beginning of Year ($10 + 19 – 3)		26
Cash and Cash Equivalents at End of Year ($11 + 24 – 2)		$ 33

Represented by:	
Cash	$ 11
Marketable Securities	24
Demand Bank Loan	(2)
	$ 33

4. The statement of cash flows shows the operating, financing, and investing activities of Cambria Corporation. The corporation financed its activities internally from operations, by the issue of notes payable, and by the sale of non-current investments. It also financed its acquisition of capital assets through the issue of common shares, and has paid dividends to the shareholders. The company appears to be expanding its base of property, plant, and equipment.

AP 13–9

Return to Question

1. Cash flow table:

	Balance		Change		Cash Effect		Activity
	2012	*2011*	*Dr.*	*Cr.*	*Inflow*	*Outflow*	
Cash	6,000	7,000		1,000	To be explained		C&CE
Accounts Receivable	3,000	4,500		1,500	1,500		Operating
Merchandise Inventory	12,000	11,000	1,000			1,000	Operating
Investment	13,000	10,000	3,000			3,000	Investing
Land	10,000	-0-	10,000			10,000	Investing
Equipment	40,000	30,000	20,000			20,000	Investing
				(a) 10,000	(a) 12,000		Investing
						(a) 3,000	Operating
Accum. Dep'n.	(10,000)	(8,000)	(a) 1,000				
				(b) 3,000	3,000		Operating
Accounts Payable	(5,000)	(7,000)	2,000			2,000	Operating
Bonds Payable*	(16,000)	(22,000)	6,000			6,000	Financing
Common Shares	(8,000)	(3,000)		5,000	5,000		Financing
Retained Earnings**	(45,000)	(22,500)		22,500	27,500		Operating
						5,000	Financing
	-0-	-0-	43,000	43,000	49,000	50,000	

$1,000 net cash outflow

* The portion of bonds payable that will be paid in one year is just an allocation from one part of the liabilities section of the balance sheet to another. The accounts should be combined and the changes during the year analysed as one.

** Placing restrictions on retained earnings have no cash flow effect. The accounts should be combined and the changes during the year analysed as one.

(a)

Cost of equipment (given)	$ 10,000
Accumulated depreciation (derived)	(1,000)
Carrying amount (derived)	9,000
Cash proceeds (given)	(12,000)
Gain on sale (given)	$ 3,000

The journal entry to record the sale would be:

Dr. Cash (Investing activity)	12,000	
Dr. Accumulated Depreciation	1,000	
Cr. Equipment		10,000
Cr. Gain on Sale (Operating activity)		3,000

(b) The balancing figure for Accumulated Depreciation is a $3,000 credit, assumed to be depreciation expense. This needs to be added back to net income to arrive at cash flow from operating activities.

AP 13–9 continued

2\.

Sors Limited
Statement of Cash Flows
For the Year Ended December 31, 2012

Operating Activities		
Net Income		$27,500
Items not Affecting Cash Flow		
Depreciation Expense		3,000
Gain on Sale of Machinery		(3,000)
Net Changes in Non-cash Working Capital ($1,500 – 1,000 – 2,000)		(1,500)
Cash Flow from Operating Activities		26,000
Investing Activities		
Proceeds from Sale of Equipment	$ 12,000	
Purchase of Investments	(3,000)	
Purchase of Land and Equipment	(30,000)	
Cash Flow used by Investing Activities		(21,000)
Financing Activities		
Redemption of Bonds	(6,000)	
Common Shares Issued	5,000	
Payment of Dividends	(5,000)	
Cash Flow used by Financing Activities		(6,000)
Net Decrease in Cash		(1,000)
Cash at Beginning of Year		7,000
Cash at End of Year		$ 6,000

3. Sors Limited's day–to–day operations generated most of the cash necessary ($26,000) to finance its cash needs. Its investing activities were funded by the cash generated from operations, sale of used equipment, and issuance of shares. With this cash, $30,000 of property, plant, and equipment were acquired for cash, dividends were paid, and bonds redeemed. Some long-term investments were also purchased. The company may be expanding its capacity by adding more equipment or replacing outdated equipment.