

10.2. Recording Stock Transactions ■ 383

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 1	Cash A+		10,000	
	Common stock SE+			1,000
	Paid-in capital – excess of par, common			9,000
	SE+			
	To record the issuance of 1,000 common shares at \$10 per share.			

Transaction 2: On February 1, 2015, 2,500 shares of \$10 par-value preferred stock 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:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Feb 1	Land A+		35,000	
	Building A+		50,000	
	Preferred stock SE+			25,000
	Paid-in capital – excess of par, preferred SE+			60,000
	To record the issuance of 2,500 preferred shares in exchange for land and buildings.			

Usually, one or more individuals decide to form a corporation and before the corporation is created may use their own funds to pay for legal and government fees, travel and promotional costs, and so on. When the corporation is legally formed, it is not unusual for the corporation to issue shares of stock to these organizers for these amounts. These expenditures are referred to as **organization costs (start-up costs)** and are required to be expensed.

Transaction 3: On March 1, 2015, 500 shares of \$1 par-value common stock are issued to the organizers of New World to pay for their services, valued at \$5,000. The journal entry to record this transaction is:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Mar 1	Organization Expense E+(SE)		5,000	
	Common stock SE+			500
	Paid-in capital – excess of par, common			4,500
	SE+			
	To record the issuance of 500 common shares in exchange for organization efforts.			

Assuming no further stock transactions and a retained earnings balance of \$480,000, the equity section of the New World Corporation balance sheet would show the following at December 31, 2015:

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Heading required when there is more than one common stock account on a classified balance sheet.

Equity Section of the Balance Sheet

100,000 shares authorized means there are 100,000 shares available for sale.

→ Stockholders' equity:		
Preferred stock, \$10 par value; 100,000 shares authorized; 2,500 shares issued and outstanding.....		\$25,000
Common stock, \$1 par value; 500,000 shares authorized; → 1,500 shares issued and outstanding.....		1,500
Paid-in capital - excess of par, preferred ..		60,000
Paid-in capital - excess of par, common ..		13,500
Contributed capital.....		<u>100,000</u>
Retained earnings.....		480,000
Total stockholders' equity.....		<u><u>\$580,000</u></u>

1,500 shares issued means 1,500 shares have been sold.

A Total contributed capital subtotal is required if there is more than one class of shares.

1,500 shares outstanding means 1,500 shares are held by shareholders (shares that have been issued but are not outstanding means the corporation purchased its own shares).

Transaction 4: Corporate legislation permits a company to reacquire some of its stocks, provided that the purchase does not cause insolvency. Repurchased stock is referred to as treasury stock. Treasury stock is issued but not outstanding. A company can use treasury stock for purposes such as giving the shares to employees as an incentive or bonus or they can choose to cancel the stock.

Assume that New World Corporation decides to repurchase 200 shares of common stock on December 1, 2016 and hold them in treasury. Assume that the price of each stock is the average issue price of the outstanding common stock, or \$10. The journal entry to record the repurchase is:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec 1	Treasury Stock XSE+ (SE)		2,000	
	Cash (A)			2,000
	To record the repurchase of 200 common shares at \$10 per share to be held in treasury.			

Assuming no further transactions, the equity section of the New World Corporation balance sheet would show the following at December 31, 2016:

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Stockholder's equity:	
Preferred stock, \$10 par value; 100,000 shares authorized; 2,500 shares issued and outstanding	\$25,000
Common stock, \$1 par value; 500,000 shares authorized; 1,500 shares issued; 1,300 shares outstanding	1,500
Paid-in capital – excess of par, preferred	60,000
Paid-in capital – excess of par, common	13,500
Retained earnings	480,000
Treasury stock, at cost; 200 common shares	(2,000)
Total stockholders' equity	\$578,000

Notice that the repurchase of stocks caused a decrease in total stockholders' equity (\$2,000 decrease) and in the number of shares outstanding (decreased by 200 shares). If the company chose to sell its treasury stock it would never report a profit or loss on the sale. This is the case even if the stock was sold above or below than the original repurchase price. For example if the above treasury stock were to be sold for \$12 (\$2 above the original repurchase price) the journal entry would be a DR to Cash for \$2,400 (200 shares × \$12 per share selling price) and CR to Treasury Stock for \$2,000 (the original repurchase price) and CR to Paid-in capital, common for \$400 (the difference).

Stock Splits

A corporation may find its shares are 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 **stock split**. A stock split increases the number of shares issued and outstanding, and 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, 2017 New World Corporation declares a 3-for-1 common stock split. This results in three new common shares replacing each currently-issued and outstanding common share. The number of issued and outstanding shares has now been tripled. The market price of each share will decrease to about one-third of its former market price. Since there is no change in the dollar amount of common stock, no debit-credit entry is required to record the stock split. Instead, a memorandum entry would be recorded in the general ledger indicating the new number of shares issued and outstanding, as follows:

		Common Shares			Acct. No. 320	
Date		Description	Debit	Credit	DR/CR	Balance
2017						
Dec.	1	Memorandum Entry:				
		Because of a 3-for-1 stock split, the issued and outstanding common shares				
		increased, respectively, from 1,500 and 1,300 to 4,500 and 3,900.				

The dollar amount shown on the balance sheet and statement of stockholders' equity will not change. The only change is an increase in the number of issued and outstanding common stock. After the stock split, the equity section of the New World Corporation would appear as follows:

The number of common shares issued changed from 1,500 shares before the stock split to 4,500 after the stock split.

Equity Section of the Balance Sheet

Stockholders' equity:	
Preferred stock, \$10 par value; 100,000 shares authorized, 2,500 shares issued and outstanding	\$25,000
Common stock, \$1 par-value; 500,000 shares authorized; 4,500 shares issued; 3,900 shares outstanding	1,500
Paid-in capital - excess of par, preferred	60,000
Paid-in capital - excess of par, common	13,500
Contributed capital	<u>100,000</u>
Retained earnings	480,000
Treasury stock, at cost; 200 common shares	<u>(2,000)</u>
Total stockholders' equity	<u><u>\$578,000</u></u>

The number of common shares outstanding changed from 1,300 shares before the stock split to 3,900 after the stock split.

The paid-in capital is not affected by a stock split.

10.3 Cash Dividends

LO3 – Record and disclose cash dividends.

Both creditors and stockholders are interested in the amount of assets that can be distributed as dividends. Dividends are distributions of assets the company has earned for its stockholders. If a company pays dividends that exceeds the amount of assets earned, this would result in returning to the stockholders a portion of their investment. Therefore, companies generally view the amount in retained earnings as the amount available for dividends. For example, assume total assets are \$40,000; total liabilities \$39,000; and total equity \$1,000, consisting of \$900 in common stock and \$100 of retained earnings. The maximum dividends that could be declared in this situation is \$100, the balance in retained earnings.

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.

- **Consideration 1: There may not be adequate cash**

Corporations regularly reinvest their earnings in assets in order to make more profits. In this way, growth occurs and reliance on creditor financing can be minimized. 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. Instead, they reinvest their earnings in the business. Stockholders generally benefit through increased earnings, reflected in increased market price for the corporation's stocks. 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 stockholders are dissatisfied, they can elect a new board of directors or sell their stocks.

- **Consideration 4: Dividends may be issued in stocks of the corporation rather than in cash**

Stock dividends may be issued to conserve cash or to increase the number of stocks to be traded on the stock market. Stock dividends are discussed in Section [10.4](#).

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 authorizing 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 [10.3](#).

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 stock outstanding (3,900). The dividend will be paid on June 26, 2016 to stockholders of record on June 7, 2016.

By order of the board

[signed]
Lee Smith
Secretary
May 25, 2016

Figure 10.3: An Example of a Dividend Notice

There are three dates associated with a dividend. Usually dividends are declared on one date, the **date of declaration** (May 25, 2016 in this case); they are payable to stockholders on a second date, the date of record (June 7, 2016); and the dividend is 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 as well as which stockholders 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 May 25, 2016, the date of declaration:

General Journal				
Date	Account/Explanation	R	Debit	Credit
May 25	Retained Earnings (SE)		1,950	
	Dividends Payable L+			1,950
	To record \$0.50 per common share cash dividend declared; 3,900 shares × \$0.50/share = \$1,950.			

Date of Record

Stockholders who own stocks on the date of record will receive the dividend even if they have sold the stocks before the dividend is actually paid. No journal entry is made in the accounting records

for the date of record.

Date of Payment

The dividend is paid on this date and recorded as:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Dividends Payable (L)		1,950	
	Cash (A)			1,950
	To record payment of dividend.			

Notice that at no point in time does a dividend impact the income statement. Dividends are not a company expense, they reduce assets (cash) and stockholders' equity (retained earnings).

Preferred Stockholder Dividends

Preferred stocks are offered to attract investors who have lower tolerance for risk than do common stockholders. Preferred stockholders are content with a smaller but more predictable share of a corporation's profits. For instance, preferred stockholders are entitled to dividends before any dividends are distributed to common stockholders. Also, most preferred stock will specifically state the amount of dividends their holders can expect each year. For example owners of 6%, \$10.00 par-value preferred stock would be paid \$0.60 per share of stock ($6\% \times \$10.00$ par-value). If the preferred stock had no par-value the dividend would be specified as \$0.60 per share. These dividends are often paid even if the corporation experiences a net loss in a particular year.

Preferred stocks may also have other dividend preferences, depending on what rights have been attached to preferred stocks at the date of incorporation. One such preference is the accumulation of undeclared dividends from one year to the next — referred to as *cumulative dividends*. Discussion of other preferences is beyond the scope of this introductory textbook. Cumulative dividends are discussed in the next section.

Cumulative Dividend Preferences

Cumulative preferred shares of stock require that any unpaid dividends accumulate from one year to the next 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 of stock. The unpaid dividends are called **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 to the financial statements.

If a preferred stock is **non-cumulative**, a dividend not declared by the board of directors in any one year is never paid to stockholders.

10.4 Stock Dividends

LO4 – Record and disclose stock dividends.

A **stock dividend** is a dividend given to stockholders in the form of stock rather than 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. Like a cash dividend, a stock dividend reduces retained earnings. However, a stock dividend does not cause assets to change. Instead, it simply reclassifies by reducing one or more shareholders' equity accounts and simultaneously increasing one or more paid-in capital accounts. The amount to be reclassified will depend on the size of the stock dividend. A small common stock dividend, normally less than 25%, will have the fair value (market value) of the distributed shares allocated from the retained earnings account to the common stock and paid-in capital accounts. A large common stock dividend, normally greater than 25%, is distributed from the retained earnings account to the common stock account. The large stock dividend does not take into account the fair value (market value) of the stock. Total assets, total liabilities, and total equity remain unchanged when there is a stock dividend. Like a cash dividend, there are three dates regarding a stock dividend: date of declaration, date of record, and date of distribution. Notice that there is no 'date of payment' as there was for a cash dividend. This is because there is no cash payment involved for a stock dividend. Instead, stocks are distributed, or given, to the stockholders.

Accounting for Stock Dividends

To demonstrate a stock dividend, assume that the Sherbrooke Corporation declares a small 10% stock dividend to common stockholders. The stock dividend, with a par-value of \$1, is declared on December 15, 2015 payable to stockholders of record on December 20, 2015. The stock dividend is distributed on January 10, 2016. At the time of the dividend declaration, the stocks were trading on the stock exchange at \$4 per stock and the equity of the corporation consisted of the following:

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Common stock; \$1 par value; 20,000 shares authorized;	
5,000 shares issued and outstanding	\$25,000
Paid-in capital – excess of par, common	65,000
Retained earnings	100,000
Total equity	\$190,000

The 10% stock dividend equals 500 shares (calculated as 5,000 outstanding shares × 10% stock dividend). The market price on the date of declaration is used to record a small stock dividend. On the declaration date, the journal entry to record the stock dividend is:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec 15	Retained earnings (SE)		2,000	
	Common stock dividends distributable			500
	SE+			
	Paid-in capital in excess of par – com-			1,500
	mon stock SE+			
	(5,000 shares stock dividend × \$4 =			
	\$2,000 stock dividend)			

\$2,000 stock dividend is allocated to common stock based on the \$1 par-value of the stock and the excess to additional paid in capital. If Sherbrooke prepared a balance sheet after the date of declaration the dividend distributable in the equity section would present as an addition to common stock. It would not be presented as a current liability. This is unlike a cash or property dividends payable that would be presented as a current liability.

On the small stock dividend distribution date, the following entry is recorded:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 10	Common stock distributable (SE)		500	
	Common stock SE+			500

When a large stock dividend is declared (a stock dividend of more than 20-25% of the number of shares outstanding), the stock dividend is reported at par value rather than reported at fair market value. Retained earnings is then decreased by the amount of par-value times the number of shares declared.

To demonstrate a large stock dividend, assume the Sherbrooke Corporation declares a 60% stock dividend to common stockholders. The stock dividend, with a par-value of \$1, is declared on December 15, 2015 payable to stockholders of record on December 20, 2015. The stock dividend is distributed on January 10, 2016. At the time of the dividend declaration, the stocks were trading on the stock exchange at \$4 per stock and the assume the equity balances of the corporation presented the same values as shown in the previous example. On the stock dividend distribution date, the following entry is recorded:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 10	Retained earnings (SE)		3,000	
	Common stock SE+			3,000
	(5,000 issued shares × \$0.60 = 3,000 shares stock dividend × \$1 par-value = \$3,000)			

The large stock dividend ignores the market value of the stock and the transaction is based on the par-value only. However, note the large stock dividend, like the small stock dividend, does not change total stockholders' equity. It simply moves the dollar value from the retained earnings account to the common stock account. Both small and large stock dividends merely reflect a reclassification of stockholders' equity and each common stockholder retains the same proportional interest in the corporation.

Is There Any Change in the Investor's Percentage of Corporate Ownership Because of a Stock Dividend?

Since a stock dividend is issued to all stockholders of a particular class, as a result of a stock dividend, each stockholder has a larger number of stocks. However, ownership percentage of the company remains the same for each stockholder, as illustrated below, for the four stockholders of Sherbrooke Corporation.

Each stockholder has received a 10% stock dividend but their ownership percentage of the company remains constant. Since total equity does not change when there is a stock dividend, the proportion owned by each stockholder does not change.

Stockholder	Corporate ownership			
	Before 10% stock dividend		After 10% stock dividend	
	Number of Shares Owned	Percent of Shares Owned	Number of Shares Owned	Percent of Shares Owned
1	1,000	20%	1,100	20%
2	500	10%	550	10%
3	2,000	40%	2,200	40%
4	1,500	30%	1,650	30%
Totals	5,000	100%	5,500	100%

10.5 Appendix A: Reporting for Multiple Classes of Stock

Multiple classes of stock are to be separately reported in the financial statements. See the equity section of the balance sheet examples displayed throughout this chapter. Another statement

affected by multiple classes of stock is the statement of stockholders' equity. This provides important information about the composition of the company's equity for its stockholders and creditors. See below using some sample data:

Sample Company Ltd. Statement of Stockholders' Equity For the Year Ended December 31, 2017						
	Preferred Stock	Common Stock	Additional Paid-in Capital	Retained Earnings	Treasury Stock	Total
Balance at January 1, 2017	\$5,000	\$15,000	\$55,000	\$80,000	(\$30,000)	\$125,000
Additional stock issued	5,000	5,000	25,000			35,000
Repurchase of common stock					(5,000)	(5,000)
Reissuance of common stock		-			-	-
Net income				20,000		20,000
Dividends declared				(12,000)		(12,000)
Balance at December 31, 2017	<u>\$10,000</u>	<u>\$20,000</u>	<u>\$80,000</u>	<u>\$88,000</u>	<u>(\$35,000)</u>	<u>\$163,000</u>

Summary of Chapter 10 Learning Objectives

L01 – Identify and explain characteristics of the corporate form of organization and classes of stock.

A corporation is a legal entity that is separate from its owners, known as stockholders. The board of directors is responsible for corporate policy and broad direction of the corporation, including hiring the person in charge of day-to-day operations. A corporation has an indefinite life, its stockholders have limited liability, it can acquire capital more easily than a sole proprietorship or partnership, and it pays income taxes on its earnings since it is a separate legal entity. A corporation can issue common and preferred stock. Common stock has voting rights while preferred stock does not. Preferred stock is listed before common stock in the equity section of the balance sheet. Preferred stockholders are entitled to receive dividends before common stockholders. Authorized shares are the total number of shares that can be issued or sold. Shares that have been issued can be

repurchased by the corporation and either held in treasury for subsequent sale/distribution or cancelled. Outstanding shares are those that have been issued and are held by stockholders. Shares repurchased by a corporation are not outstanding shares.

L02 – Record and disclose preferred and common stock transactions including stock splits.

Common and preferred stock can be issued for cash or other assets. Organization costs are expensed when incurred and organizers sometimes accept stock in lieu of cash for their work in organizing the corporation. When more than one type of stock has been issued, the equity section of the balance sheet must be classified by including the various forms of stock. When a corporation's stock is selling at a high price, a stock split may be declared to increase the marketability of the stock. There is no journal entry for a stock split. Instead, a memorandum entry is entered into the records detailing the split. A stock split increases the number of shares but does not change any of the dollar amounts on the financial statements.

L03 – Record and disclose cash dividends.

Cash dividends are a distribution of earnings to the stockholders and are declared by the board of directors. On the declaration date, retained earnings is debited and dividends payable is credited. On the date of record, no journal entry is recorded. Stockholders who hold stocks on the date of record are eligible to receive the declared dividend. On the date of payment, dividends payable is debited and cash is credited. Preferred stocks may have a feature known as cumulative or non-cumulative. Cumulative preferred stocks accumulate undeclared dividends from one year to the next. These unpaid dividends are called dividends in arrears. When dividends are subsequently declared, dividends in arrears must be paid before anything is paid to the other stockholders. Non-cumulative preferred stocks do not accumulate undeclared dividends.

L04 – Record and disclose stock dividends.

Stock dividends distribute additional shares to stockholders and are declared by the board of directors. On the declaration date, retained earnings is debited and common stock dividends distributable (an equity account), is credited. When the stock dividend is distributed to stockholders, common stock dividends is debited and common stock is credited. Stock dividends cause an increase in the number of shares issued and outstanding but do not affect account balances. Stock dividends simply transfer an amount from retained earnings to common stock or common stock and additional paid-in capital depending on the size of the stock dividend.

Discussion Questions

1. What are some advantages of the corporate form of organization?
2. What is meant by *limited liability* of a corporation?
3. What rights are attached to common stock? Where are these rights indicated?
4. What is a board of directors and whom does it represent? Are the directors involved in the daily management of the entity?
5. Describe:
 - a. two main classes of stock that can be issued by a corporation; and
 - b. the different terms relating to the status of a corporation's stocks.
6. In what ways can stock be "preferred"? In what way is it similar to common stock? Different from common stock?
7. Why do corporations sometimes opt for a stock split?
8. Identify the major components of the equity section of a balance sheet. Why are these components distinguished?
9. How can retained earnings be said to be reinvested in a corporation?
10. What are the main issues a board of directors considers when making a dividend declaration decision?
11. 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?
12. Distinguish among the date of dividend declaration, the date of record, and the date of payment.
13. What is the difference in accounting between cash dividends and stock dividends?
14. Explain the different dividend preferences that may be attached to preferred stock. Why would preferred stock have these preferences over common stock? Does it mean that purchasing preferred stock is better than purchasing common stock?
15. What are dividends in arrears? Are they a liability of the corporation?
16. How does a stock dividend differ from a stock split?
17. Does a stock dividend change an investor's percentage of corporate ownership? Explain, using an example.

Exercises

EXERCISE 10–1 (LO1,2)

Bagan Corporation, a profitable growth company with 200,000 shares of common stock outstanding, is in need of \$40 million in new funds to finance a required expansion. Management has two options:

- (1) Sell \$40 million of 12% bonds at face value.
- (2) Sell an additional 200,000 common stocks at \$200 per stock.

Operating income (before interest and income taxes) upon completion of the expansion is expected to average \$12 million per year; assume an income tax rate of 21 per cent.

Required:

- a. Complete the schedule below.

	<u>12% Bonds</u>	<u>Common Stock</u>
Income before interest and income taxes		
<i>Less: Interest expense</i>		
Income before taxes	_____	_____
<i>Less: Income taxes at 21%</i>		
Net income	_____	_____
<i>Less: Preferred dividends</i>		
Net income available to common stockholders	_____	_____
Number of shares of common stock outstanding	=====	=====
Earnings per share	=====	=====

b. Which financing option is most advantageous to the common stockholders? Why?

EXERCISE 10–2 (LO2)

A tract of land valued at \$50,000 has been given to a corporation in exchange for 1,000 preferred shares of stock with a par value of \$15.

Required:

- a. Prepare the journal entry to record the transaction.
- b. Where would the transaction be classified in the balance sheet?

EXERCISE 10–3 (LO1,2)

A portion of the equity section of Gannon Oilfield Corporation's balance sheet at December 31, 2019 is shown below.

Preferred stock, 3%, \$10 par-value; 100 authorized shares; ? shares issued	640
Common stocks, \$1 par-value; 2,000 shares authorized; ? shares issued	1,000
Paid-in capital – excess of par, preferred	2,200
Paid-in capital – excess of par, common	1,800
Retained earnings	600

Required:

There are no outstanding shares.

- a. What is the number of shares of preferred stock that has been issued?
- b. What is the number of shares of common stock that has been issued?
- c. If this was the company's first year of operations and they paid no dividends how much was the company net income for the year?

EXERCISE 10–4 (LO3)

Strada Controls Inc. has 100,000 shares of \$0.25 par value common stock outstanding on January 1, 2019. On May 25, 2019, the board of directors declared a semi-annual cash dividend of \$1 per stock. The dividend will be paid on June 26, 2019 to stockholders of record on June 7, 2019.

Required: Prepare journal entries for

- a. The declaration of the dividend.
- b. The payment of the dividend.

EXERCISE 10–5 (LO1,3)

Landers Flynn Inc. has 1,000, \$5 cumulative preferred shares of stock outstanding. Dividends were not paid last year. The corporation also has 5,000 common shares of stock outstanding. Landers Flynn declared a \$14,000 cash dividend to be paid in the current year.

Required:

- a. Calculate the dividends received by the preferred and common stockholders.
- b. If the preferred stocks were non-cumulative, how would your answers to part (a) above change?

EXERCISE 10–6 (LO1,3)

The following note appeared on the balance sheet of Sabre Rigging Limited:

As of December 31, 2019, dividends on the 1,000 issued and outstanding shares of cumulative preferred stock were in arrears for three years at the rate of \$5 per stock per year or \$15,000 in total.

Required:

- a. Does the \$15,000 of dividends in arrears appear as a liability on the December 31, 2019 balance sheet? Explain your answer.
- b. Why might the dividends be in arrears? In other words why might the company have chosen not to pay dividends for three years?
- c. The comptroller of Sabre Rigging projects net income for the 2020 fiscal year of \$35,000. When the company last paid dividends, the directors allocated 50% of current year's net income for dividends. If dividends on preferred stock is declared at the end of 2020 and the established policy of 50% is continued, how much will be available for dividends to the common stockholders if the profit projection is realized?

EXERCISE 10–7 (LO1,2,3,4)

The December 31, 2018 balance sheet for Arrow Streaming Corporation shows that as of that date it issued a total of 10,000 shares of common stock with a par-value of \$1 for \$140,000. On April 1, 2019 Arrow Streaming declared a 10% small stock dividend, payable on April 15 to stockholders of record on April 10. The market value of Arrow's stocks on April 1 was \$15. On June 1, the company declared a \$2 cash dividend per share to common stockholders of record on June 10, and paid the dividend on June 30. Assume the year end of the corporation is December 31.

Required: Prepare journal entries for the above transactions.

EXERCISE 10–8 (LO2,5)

The equity section of Pembina Valley Manufacturing Limited's balance sheet at December 31, 2019 is shown below.

Preferred stock, 3% cumulative ? par-value; 1,000 shares authorized; 300 issued and outstanding	\$ 4,500
Common stock, \$? par-value; 10,000 shares authorized; 2,000 shares issued and 1,500 outstanding	2,000
Paid-in capital – excess of par, preferred	5,000
Paid-in capital – excess of par, common	22,000
Retained earnings	?
Treasury stock, at cost, ? shares	(750)
Total equity	<u>\$92,750</u>

Note: There were \$3,000 of dividends in arrears on the preferred stock at December 31, 2019.

Required:

- a. Calculate the par value of
 - i. the preferred stock; and
 - ii. the common stock.
- b. What is the balance in retained earnings?
- c. How many shares of stock are in treasury?

EXERCISE 10–9 (LO2)

Essential Financial Service Corp. was incorporated on January 1, 2018 to prepare business plans for small enterprises seeking bank financing.

Required: Prepare journal entries to record the following transactions on January 2, 2018:

- a. Received an incorporation charter authorizing the issuance of 800,000 shares of \$0.20 par-value common stock and 10,000, 4%, \$1.00 par-value preferred stock.
- b. Issued in exchange for start-up costs incurred by stockholders 10,000 shares of common stock at \$1.
- c. Issued for cash 1,000 shares of preferred stock at \$3 each.

EXERCISE 10–10 (LO4)

The stockholders' equity section of Lakeview Homes Corporation's statement of financial position at December 31, 2018 is reproduced below:

Stockholders' equity:	
Common stock, \$0.50 par-value;	
50,000 shares authorized; 5,000 issued and outstanding	\$ 5,000
Paid-in capital – excess of par, common	15,000
Retained earnings	100,000
Total stockholders' equity	<u>\$120,000</u>

Scenario 1: On January 15, 2018, Lakeview Homes declared a 10% stock dividend to holders of common stock. At this date, the common stock of the corporation were trading on the stock exchange at \$10 each. The stock dividend was issued February 15, 2018.

Required: Prepare the journal entries to record the stock dividend.

Scenario 2: On January 15, 2018, Lakeview Homes declared a 30% stock dividend to holders of common stock. At this date, the common stock of the corporation were trading on the stock exchange at \$10 each. The stock dividend was issued February 15, 2018.

Required: Prepare the journal entries to record the stock dividend.

EXERCISE 10–11 (LO2,3,4)

Blitz Power Tongs Inc. received a charter that authorized it to issue 100,000 shares of common stock with a par-value of \$2. The following transactions were completed during 2018:

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- Jan 5 Issued 10 shares of common stock for a total of \$150 cash.
- Jan 12 Exchanged 50 shares of common stock for assets listed at their fair values: machinery – \$100; building – \$100; land – \$50.
- Feb 28 Declared a 10% stock dividend. Market value is \$7 per stock. Net income to date is \$60.
- Mar 15 Issued the stock dividend.
- Dec 31 Closed the 2018 net income of \$200 from the Income Summary account in the general ledger to the Retained Earnings account.
- Dec 31 Declared a \$1 per stock cash dividend.

Required:

- a. Prepare journal entries for the 2018 transactions, including closing entries.
- b. Prepare the stockholders' equity section of the statement of financial position at:
 - i. January 31, 2018
 - ii. February 28, 2018
 - iii. December 31, 2018

EXERCISE 10–12 (LO1)

The board of directors of Oolong Ltd. is planning to expand its manufacturing facilities. To raise the \$1.5 million capital needed, the following financing methods are being considered:

- i. Sell \$1.5 million of 10% bonds at face value.
- ii. Sell another 30,000 stocks of common stocks at \$50 a stock (currently 20,000 common stocks are outstanding).

Income before interest and income taxes is expected to average \$750,000 per year following the expansion; the income tax rate is 30%.

Required:

- a. Calculate the earnings per common stock for each alternative.
- b. Which financing method will the stockholders most likely prefer and why?

EXERCISE 10–13 (LO2,3)

At December 31, 2018, the stockholders' equity section of the statement of financial position for Belfast Steel Ltd. totaled \$30,000,000. Following are the balances of various general ledger accounts at that date.

Preferred stock, \$1.00 cumulative no-par value; 1,000,000 shares authorized; 100,000 shares issued and outstanding	1,000,000
Common stock, \$0.01 par-value; 2,000,000 shares authorized; 1,250,000 issued and outstanding	12,500
Paid-in capital – excess of par, common	24,987,500
Retained earnings	4,000,000

The following transactions occurred during 2019:

- Feb 20 A cash dividend of \$0.50 per preferred stock was declared, payable Mar 1 to stockholders of record on Feb 25.
- Mar 1 Payment of previously declared dividend on preferred stock was made.
- Apr 15 A cash dividend on common stock of \$0.60 per stock was declared, payable Jun 10 to stockholders of record on May 1.
- Jun 10 Payment of the previously-declared dividend on common stock was made.
- Aug 1 10,000 shares of common stock were issued for \$250,000 cash.
- Dec 31 A cash dividend on common stock totaling \$425,000 was declared and paid.

Required:

- a. Prepare journal entries for the 2019 transactions. Separate the dividends for preferred and common stock into the two classes of stock.
- b. Prepare the statement of stockholders' equity for the year ended December 31, 2019 assuming net income for the year amounted to \$500,000.

EXERCISE 10–14 (LO2,3)

Bray Co. was authorized to issue 10,000 \$2.00 preferred stock and 350,000 shares of \$1 par-value common stock. December 31 is Bray's year-end. During 2016, its first year of operations, the following selected transactions occurred:

- i. January 15: Issued 32,000 shares of common stock to the corporation's organizers in exchange for services to get the company operational. Their efforts are estimated to be worth \$15,000.
- ii. February 20: 15,000 shares of common stock were issued for cash of \$6 per stock.
- iii. March 7: 4,500 shares of preferred stock were issued for cash totaling \$90,000.
- iv. April 9: 60,000 shares of common stock were issued in exchange for land and building with appraised values of \$300,000 and \$120,000 respectively.
- v. May 1: 3,500 shares of preferred stock were issued for a cash price of \$18.00 per stock.
- vi. May 15: Declared and paid dividends to the stockholders of record May 18. Total cash paid dividends was \$50,000.
- vii. January 5: 16,000 shares of common stock were issued for a cash total of \$112,000.
- viii. July 15: 2,000 shares of preferred stock and 20,000 shares of common stock were issued for a cash price of \$17.50 and \$7.50, respectively.
- ix. December 31: The company closed all its temporary accounts. The Income Summary account showed a debit balance of \$25,000.

Required:

- a. Prepare journal entries for each of the items above during Bray's first year of operations.
- b. Prepare the equity section of the balance sheet in good form with all disclosures and subtotals, for the year ended December 31, 2019.

EXERCISE 10–15 (LO2,3)

The partial balance sheet for the Carman Corp. reported the following components of equity on December 31, 2016:

Carman Corp.
Equity Section of the Balance Sheet
December 31, 2016

Stockholders' equity:	
Preferred stock, \$1.50 cumulative no-par value; 20,000 shares authorized; 10,000 shares issued and outstanding	\$ 150,000
Common stock, \$1 par-value; 500,000 authorized; 25,000 shares issued; 20,000 shares outstanding	25,000
Paid-in capital – excess of par, common	275,000
Retained earnings	250,000
Treasury stock, 5,000 shares, at cost	(50,000)
Total equity	<u>\$ 650,000</u>

In 2017, Carman Corp. had the following transactions affecting the various equity accounts:

- Jan 4 Sold 15,000 shares of common stock at \$11 per share.
- Jan 8 The directors declared a total cash dividend of \$57,500 payable on Jan. 31 to the Jan. 21 stockholders of record. Dividends had not been declared for 2015 and 2016. All of the preferred shares had been issued during 2015.
- Jan 31 Paid the dividends declared on January 8.
- July 1 Sold preferred stock for a total of \$77,500. The average issue price was \$15.50 per share.
- Aug 7 The directors declared a \$1.00 dividend per common share cash dividend payable on Aug. 31 to the Aug. 20 stockholders of record.
- Aug 31 Paid the dividends declared on Aug 7.

Required:

- a. Prepare journal entries to record the transactions for 2017.
- b. Prepare a statement of stockholders' equity for the year ended December 31, 2017. For purposes of preparing this statement, assume that the retained earnings balance at December 31, 2017 was \$102,500.
- c. Prepare the equity section of the company's balance sheet as at December 31, 2017 in good form with all required disclosures and subtotals.

Problems

PROBLEM 10–1 (LO2)

Following is the equity section of Critter Contracting Inc. shown before and after the board of directors authorized a 5 for 1 stock split on April 15, 2019.

Before split		After split	
<i>Equity</i>		<i>Equity</i>	
Common stock, \$0.50 par-value;		Common stock, \$0.50 par-value;	
5,000 shares authorized;		? shares authorized;	
1,000 issued and outstanding	100,000	? issued and outstanding	?

Required:

1. Complete the 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 stock was \$40 before the split, what would be the market value after the split? Why?

PROBLEM 10–2 (LO3,4)

The equity section of TWR Contracting Inc.'s December 31, 2018 balance sheet showed the following:

Equity	
Stockholders' equity:	
Preferred stock, \$0.30 cumulative no-par-value;	
100,000 shares authorized; 40 issued and outstanding	\$400
Common stock, \$0.50 par-value;	
50,000 shares authorized; 2,000 issued and outstanding	1,000
Paid-in capital – in excess of par, common	1,000
Retained earnings	900
Total equity	\$3,300

The following transactions occurred during 2019:

- Feb. 15 Declared the regular \$0.30 per share semi-annual dividend on its preferred stock and a \$0.05 per share dividend on the common stock to holders of record March 5, payable April 1.
- Apr. 1 Paid the dividends declared on February 15.
- May 1 Declared a 10% stock dividend to common stockholders of record May 15 to be issued June 15, 2019. The market value of the common stock at May 1 was \$2 per share.
- June 15 Distributed the dividends declared on May 1.
- Aug. 15 Declared the regular semi-annual dividend on preferred stock and a dividend of \$0.05 on the common stock to holders of record August 31, payable October 1.
- Oct. 1 Paid the dividends declared on August 15.
- Dec. 15 Declared a 10% stock dividend to common stockholders of record December 20 to be issued on December 27, 2019. The market value of the common stock at December 15 was \$3 per stock.
- Dec. 27 Distributed the dividends declared on December 15.
- Dec. 31 Net income for the year ended December 31, 2019 was \$1,400.

Required:

1. Prepare journal entries to record the 2019 transactions, including closing entries for the December 31 year end date. Show calculations. Descriptive narrative is not needed.
2. Prepare the statement of stockholders' equity for the year ended December 31, 2019.

PROBLEM 10–3 (LO1,2,3,4)

The equity section of Wondra Inc.'s December 31, 2018 balance sheet showed the following:

Stockholders' equity:	
Preferred stock; \$0.50 cumulative no par-value; 400,000 authorized; 30,000 stocks issued and outstanding	\$480,000
Common stock; \$1 par-value; 700,000 authorized; 70,000 stocks issued; 60,000 outstanding	490,000
Paid-in capital – excess of par, common	80,000
Retained earnings	95,000
Treasury stock, ? shares, at cost	(10,000)
Total equity	<u><u>\$1,135,000</u></u>

At December 31, 2018 there were \$15,000 of dividends in arrears.

The following transactions occurred during 2019:

- Feb. 10 Declared a total dividend of \$32,000 to stockholders of record on February 15, payable March 1.
- Mar. 1 Paid dividends declared February 10.
- 5 Issued for cash 2,000 shares of preferred stock at \$18 each.
- Apr. 15 The Board of Directors declared a 2:1 split on the preferred and common stock.
- Jun. 22 Issued for cash 20,000 shares of common stock at \$4.00 per stock.
- Nov. 10 Declared a 20% stock dividend to common stockholders of record on Nov. 14, distributable Dec. 15. The market price of the stock on Nov. 10 was \$3.50.
- Dec. 15 Distributed stock dividend declared on November 10.
- Dec. 31 Closed the Income Summary account which had a credit balance of \$290,000.
- 31 Closed the dividend accounts.

Required:

1. Journalize the 2019 transactions.
2. Prepare the equity section of the December 31, 2019 balance sheet.
3. What is the number of shares in Treasury?

PROBLEM 10–4 (LO1,2,5)

The following is the equity section of the balance sheet of Tridon Construction Limited at December 31, 2019.

Stockholders' equity:	
Common stock, \$0.30 par-value; 500 shares authorized; 300 shares issued and outstanding	?
Paid-in capital	2,980
Retained earnings	500
Total equity	<u> ?</u> <u> </u>

Required: What is the value of common stock? What is the value of total equity?

Chapter 11

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 stockholders' equity. This information is disclosed on the statement of cash flows (SCF). This chapter discusses the purpose of the statement of cash flows, the steps in preparing the SCF, as well as how to interpret various sections of the statement of cash flows.

Chapter 11 Learning Objectives

LO1 – Explain the purpose of the statement of cash flows.

LO2 – Prepare a statement of cash flows.

LO3 – Interpret a statement of cash flows.

Concept Self-Check

Use the following as a self-check while working through Chapter 11.

1. What is the definition of cash and cash equivalents?
2. Why is a statement of cash flows prepared?
3. What are the three sections of a statement of cash flows?
4. What two methods can be used to prepare the operating activities section of the statement of cash flows?
5. Why is depreciation expense an adjustment in the operating activities section of the statement of cash flows?
6. Where are dividend payments listed on the statement of cash flows?
7. In what section of the statement of cash flows are the cash proceeds resulting from the sale of a non-current asset listed?

8. Where on the statement of cash flows is a long-term bank loan payment identified?

NOTE: The purpose of these questions is to prepare you for the concepts introduced in the chapter. Your goal should be to answer each of these questions as you read through the chapter. If, when you complete the chapter, you are unable to answer one or more the Concept Self-Check questions, go back through the content to find the answer(s). Solutions are not provided to these questions.

11.1 Financial Statement Reporting

LO1 – Explain the purpose of the statement of cash flows.

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 discussed in Chapter 7, a company can have liquidity issues because of large amounts of cash 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 enough financing from loans or by issuing common stock.

We know that the financial activities of a corporation are reported through four financial statements: a balance sheet, an income statement, a statement of shareholders' equity, and a statement of cash flows (SCF). This chapter discusses the statement of cash flows in detail.

The SCF identifies the sources (inflows) and uses (outflows) of cash during the accounting period. It explains why the cash balance at the end of the accounting period is different from that at the beginning of the period by describing the enterprise's *financing*, *investing*, and *operating* activities.

Cash flow information is useful to management when making decisions such as purchasing equipment, plant expansion, retiring long-term debt, or declaring dividends. The SCF is useful to external users when evaluating a corporation's financial performance.

The SCF, together with the income statement, provides a somewhat limited means of assessing future cash flows because these statements 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 be able to meet obligations as they become due, pay dividends, pay for recurring operating costs, or survive adverse economic conditions.

The FASB views cash on the CFS to include cash and cash equivalents — assets that can be quickly converted into a known amount of cash, such as short-term investments that 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.

11.2. Preparing the Statement of Cash Flows ■ 411

Because of differences in the nature of each entity and industry, management judgment 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 as shown in the following example:

Note X

Cash and cash equivalents consist of cash on deposit and short-term investments 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
Short-term Investments	36	31	37
	<u>\$56</u>	<u>\$61</u>	<u>\$87</u>

For simplicity, examples throughout this chapter involving cash and cash equivalents will include only cash.

Cash flows result from a wide variety of a corporation's activities as cash is received and disbursed over a period of time. Because the income statement is based on accrual accounting that matches expenses with revenues, net income most 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 accrual net income to a cash basis net income.

11.2 Preparing the Statement of Cash Flows

LO2 – Prepare a statement of cash flows.

The general format for a SCF is shown in Figure 11.1. The SCF details the cash inflows and outflows that caused the beginning of the period cash account balance to change to its end of period balance.

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Name of Company		
Statement of Cash Flows		
For the Period Ended		
<i>Cash flows from operating activities:</i>		
[Each operating inflow/outflow is listed]		
Net cash inflow/outflow from operating activities	\$	XX
<i>Cash flows from investing activities:</i>		
[Each investing inflow/outflow is listed]		
Net cash inflow/outflow from investing activities		XX
<i>Cash flows from financing activities:</i>		
[Each financing inflow/outflow is listed]		
Net cash inflow/outflow from financing activities		XX
Net increase/decrease in cash	\$	XX
Cash at beginning of period		XX
Cash at end of period	\$	XX

Figure 11.1: General Format for a Statement of Cash Flows

Notice that the cash flows in Figure 11.1 are separated into three groups: cash flows from operating, investing, and financing activities. Grouping or classifying cash flows is a key component of preparing a SCF.

Classifying Cash Flows—Operating 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. Because of accrual accounting, the net income reported on the income statement includes non-cash transactions. For example, revenue earned on account is included in accrual net income but it does not involve cash (debit accounts receivable and credit revenue). Therefore, the operating activities section of the SCF must convert accrual net income to a cash basis net income. There are two generally accepted methods for preparing the operating activities section of the SCF, namely the direct method and the indirect method. This chapter illustrates the indirect method because it is more commonly used in the United States. Both methods result in the same cash flows from operating activities — it is the way in which the number is calculated that differs. The method used has an impact on only the operating activities section and not on the investing or financing activities sections.

In using the indirect method for preparing the operating activities section, the accrual net income is adjusted for changes in current assets (except cash), current liabilities (except dividends payable), depreciation expense, and gains/losses on the disposition of non-current assets. Figure 11.2 illustrates the effect of these items on the SCF.

11.2. Preparing the Statement of Cash Flows ■ 413

<i>Cash flows from operating activities:</i>	
Net income/net loss	\$ XX
<i>Adjustments for non-cash effects:</i>	
Add: Depreciation expense	XX
Add: Losses on disposal of non-current assets	XX
Subtract: Gains on disposal of non-current assets	XX
<i>Changes in operating assets and liabilities:</i>	
Add: Decreases in current assets (except Cash)	XX
Subtract: Increases in current assets (except Cash)	XX
Add: Increases in current liabilities (except Dividends payable)	XX
Subtract: Decreases in current liabilities (except Dividends payable)	XX
<i>Net cash inflow/outflow from operating activities</i>	<i>\$ XX</i>

Figure 11.2: Detailed Adjustments to Convert Accrual Net Income to a Cash Basis

Depreciation expense is subtracted in calculating accrual net income. However, an analysis of the journal entry shows that no cash was involved (debit depreciation expense and credit accumulated depreciation), so it must be added back to adjust the accrual net income to a cash basis.

A loss on the disposal of a non-current asset is added back as an adjustment to net income because, in analyzing the journal entry when losses occur (e.g., debit cash, debit loss, credit land), the loss represents the difference between the cash proceeds and the book value of the non-current asset. Since a loss is subtracted on the income statement and does not represent a cash outflow, it is added back to adjust the accrual net income to a cash basis. The same logic applies for a gain on the disposal of a non-current asset.

Decreases in current assets are added back as an adjustment to net income because, for example, a decrease in accounts receivable indicates that cash was collected from credit customers (debit cash and credit accounts receivable) yet it is not part of accrual net income, so the cash collected must be added. An increase in accounts receivable indicates that sales on account were recorded (debit accounts receivable and credit sales) so it is part of accrual net income. However, since no cash was collected, this must be subtracted from accrual net income to adjust it to a cash basis.

Increases in current liabilities are added back as an adjustment to net income because, for example, an increase in accounts payable indicates that a purchase/expense was made on account (debit expense and credit accounts payable) so it was subtracted in calculating accrual net income. However, since no cash was paid, this must be added back to accrual net income to adjust it to a cash basis. A decrease in accounts payable indicates that a payment was made to a creditor (debit accounts payable and credit cash) yet it is not part of accrual net income so the cash paid must be subtracted.

Classifying Cash Flows—Investing Activities

Cash flows from investing activities involve increases and decreases in long-term asset accounts. These include outlays for the acquisition of investments and property, plant, and equipment, as well as proceeds from their disposal. Note that interest receivable from investments belongs in the operating section of the SCF. Figure 11.3 illustrates the effect of these items on the SCF.

<i>Cash flows from investing activities:</i>	
Cash proceeds from sale of non-current assets	XX
Cash paid to purchase non-current assets	XX
<i>Net cash inflow/outflow from investing activities</i>	XX

Figure 11.3: Detail of Inflows/(Outflows) From Investing Activities

Classifying Cash Flows—Financing 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 accounts and common stock accounts such as common and preferred shares. These include cash flows from the issue and repayment of debt, and the issue and repurchase of common stock. Dividend payments to shareholders are considered to be financing activities, since these represent a return to shareholders on the original capital they invested. Note, however, that dividends receivable from investing in another entity and interest payable on any borrowings both belong in the operating section of the SCF. Figure 11.4 illustrates the effect of these items on the SCF.

<i>Cash flows from financing activities:</i>	
Cash proceeds from issuance of shares	XX
Cash paid for repurchase of shares	XX
Cash proceeds from borrowings	XX
Cash repayments of borrowings	XX
Cash paid for dividends to shareholders	XX
<i>Net cash inflow/outflow from financing activities</i>	XX

Figure 11.4: Detail of Inflows/(Outflows) From Financing Activities

Classifying Cash Flows—Non-cash Investing and Non-cash Financing Activities

There are some transactions that involve the direct exchange of non-current balance sheet items so that cash is not affected. For example, non-cash investing and non-cash financing activities would include the purchase of a non-current asset by issuing debt or common stock, the declaration and issuance of a share dividend, retirement of debt by issuing shares, or the exchange of

11.2. Preparing the Statement of Cash Flows ■ 415

non-cash assets for other non-cash assets. Although non-cash investing and non-cash financing activities do not appear on the SCF, the full disclosure principle requires that they be disclosed either in a note to the financial statements or in a schedule on the SCF.

Now, let us demonstrate the preparation of a SCF using the balance sheet, income statement, and statement of shareholders' equity of Example Corporation shown below.

Example Corporation			
Balance Sheet			
At December 31			
(\$000s)			
	2016		2015
<i>Assets</i>			
Current assets			
Cash	\$ 27		\$ 150
Accounts receivable	375		450
Merchandise inventory	900		450
Prepaid expenses	20		10
Total current assets	1,322		1,060
Property, plant, and equipment			
Land	70		70
Buildings	1,340		620
Less: Accumulated depreciation - buildings	(430)		(280)
Machinery	1,130		920
Less: Accumulated depreciation - machinery	(250)		(240)
Total property, plant, and equipment	1,860		1,090
Total assets	\$ 3,182		\$ 2,150
<i>Liabilities</i>			
Current liabilities			
Accounts payable	\$ 235		\$ 145
Dividends payable	25		30
Income taxes payable	40		25
Total current liabilities	300		200
Long-term loan payable	1,000		500
Total liabilities	1,300		700
<i>Equity</i>			
Common stock	1,210		800
Retained earnings	672		650
Total equity	1,882		1,450
Total liabilities and equity	\$ 3,182		\$ 2,150

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Example Corporation
Income Statement
For the Year Ended December 31, 2016
(\$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 revenues and expenses		
Interest expense	26	
Loss on disposal of machinery	10	36
Income before income taxes		115
Income taxes		35
Net Income		\$ 80

Example Corporation
Statement of Stockholders' Equity
For the Year Ended December 31, 2016
(\$000s)

	<i>Common Stock</i>	<i>Retained Earnings</i>	<i>Total Equity</i>
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 summarize and classify these cash flows on the SCF for the three major activities noted earlier, namely operating, investing, and financing. To aid our analysis, the following list of additional information from the records of Example Corporation will be used.

Additional Information

1. A building was purchased for \$720 cash.
2. Machinery was purchased for \$350 cash.
3. Machinery costing \$140 with accumulated depreciation of \$100 was sold for \$30 cash.
4. Total depreciation expense of \$260 was recorded during the year; \$150 on the building and \$110 on the machinery.
5. Example Corporation received \$500 cash from issuing a long-term loan with the bank.

6. Shares were issued for \$410 cash.
7. \$58 of dividends were declared during the year.

Analysis of Cash Flows

There are different ways to analyze cash flows and then prepare the SCF; only one of those techniques will be illustrated here using the following steps.

1. Set up a cash flow table.
2. Calculate the changes in each balance sheet account.
3. Calculate and analyze the changes in retained earnings and dividends payable (if there is a Dividends Payable account).
4. Calculate and analyze the changes in the non-cash current assets and current liabilities (excluding Dividends Payable account).
5. Calculate and analyze changes in non-current asset accounts
6. Calculate and analyze changes in Long-term Liability and Common Stock accounts.
7. Reconcile the analysis.
8. 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 2015 and 2016. 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:

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<i>Account</i>	<i>Balance</i>	
	<i>(\$000s)</i>	
	<i>2016</i>	<i>2015</i>
	<i>Dr. (Cr.)</i>	<i>Dr. (Cr.)</i>
Cash	27	150
Accounts receivable	375	450
Merchandise inventory	900	450
Prepaid expenses	20	10
Land	70	70
Buildings	1,340	620
Accum. dep.- buildings	(430)	(280)
Machinery	1,130	920
Accum. dep.- machinery	(250)	(240)
Accounts payable	(235)	(145)
Dividends payable	(25)	(30)
Income taxes payable	(40)	(25)
Long-term loan payable	(1,000)	(500)
Common stock	(1,210)	(800)
Retained earnings	(672)	(650)
Total	<u>-0-</u>	<u>-0-</u>

Step 2: Calculate the change in cash

Add two columns to the cash flow table. Calculate the net debit or net credit change in cash and insert this change in the appropriate column. This step is shown below.

Account	Balance (\$000s)		Step 2 Change	
	2016	2015	Dr.	Cr.
	Dr. (Cr.)	Dr. (Cr.)		
Cash	27	150		123
Accounts receivable	375	450		
Merchandise inventory	900	450		
Prepaid expenses	20	10		
Land	70	70		
Buildings	1,340	620		
Accum. dep. – buildings	(430)	(280)		
Machinery	1,130	920		
Accum. dep. – machinery	(250)	(240)		
Accounts payable	(235)	(145)		
Dividends payable	(25)	(30)		
Income taxes payable	(40)	(25)		
Long-term loan payable	(1,000)	(500)		
Common stock	(1,210)	(800)		
Retained earnings	(672)	(650)		
Total	<u>-0-</u>	<u>-0-</u>	<u> </u>	<u> </u>

Cash has decreased by \$123k. This is the amount that the SCF analysis must reconcile to.

Step 3: Calculate and analyze the changes in retained earnings and dividends payable (if there is a Dividends Payable account)

When we calculate the changes for each of retained earnings and dividends payable, the net difference may not always reflect the causes for change in these accounts. For example, the net difference between the beginning and ending balances in retained earnings is an increase of \$22 thousand. However, two things occurred to cause this net change: a net income of \$80 thousand (a debit to income summary and a credit to retained earnings) and dividends of \$58 thousand that were declared during the year per the additional information (a debit to retained earnings of \$58k and a credit to dividends payable of \$58k). **The net income of \$80 thousand is the starting position in the operating activities section of the SCF (see Figure 11.5).**

The change in the dividends payable balance was also caused by two transactions — the dividend declaration of \$58 thousand (a debit to retained earnings and a credit to dividends payable) and a \$63 thousand payment of dividends (a debit to dividends payable and a credit to cash). **The \$63 thousand cash payment is subtracted in the financing activities section of the SCF (see Figure 11.5).** Dividends payable can change because of two transactions, as in this example, or because of one transaction, which could be either a dividend declaration with no payment of cash, or a payment of the dividend payable and no dividend declaration. Step 3 as it applies to Example

Corporation is detailed below.

Account	Balance		Step 3	
	(\$000s)		Change	
	2016	2015	Dr.	Cr.
Cash	27	150		123
Accounts receivable	375	450		75
Merchandise inventory	900	450	450	
Prepaid expenses	20	10	10	
Land	70	70		
Buildings	1,340	620		
Accum. dep. – buildings	(430)	(280)		
Machinery	1,130	920		
Accum. dep. – machinery	(250)	(240)		
Accounts payable	(235)	(145)		90
Dividends payable	(25)	(30)	63	58
Income taxes payable	(40)	(25)		15
Long-term loan payable	(1,000)	(500)		
Common stock	(1,210)	(800)		
Retained earnings	(672)	(650)	58	80
Total	-0-	-0-		

During 2016, dividends of \$58k were declared (this information was given). The beginning balance of \$30k plus \$58k means \$63k were paid, creating the ending balance of \$25k (the \$63k was not given so had to be calculated and results in a debit to dividends payable). The payment of \$63k of dividends is a financing activity.

During 2016, net income of \$80k was earned. The beginning balance in retained earnings of \$650k plus net income of \$80 means \$58k of dividends were declared, creating the \$672k ending retained earnings balance.

Step 4: Calculate and analyze the changes in the non-cash current assets and current liabilities (excluding Dividends Payable account)

Calculate the net debit or net credit changes for each current asset and current liability account on the balance sheet and insert these changes in the appropriate column. Step 4 as it applies to Example Corporation is detailed below. **The \$75 thousand decrease in accounts receivable is added in the operating activities section of the SCF, the \$450 thousand increase in merchandise inventory is subtracted, the \$10 thousand increase in prepaid expenses is subtracted, the \$90 thousand increase in accounts payable is added, and the \$15 thousand increase in income taxes payable is added (see Figure 11.5).**

Account	Balance (\$000s)		Step 4 Change		The net change in each of accounts receivable, merchandise inventory, and prepaid expenses are classified as operating activities.
	2016	2015	Dr.	Cr.	
	Dr. (Cr.)	Dr. (Cr.)			
Cash	27	150		123	
Accounts receivable	375	450		75 ←	
Merchandise inventory	900	450	450 ←		
Prepaid expenses	20	10	10 ←		
Land	70	70			
Buildings	1,340	620			
Accum. dep. – buildings	(430)	(280)			
Machinery	1,130	920			
Accum. dep. – machinery	(250)	(240)			
Accounts payable	(235)	(145)		90 ←	
Dividends payable	(25)	(30)			
Income taxes payable	(40)	(25)		15 ←	
Long-term loan payable	(1,000)	(500)			
Common stock	(1,210)	(800)			
Retained earnings	(672)	(650)			
Total	<u>-0-</u>	<u>-0-</u>	<u> </u>	<u> </u>	

Step 5: Calculate and analyze changes in non-current asset accounts

Changes in non-current assets are classified as investing activities. There was no change in the Land account. We know from the additional information provided that buildings and machinery were purchased and that machinery was sold.

Buildings were purchased for \$720 thousand (a debit to buildings and a credit to cash). **The cash payment of \$720 thousand is shown in the investing activities section (see Figure 11.5).**

Accumulated depreciation–buildings is a non-current asset account and it increased by \$150 thousand. This change was caused by a debit to depreciation expense and a credit to accumulated depreciation–building. We know from an earlier discussion that depreciation expense is an adjustment in the operating activities section of the SCF therefore **the \$150 thousand is added in the operating activities section (see Figure 11.5).**

Two transactions caused machinery to change. First, the purchase of \$350 thousand of machinery (debit machinery and credit cash); **the \$350 thousand cash payment is shown in the investing activities section (see Figure 11.5).** Second, machinery costing \$140 thousand with accumulated depreciation of \$100 thousand was sold for cash of \$30 thousand resulting in a loss of \$10 thou-

sand. **The cash proceeds of \$30 thousand is shown in the investing activities section of the SCF and the \$10 thousand loss is added in the operating activities section (see Figure 11.5).**

Accumulated depreciation–machinery not only decreased \$100 thousand because of the sale of machinery but it increased by \$110 thousand because of depreciation (debit depreciation expense and credit accumulated depreciation–machinery). **The \$110 thousand of depreciation expense is added in the operating activities section of the SCF (see Figure 11.5).**

Account	Balance (\$000s)		Step 5 Change	
	2016 Dr. (Cr.)	2015 Dr. (Cr.)	Dr.	Cr.
	Cash	27	150	
Accounts receivable	375	450		75
Merchandise inventory	900	450	450	
Prepaid expenses	20	10	10	
Land	70	70	-0-	
Buildings	1,340	620	720 ←	
→ Accum. dep. – buildings	(430)	(280)		150
Machinery	1,130	920	350	140 ←
→ Accum. dep. – machinery	(250)	(240)	100	110 ←
Accounts payable	(235)	(145)		90
Dividends payable	(25)	(30)	5	
Income taxes payable	(40)	(25)		15
Long-term loan payable	(1,000)	(500)		
Common stock	(1,210)	(800)		
Retained earnings	(672)	(650)		
Total	<u>-0-</u>	<u>-0-</u>	<u> </u>	<u> </u>

Total depreciation expense of \$260k was recorded during the year; \$150k on the building and \$110k on the machinery, an adjustment under operating activities on the SCF.

A building was purchased for cash of \$720k, an investing activity.

Machinery costing \$140k with accum. dep. of \$100k was sold for cash of \$30k, an investing activity.

Step 6: Calculate and analyze changes in Long-term Liability and Common Stock accounts

Changes in Long-term Liability and Common Stock accounts result from financing activities. We know from the additional information provided earlier that Example Corporation received cash of \$500k from a bank loan (debit cash and credit long-term loan payable) and issued shares for \$410k cash (debit cash and credit common stock). **The \$500 thousand cash proceeds from the bank loan and \$410 thousand cash proceeds from the issuance of shares are listed in the financing section of the SCF (see Figure 11.5).**

<i>Account</i>	<i>Balance</i>		Step 6	
	<i>(\$000s)</i>		<i>Change</i>	
	<i>2016</i>	<i>2015</i>	<i>Dr.</i>	<i>Cr.</i>
	<i>Dr.</i>	<i>Dr.</i>	<i>Dr.</i>	<i>Cr.</i>
	<i>(Cr.)</i>	<i>(Cr.)</i>		
Cash	27	150		123
Accounts receivable	375	450		75
Merchandise inventory	900	450	450	
Prepaid expenses	20	10	10	
Land	70	70	-0-	
Buildings	1,340	620	720	
Accum. dep. – buildings	(430)	(280)		150
Machinery	1,130	920	350	140
Accum. dep. – machinery	(250)	(240)	100	110
Accounts payable	(235)	(145)		90
Dividends payable	(25)	(30)	5	
Income taxes payable	(40)	(25)		15
Long-term loan payable	(1,000)	(500)		500
Common stock	(1,210)	(800)		410
Retained earnings	(672)	(650)	58	80
Total	-0-	-0-		

Shares were issued for cash of \$410k, a financing activity.

\$500k of cash was received because of an additional bank loan, a financing activity.

Step 7: Reconcile the analysis

The analysis is now complete. Add the debit and credit changes, excluding the change in cash. The total debits of \$1,693 less the total credits of \$1,570 equal a difference of \$123 which reconciles to the decrease in cash calculated in Step 2.

Account	Balance (\$000s)		Step 7 Change		
	2016	2015	Dr.	Cr.	
	Dr. (Cr.)	Dr. (Cr.)			
Cash	27	150		123 ←	<p>The change in cash calculated in Step 2...</p> <p>...must agree to the change in cash resulting from the analysis.</p>
Accounts receivable	375	450		75	
Merchandise inventory	900	450	450		
Prepaid expenses	20	10	10		
Land	70	70	-0-		
Buildings	1,340	620	720		
Accum. dep. – buildings	(430)	(280)		150	
Machinery	1,130	920	350	140	
Accum. dep. – machinery	(250)	(240)	100	110	
Accounts payable	(235)	(145)		90	
Dividends payable	(25)	(30)	5		
Income taxes payable	(40)	(25)		15	
Long-term loan payable	(1,000)	(500)		500	
Common stock	(1,210)	(800)		410	
Retained earnings	(672)	(650)	58	80	
Total	<u>-0-</u>	<u>-0-</u>	<u>1,693</u>	<u>1,570</u>	
Change in cash				123 ←	

The information in the completed analysis can be used to prepare the statement of cash flows shown in Figure 11.5.

11.3. Interpreting the Statement of Cash Flows ■ 425

Example Corporation Statement of Cash Flows For the Year Ended December 31, 2016 (\$000s)		
<i>Cash flows from operating activities:</i>		
Net income		\$ 80
<i>Adjustments for non-cash effects:</i>		
Depreciation expense		260
Loss on disposal of machinery		10
<i>Adjustments to reconcile net income cash provided by operating activities:</i>		
Decrease in accounts receivable		75
Increase in merchandise inventory		(450)
Increase in prepaid expenses		(10)
Increase in accounts payable		90
Increase in income taxes payable		15
Net cash inflow from operating activities		\$ 70
<i>Cash flows from investing activities:</i>		
Proceeds from sale of machinery	30	
Purchase of building	(720)	
Purchase of machinery	(350)	
Net cash outflow from investing activities		(1,040)
<i>Cash flows from financing activities:</i>		
Payment of dividends	(63)	
Proceeds from bank loan	500	
Proceeds from issuance of shares	410	
Net cash inflow from financing activities		847
Net decrease in cash		\$ (123)
Cash at beginning of year		150
Cash at end of year		\$ 27

Figure 11.5: Statement of Cash Flows for Example Corporation

11.3 Interpreting the Statement of Cash Flows

LO3 – Interpret a 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 such as 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 2016, its net cash inflow from operations is only \$70,000, 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 plant and equipment assets occurred during the year (\$1,070,000), financed in part by cash flow from operating activities but primarily by financing activities. These activities included the assumption of loans and issue of shares that amounted to \$847,000, net of dividend payments (\$500,000 from issuing a long-term loan plus \$410,000 from issuing shares less \$63,000 for payment of dividends).

It appears that a significant plant and equipment 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 the issuance of common stock. However, the magnitude of the plant and equipment 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 an enterprise's operations 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.

11.4 Appendix A: Putting It All Together: Corporate Financial Statements

The core financial statements connect to complete an overall picture of the company's operations and its current financial state. It is important to understand how these reports connect; therefore, a review of some simplified financial statements for Wellbourn Services Ltd. is presented below.

Wellbourn Services Ltd. Statement of Income For the Year Ended December 31, 2015			
Revenues:			
Sales	\$	250,000	
Services revenue		53,000	
Total revenue		303,000	\$ 303,000
Operating expenses:			
Cost of good sold		100,000	
Depreciation expense		3,000	
Rent expense		20,000	
Salaries expense		65,000	
Total operating expense		188,000	
Income from continuing operations before tax		115,000	
Income tax		34,500	
Net income		80,500	\$ 80,500
Earnings per share			\$ 24

Wellbourn Services Ltd. Statement of Stockholders' Equity For the Year Ended December 31, 2015			
	Common Stock	Retained Earnings	Total
Balance, January 1	\$200,000	\$75,000	\$275,000
Net income		80,500	80,500
Issuance of common stock	10,000		10,000
Dividends declared		(50,000)	(50,000)
Balance, December 31	\$210,000	\$105,500	\$315,500



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Wellbourn Services Ltd. Statement of Financial Position December 31, 2015			
Assets Current assets Cash Accounts receivable (net) Inventory Total current assets Investments Property, plant, and equipment (net) Intangible assets Total assets	\$135,500 225,000 130,000 490,500 100,000 172,500 15,000 <u>\$778,000</u>	Liabilities Current liabilities Accounts payable Accrued liabilities Total current liabilities Bonds payable Total liabilities Equity Common stock Retained earnings Total equity Liabilities and equity	\$ 77,500 225,000 302,500 160,000 462,500 210,000 105,500 315,500 <u>\$778,000</u>

Wellbourn Services Ltd. Statement of Cash Flows For the Year Ended December 31, 2015			
Cash flows from operating activities Net income Adjustments for non-cash effects: Plus: Depreciation Adjustments to reconcile net income cash provided by operating activities: Increase in accounts receivable Increase in inventory Decrease in accounts payable Decrease in accrued liabilities Net cash used by operating activities Cash flows from investing activities Purchase of equipment Net cash used by investing activities Cash flows from financing activities Payment of dividends Proceeds from bonds Net cash received by financing activities Net increase in cash Cash balance, January 1 Cash balance, December 31	\$ 80,500 3,000 (50,000) (34,700) (20,000) (5,000) (26,200) (25,000) (25,000) (50,000) 160,000 110,000 58,800 76,700 <u>\$135,500</u>		

As can be seen from the flow of the numbers above, the net income from the statement of income is closed to retained earnings.

The statement of shareholders' equity total column flows to the equity section of the balance sheet. Finally, the **statement of cash flows** (SCF) ending cash balance must be equal to the cash ending balance reported in the balance sheet, which completes the loop of interconnecting accounts and amounts.

Statement of Income with Discontinued Operations

Single-step and Multiple-step Statement of Income

Companies can choose whichever format best suits their reporting needs. Smaller companies tend to use the simpler single-step format, while larger companies tend to use the multiple-step format.

The Wellbourn Services Ltd. statement of income, shown earlier, is an example of a typical **single-step** income statement. For this type of statement, revenue and expenses are each reported in the two sections for continuing operations. Discontinued operations are separately reported below the continuing operations. The separate disclosure and format for the discontinued operations section is a reporting requirement and is discussed and illustrated below. The single-step format makes the statement simple to complete and keeps sensitive information out of the hands of competitive companies, but provides little in the way of analytical detail.

The **multiple-step** income statement format provides much more detail. Below is an example of a multiple-step statement of income for Toulon Ltd. for the year ended December 31, 2015.

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Multiple-step format - typical sections and subtotals:

Heading		Toulon Ltd. Statement of Income For the Year Ended December 31, 2015		
		In \$000's except per share amounts	2015	2014
Gross profit section with subtotal	{	Sales	\$6,260	\$5,008
		Cost of goods sold	2,500	1,750
		Gross profit	3,760	3,258
Operating expenses with subtotal	{	Operating expenses		
		Salaries and benefits expense	650	520
		Depreciation expense	35	20
		Travel and entertainment expense	150	120
		Advertising expense	55	45
		Freight-out expenses	10	8
		Supplies and postage expense	5	4
		Telephone and internet expense	15	12
		Legal and professional expenses	8	6
Insurance expense	6	5		
		934	740	
		2,826	2,518	
Non-operating section with subtotal	{	Other revenue and expense		
		Interest income from investments	5	5
		Gain from sale of trade investments	4	0
		Interest expense	(2)	(3)
		7	2	
		2,833	2,520	
Income tax expense	→	Income tax expense	850	680
Subtotal from continuing operations	→	Income from continuing operations	1,983	1,840
Discontinued	{	Discontinued operations		
		Loss from disposal of division (net of tax of \$63,000)	(147)	0
		(147)	0	
Net income (profit or loss)		Net income	1,836	1,840
Earnings per share	{	Basic earnings per share		
		Continuing operations	\$ 16.32	\$13.25
		Discontinued operations	(1.21)	0

The multiple-step format with its section subtotals makes performance analysis and ratio calculations such as gross profit margins easier to complete and makes it easier to assess the company's future earnings potential. The multiple-step format also enables investors and creditors to evaluate company performance results from continuing and ongoing operations having a high predictive value separately, compared to non-operating or unusual items having little predictive value.

Operating Expenses

As discussed in an earlier chapter, expenses from operations can be reported by their nature and, optionally, by function. **Expenses by nature** relate to the type of expense or the source of expense such as salaries, insurance, advertising, travel and entertainment, supplies expense, depreciation and amortization, and utilities expense, to name a few. The statement for Toulon Ltd. is an example of reporting expenses by nature.

Expenses by function relate to how various expenses are incurred within the various departments and activities of a company such as selling and administrative expenses.

The sum of all the revenues, expenses, gains, and losses to this point represents the **income or loss from continuing operations**. This is a key component used in performance analysis.

Income Tax Allocations

This is the process of allocating income tax expense to various categories within the statement of income such as income from continuing operations before taxes and discontinued operations. The purpose of these allocations is to make the information within the statements more informative and complete. For example, Toulon's statement of income for the year ending December 31, 2015, allocates tax at a rate of 30% to the following:

- Income from continuing operations of \$850,000 ($\$2,833,000 \times 30\%$)
- Loss from disposal of discontinued operations of \$63,000

Discontinued operations

Sometimes companies will sell or shut down certain business operations because the operating segment is no longer profitable, or they may wish to focus their resources on other business operations. Examples are a major business line or geographical area. If the discontinued operation has not yet been sold, then *there must be a formal plan in place to dispose of the component within one year and to report it as a discontinued operation*.

The items reported in this section of the statement of income are to be reported net of tax, with the tax amount disclosed.

Earnings per Share

Basic earnings per share represent the amount of income attributable to each outstanding common share, as shown in the calculation below:

$$\text{Basic earnings per share (EPS)} = \frac{\text{Net income} - \text{preferred dividends}}{\text{Number of common shares outstanding}}$$

The earnings per share amounts are not required for private companies. This is because ownership of privately owned companies is often held by only a few investors, compared to publicly-traded companies where shares are held by many investors.

Basic earnings per share are to be reported on the face of the statement of income as follows:

- Basic EPS from continuing operations
- Basic EPS from discontinued operations, if any

If the outstanding common shares for Toulon was 121,500, the EPS from continuing operations would be \$16.32 ($1,983,000 \div 121,500$) and \$(1.21) from discontinued operations ($\$147,000 \text{ loss} \div 121,500$), as reported in their statement above. There is also a requirement to report diluted EPS but this is beyond the scope of this course.

Summary of Chapter 11 Learning Objectives

L01 – Explain the purpose of the statement of cash flows.

The statement of cash flows is one of the four financial statements. It highlights the net increase or decrease in the cash and cash equivalents balance during the accounting period, and details the sources and uses of cash that caused that change.

L02 – Prepare a statement of cash flows.

The operating activities section of the statement of cash flows can be prepared using the direct or indirect method. This textbook focuses only on the indirect method. The result of both methods is identical; it is only how the calculations are performed that differs. The operating activities section begins with accrual net income and by adding back depreciation expense, and adding back/subtracting losses/gains on disposal of non-current assets, and then adjusting for changes in current assets, current liabilities, in order to arrive at net income on a cash basis. The investing activities section analyzes cash inflows and outflows from the sale and purchase of non-current assets. The finance activities section details the cash inflows and outflows resulting from the issue and payment of loans, issue and repurchase of shares, and payment of dividends to shareholders.

L03 – Interpret a statement of cash flows.

A statement of cash flows contributes to the decision-making process by explaining the sources and uses of cash. The operating activities section can signal potential areas of concern by focusing on differences between accrual net income and cash basis net income. The investing activities section can highlight if cash is being used to acquire assets for generating revenue, while the financing activities section can identify where the cash to purchase those assets might be coming from. Those who use financial statements can focus on the effectiveness of management's investing and financing decisions and how these may affect future financial performance.

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. 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?
5. Why may a change in the Short-term investments account not affect the amount of cash provided by operations?
6. 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?
7. Describe common transactions affecting balance sheet accounts that use cash. Explain how these items are analyzed to identify cash flows that have occurred during the year.

Exercises

EXERCISE 11–1 (LO1,2)

The following transactions were carried out by Crozier Manufacturing Limited.

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. For non-cash investing/financing activities that are disclosed in a note to the financial statements, indicate (NC).

- _____ A payment of \$5,000 was made on a bank loan.
- _____ Depreciation expense for equipment was \$1,000.
- _____ \$10,000 of common stock 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.
- _____ \$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.
- _____ A 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 amortized for \$500.
- _____ Bonds were issued for \$50,000 cash.

EXERCISE 11-2 (LO2)

Assume the following selected income statement and balance sheet information for Larriet Inc.:

Larriet Inc. Balance Sheet Information (000's)			Larriet Inc. Income Statement Year Ended December 31, Year 5 (000's)		
	December 31,				
	Year 5	Year 4			
Cash	\$40	\$22	Sales revenue		\$385
Accounts receivable	34	39	Cost of goods sold	\$224	
Merchandise inventory	150	146	Other operating expenses	135	
Prepaid expenses	3	2	Depreciation expense	25	
Machinery	125	138	Loss on sale of machinery	3	(387)
Accumulated depreciation	55	42	Net loss	<u>3</u>	<u>\$2</u>
Accounts payable	29	31			
Dividends payable	1	5			
Bonds payable	15	38			
Common stock	208	150			
Retained earnings	44	81			

Additional information:

- i. Machinery costing \$20 thousand was sold for cash.
- ii. Machinery was purchased for cash.
- iii. The change in retained earnings was caused by the net loss and the declaration of dividends.

Required:

- a. Reconstruct the journal entry regarding the sale of the machinery.
- b. Reconstruct the entry regarding the purchase of machinery.
- c. Reconstruct the entry regarding the declaration of dividends.
- d. Reconstruct the entry regarding the payment of dividends.
- e. Prepare the statement of cash flows for the year ended December 31, Year 5.

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The comparative statement of financial positions of Glacier Corporation showed the following at December 31.

	2019	2018
<i>Debits</i>		
Cash	\$ 10	\$ 8
Accounts receivable	18	10
Merchandise inventory	24	20
Land	10	24
Plant and equipment	94	60
	<u>\$156</u>	<u>\$122</u>
 <i>Credits</i>		
Accumulated depreciation	\$ 14	\$ 10
Accounts payable	16	12
Non-current borrowings	40	32
Common stock	60	50
Retained earnings	26	18
	<u>\$156</u>	<u>\$122</u>

The statement of profit and loss for 2019 was as follows:

Glacier Corporation
Statement of Profit and Loss
For the Year Ended December 31, 2019

Sales		\$ 300
Cost of sales		200
Gross profit		<u>100</u>
Operating expenses		
Rent	\$77	
Depreciation	6	83
Income from operations		<u>17</u>
Other gains (losses)		
Gain on sale of equipment	1	
Loss on sale of land	(4)	(3)
Net income		<u>\$ 14</u>

Additional information:

- i. Cash dividends paid during the year amounted to \$6.

- ii. Land was sold during the year for \$10. It was originally purchased for \$14.
- iii. Equipment was sold during the year that originally cost \$7. Carrying amount was \$5.
- iv. Equipment was purchased for \$41.

Required:

- a. Prepare a statement of cash flows for the year ended December 31, 2019.
- b. Comment on the operating, financing, and investing activities of Glacier Corporation for the year ended December 31, 2019.

EXERCISE 11–4 (LO2,3)

The following trial balance has been prepared from the ledger of Lelie Ltd. at December 31, 2019, following its first year of operations.

	<i>(in \$000's)</i>	
	<i>Debits</i>	<i>Credits</i>
Cash	\$ 40	
Accounts receivable	100	
Merchandise inventory	60	
Prepaid rent	10	
Equipment	160	
Accumulated depreciation – equipment		\$ 44
Patent	-0-	
Accounts payable		50
Dividends payable		10
Income taxes payable		8
Note payable – due 2023		80
Common stock		140
Retained earnings		-0-
Cash dividends	20	
Sales		225
Depreciation	44	
Cost of goods sold	100	
Selling and administrative expenses	28	
Income taxes expense	10	
Gain on sale of land		15
	\$ 572	\$ 572

Additional information:

- i. A patent costing \$30,000 was purchased, and then sold during the year for \$45,000.
- ii. Lelie assumed \$100,000 of long-term debt during the year.
- iii. Some of the principal of the long-term debt was repaid during the year.
- iv. Lelie issued \$40,000 of common stock for equipment. Other equipment was purchased for \$120,000 cash. No equipment was sold during the year.

Required:

- a. Prepare a statement of cash flows for the year ended December 31, 2019.
- b. Explain what the statement of cash flows tells you about Lelei Ltd. at the end of December 31, 2019.

EXERCISE 11–5 (LO2,3)

The accounts balances of ZZ Corp. at December 31 appear below:

	<i>2019</i>	<i>2018</i>
<i>Debits</i>		
Cash	\$ 40,000	\$ 30,000
Accounts receivable	40,000	30,000
Merchandise inventory	122,000	126,000
Prepaid expenses	6,000	4,000
Land	8,000	30,000
Buildings	220,000	160,000
Equipment	123,000	80,000
	<u>\$559,000</u>	<u>\$460,000</u>
<i>Credits</i>		
Accounts payable	\$ 48,000	\$ 50,000
Accumulated depreciation	86,000	70,000
Note payable, due 2023	70,000	55,000
Common stock	300,000	250,000
Retained earnings	55,000	35,000
	<u>\$559,000</u>	<u>\$460,000</u>

The following additional information is available:

- i. Net income for the year was \$40,000; income taxes expense was \$4,000 and depreciation recorded on building and equipment was \$27,000.
- ii. Equipment costing \$30,000 was purchased; one-half was paid in cash and a 4-year promissory note signed for the balance.
- iii. Equipment costing \$50,000 was purchased in exchange for 6,000 shares of common stock.
- iv. Equipment was sold for \$15,000 that originally cost \$37,000. The gain/loss was reported in net income.
- v. An addition to the building was built during the year.
- vi. Land costing \$22,000 was sold for \$26,000 cash during the year. The related gain was reported in the income statement.
- vii. Cash dividends were paid.

Required:

- a. Prepare a statement of cash flows for the year ended December 31, 2019.
- b. What observations about ZZ Corp. can be made from this statement?

EXERCISE 11–6 (LO2,3)

Below is a comparative statement of financial position for Egglestone Vibe Inc. as at December 31, 2016:

Egglestone Vibe Inc.
Statement of Financial Position

		<i>December 31</i>	
		<i>2016</i>	<i>2015</i>
Assets:			
Cash		\$ 166,400	\$ 146,900
Accounts receivable		113,100	76,700
Inventory		302,900	235,300
Land		84,500	133,900
Plant assets		507,000	560,000
Accumulated depreciation – plant assets		(152,100)	(111,800)
Goodwill		161,200	224,900
Total assets		\$1,183,000	\$1,265,900
Liabilities and Equity:			
Accounts payable		38,100	66,300
Dividend payable		19,500	41,600
Notes payable		416,000	565,500
Common stock		322,500	162,500
Retained earnings		374,400	370,200
Accumulated other comprehensive income		12,500	59,800
Total liabilities and equity		\$1,183,000	\$1,265,900

Additional information:

- i. Net income for the 2016 fiscal year was \$24,700. Depreciation expense was \$55,900.
- ii. During 2016, land was purchased for cash of \$62,400 for expansion purposes. Six months later, another section of land with a carrying value of \$111,800 was sold for \$150,000 cash.
- iii. On June 15, 2016, notes payable of \$160,000 was retired in exchange for the issuance of common stock. On December 31, 2016, notes payable for \$10,500 were issued for additional cash flow.
- iv. At year-end, plant assets originally costing \$53,000 were sold for \$27,300, since they were no longer contributing to profits. At the date of the sale, the accumulated depreciation for the asset sold was \$15,600.
- v. Cash dividends were declared and a portion of those were paid in 2016.
- vi. Goodwill impairment loss was recorded in 2016 to reflect a decrease in the recoverable amount of goodwill. (Hint: Review impairment of long-lived assets in Chapter 8 of the text.)

Required:

- a. Prepare a statement of cash flows for the year ended December 31, 2016.
- b. Analyze and comment on the results reported in the statement.

EXERCISE 11-7 (LO2)

Below is a comparative statement of financial position for Nueton Ltd. as at June 30, 2016:

Nueton Ltd. Balance Sheet		
<i>June 30</i>		
	<i>2016</i>	<i>2015</i>
Cash	\$ 55,800	\$ 35,000
Accounts receivable (net)	80,000	62,000
Inventory	66,800	96,800
Prepaid expenses	5,400	5,200
Equipment	130,000	120,000
Accumulated depreciation	28,000	10,000
Accounts payable	6,000	32,000
Wages payable	7,000	16,000
Income taxes payable	2,400	3,600
Notes payable (long-term)	40,000	70,000
Common stock	230,000	180,000
Retained earnings	24,600	7,400

Nueton Ltd. Income Statement For Year Ended June 30, 2016	
Sales	\$500,000
Cost of goods sold	300,000
Gross profit	<u>200,000</u>
Operating expenses:	
Depreciation expense	58,600
Other expenses	80,000
Total operating expenses	<u>138,600</u>
Income from operations	61,400
Gain on sale of equipment	<u>2,000</u>
Income before taxes	63,400
Income taxes	19,020
Net income	<u><u>\$ 44,380</u></u>

Additional Information:

- i. A note is retired at its carrying value.
- ii. New equipment is acquired during 2016 for \$58,600.
- iii. The gain on sale of equipment costing \$48,600 during 2016 is \$2,000.

Required: Use the Neuton Ltd. information given above to prepare a statement of cash flows for the year ended June 30, 2016.

EXERCISE 11–8 (LO2)

The trial balance for Yucotin Corp. is shown below. All accounts have normal balances.

Yucotin Corp.		Trial Balance	
		<i>December 31</i>	
		<i>2016</i>	<i>2015</i>
Cash	\$	248,000	\$ 268,000
Accounts receivable		62,000	54,000
Inventory		406,000	261,000
Equipment		222,000	198,000
Accumulated depreciation, equipment		(104,000)	(68,000)
Accounts payable		46,000	64,000
Income taxes payable		18,000	16,000
Common stock		520,000	480,000
Retained earnings		116,000	58,000
Sales		1,328,000	1,200,000
Cost of goods sold		796,000	720,000
Depreciation expense		36,000	30,000
Operating expenses		334,000	330,000
Income taxes expense		28,000	25,000

Additional information:

- i. Equipment is purchased for \$24,000 cash.
- ii. 16,000 common shares are issued for cash at \$2.50 per share.

iii. Declared and paid \$74,000 of cash dividends during the year.

Required: Prepare a statement of cash flows for 2016.

EXERCISE 11–9 (LO2)

Below is an unclassified balance sheet and income statement for Tubric Corp. for the year ended December 31, 2016:

Tubric Corp.		Balance Sheet	
		<i>December 31</i>	
		2016	2015
Cash		\$ 40,000	\$ 20,800
Petty cash		14,400	8,000
Accounts receivable		73,600	31,200
Inventory		95,200	69,600
Long-term investment		0	14,400
Land		64,000	64,000
Building and equipment		370,400	380,000
Accumulated depreciation		98,400	80,800
Total assets		\$559,200	\$507,200
Accounts payable		16,600	31,500
Dividends payable		1,000	500
Bonds payable		20,000	0
Preferred stock		68,000	68,000
Common stock		338,400	338,400
Retained earnings		115,200	68,800
Total liabilities and equity		\$559,200	\$507,200

Tubric Corp. Income Statement For the Year Ended December 31, 2016		
Sales		\$720,000
Cost of goods sold		480,000
Gross profit		<u>240,000</u>
Operating expenses	\$110,600	
Depreciation expense	34,400	
Loss on sale of equipment	3,200	
Income tax expense	15,000	
Gain on sale of long-term investment	(9,600)	153,600
Net income		<u><u>\$ 86,400</u></u>

During 2016, the following transactions occurred:

- i. Purchased equipment for \$16,000 cash.
- ii. Sold the long-term investment on January 2, 2016, for \$24,000.
- iii. Sold equipment originally costing \$25,600 for \$5,600 cash. Equipment had \$16,800 of accumulated depreciation at the time of the sale.
- iv. Issued \$20,000 of bonds payable at par.

Required:

- a. Calculate the cash paid dividends for 2016.
- b. Prepare a statement of cash flows for Tubric Corp. for the year ended December 31, 2016.

Problems

PROBLEM 11–1 (LO2)

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	<u>\$33</u>

Required:

1. Assume the equipment that was sold for a gain of \$8 originally cost \$20, had a book value 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.

PROBLEM 11–2 (LO2)

Assume the following selected income statement and balance sheet information for the year ended December 31, 2019:

Sales	\$200
Cost of Goods Sold	<u>120</u>
Gross Profit	80
<i>Operating Expenses</i>	
Rent	<u>30</u>
Net Income	<u>\$50</u>

	2019	2018
	Dr. (Cr.)	Dr. (Cr.)
Cash	\$100	\$86
Accounts Receivable	60	40
Inventory	36	30
Prepaid Rent	10	-0-
Retained Earnings	(206)	(156)

Required:

1. Reconcile the change in retained earnings from December 31, 2018 to December 31, 2019.
2. Calculate cash flow from operating activities.

PROBLEM 11–3 (LO2)

Assume the following income statement and balance sheet information:

Revenue	\$0-
Depreciation Expense	<u>(100)</u>
Net Loss	<u><u>\$(100)</u></u>

	<i>2019</i>	<i>2018</i>
	<i>Dr. (Cr.)</i>	<i>Dr. (Cr.)</i>
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, 2019.

PROBLEM 11–4 (LO2)

Assume the following income statement and balance sheet information:

Service Revenue (all cash)	\$175
Operating Expenses	
Salaries (all cash)	85
Net Income	<u>\$90</u>

	2019	2018
	<i>Dr. (Cr.)</i>	<i>Dr. (Cr.)</i>
Cash	\$1,350	\$1,800
Borrowings	(800)	(1,300)
Retained Earnings	(550)	(500)

Other information: All dividends were paid in cash.

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.

PROBLEM 11–5 (LO2)

The following transactions occurred in the Hubris Corporation during the year ended December 31, 2019.

(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) Amortization of patents	5
(g) Payment of non-current borrowings	250
(h) Issuance of common stock for cash	500
(i) Payment of cash dividends	30

Other information: Cash at December 31, 2019 was \$1,200.

Required: Prepare a statement of cash flows.

PROBLEM 11–6 (LO2,3)

During the year ended December 31, 2019, 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) Amortization of patent, \$100
- (f) Non-current borrowings paid in cash, \$5,000
- (g) Issuance of common stock for cash, \$12,500
- (h) Equipment, cost \$10,000, acquired by issuing common stock
- (i) At the end of the fiscal year, a \$5,000 cash dividend was declared but not paid.
- (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, 2019 was \$1,000; increase in cash during the year, \$37,900
- (m) There was no change in income taxes owing.

Required:

1. Prepare a statement of cash flows.
2. Explain what this statement tells you about Wheaton Co. Ltd.

Chapter 12

Financial Statement Analysis

Financial statements can be used by stockholders, creditors, and other interested parties to analyze a corporation's liquidity, profitability, and financial structure compared to prior years and other similar companies. As part of this analysis, financial evaluation tools are used. Some of these tools are discussed in this chapter.

Chapter 12 Learning Objectives

LO1 – Describe ratio analysis, and explain how the liquidity, profitability, leverage, and market ratios are used to analyze and compare financial statements.

LO2 – Describe horizontal and vertical trend analysis, and explain how they are used to analyze financial statements.

Concept Self-Check

Use the following as a self-check while working through Chapter 12.

1. What is working capital?
2. What is meant by *liquidity*?
3. What are some ratios commonly used to evaluate liquidity?
4. What is a company's revenue operating cycle and how is it measured?
5. What profitability ratios can be used to evaluate a corporation?
6. How is the amount of stockholder claims against a corporation's assets compared to the amount of creditor claims?
7. What are the relative advantages of short-term and long-term debt?
8. What are some measures used to evaluate the future financial prospects of a company for investors?

9. What is a *horizontal analysis*? How does it differ from a *vertical analysis*?
10. What is a common-size analysis?

NOTE: The purpose of these questions is to prepare you for the concepts introduced in the chapter. Your goal should be to answer each of these questions as you read through the chapter. If, when you complete the chapter, you are unable to answer one or more the Concept Self-Check questions, go back through the content to find the answer(s). Solutions are not provided to these questions.

12.1 Introduction to Ratio Analysis

LO1 – Describe ratio analysis, and explain how the liquidity, profitability, leverage, and market ratios are used to analyze and compare financial statements.

A common way to evaluate financial statements is through **ratio analysis**. A *ratio* is a relationship between two numbers of the same kind. For example, if there are two apples and three oranges, the ratio of the number of apples to the number of oranges is 2:3 (read as “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 percentage studied in Chapter 6, also known as the gross profit ratio, expresses the numerical relationship between gross profit and sales. If a company has a gross profit ratio of 0.25:1, this means that for every \$1 of sales, the company earns, on average, \$0.25 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. One of the main purposes of ratio analysis is to highlight areas that require further analysis and investigation. Ratio analysis alone will not provide a definitive financial evaluation. It is used as one analytic tool, which, when combined with informed judgment, offers insight into the financial performance of a business.

For example, one business may 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

¹Any ratio in the form X:1 can be expressed as a percentage by multiplying both the numerator and denominator by 100. For example, a 0.25:1 ratio would equal 25% $[(0.25 \times 100)/(1 \times 100) = 25/100 = 25\%]$

doing relative to others, or to identify 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 from 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 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.

In this chapter, financial ratios will be used to provide insights into the financial performance of Big Dog Carworks Corp. (BDCC). The ratios will focus on financial information contained within the income statement, statement of stockholders' equity, and balance sheet of BDCC for the three years 2019, 2020, and 2021. This information is shown below. Note that figures in these statements are reported in thousands of dollars (000s). ***For consistency, all final calculations in this chapter are rounded to two decimal places.***

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Big Dog Carworks Corp. Balance Sheet At December 31 (\$000s)

	<i>Assets</i>		
	<i>2021</i>	<i>2020</i>	<i>2019</i>
<i>Current</i>			
Cash	\$ 20	\$ 30	\$ 50
Short-term Investments	36	31	37
Accounts Receivable	544	420	257
Inventories	833	503	361
	<u>1,433</u>	<u>984</u>	<u>705</u>
<i>Property, Plant, and Equipment, net</i>	1,053	1,128	712
Total Assets	<u>\$ 2,486</u>	<u>\$ 2,112</u>	<u>\$ 1,417</u>
	<i>Liabilities</i>		
<i>Current</i>			
Borrowings	\$ 825	\$ 570	\$ 100
Accounts Payable	382	295	\$ 219
Income Taxes Payable	48	52	\$ 50
	<u>1,255</u>	<u>917</u>	<u>369</u>
	<i>Equity</i>		
Common Stock	1,063	1,063	963
Retained Earnings	168	132	85
	<u>1,231</u>	<u>1,195</u>	<u>1,048</u>
Total Liabilities and Equity	<u>\$ 2,486</u>	<u>\$ 2,112</u>	<u>\$ 1,417</u>

Big Dog Carworks Corp. Income Statement For the Year Ended December 31 (\$000s)

	<i>2021</i>	<i>2020</i>	<i>2019</i>
Sales (net)	\$ 3,200	\$ 2,800	\$ 2,340
Cost of Goods Sold	2,500	2,150	1,800
Gross Profit	<u>700</u>	<u>650</u>	<u>540</u>
<i>Operating Expenses</i>			
Selling, General, and Administration	212	183	154
Employee Benefits	113	109	119
Depreciation	75	84	63
	<u>400</u>	<u>376</u>	<u>336</u>
Income from Operations	300	274	204
<i>Financing Costs</i>			
Interest	89	61	-0-
Income Before Income Taxes	<u>211</u>	<u>213</u>	<u>204</u>
Income Taxes	95	96	92
Net Income	<u>\$ 116</u>	<u>\$ 117</u>	<u>\$ 112</u>

12.2. Liquidity Ratios: Analyzing Short-term Cash Needs ■ 453

Big Dog Carworks Corp.
Statement of Shareholders' Equity
For the Year Ended December 31
(\$000s)

	2021			2020	2019
	<i>Share Capital</i>	<i>Retained Earnings</i>	<i>Total Equity</i>	<i>Total Equity</i>	<i>Total Equity</i>
Opening Balance	\$1,063	\$132	\$1,195	\$1,048	\$ 43
Common Shares Issued				100	953
Net Income		116	116	117	112
Dividends Declared		(80)	(80)	(70)	(60)
Ending Balance	\$1,063	\$168	\$1,231	\$1,195	\$1,048

Assume that 100,000 common shares are outstanding at the end of 2019, 2020, and 2021. Shares were issued in 2020, but at the end of year the number of outstanding stock was still 100,000.

There are four major types of financial ratios: a) *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); b) *profitability ratios* that measure various levels of return on sales, total assets employed, and stockholder investment; c) *leverage ratios* that measure the financial structure of a corporation, its amount of relative debt, and its ability to cover interest expense; and d) *market ratios* that measure financial returns to stockholders, and perceptions of the stock market about the corporation's value.

Initial insights into the financial performance of BDCC can be derived from an analysis of relative amounts of current and non-current debt. This analysis is addressed in the following sections.

12.2 Liquidity Ratios: Analyzing Short-term Cash Needs

Current (Short-term) versus Non-current (Long-term) Debt

Short-term and long-term financing strategies both 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 on long-term debt. An increase in the proportion of short-term debt is more risky because it must be renewed and therefore renegotiated more frequently.

The advantages of long-term debt 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 that is often lacking with short-term debt. The disadvantages of long-term debt are that interest payments must be made at specified times and the amounts owing may be secured by assets of the company.

Analyzing Financial Structure

As a general rule, long-term financing should be used to finance long-term assets. Note that in BDCC's case, property, plant, and equipment assets amount to \$1,053,000 at December 31, 2021 yet the firm has no long-term liabilities. This is unusual. An analysis of the company's balance sheet reveals the following:

	(000s)		
	2021	2020	2019
Current Liabilities	\$1,255	\$917	\$369
Non-current Liabilities	-0-	-0-	-0-

2021 information indicates that BDCC's 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 is that management will likely need to replace current liabilities with new liabilities. If creditors become unwilling to do this, the ability of BDCC to pay its short-term creditors may be compromised. As a result, the company may experience a liquidity crisis — the inability to pay its current liabilities as they come due. The ratios used to evaluate liquidity of a corporation are discussed below.

Even though a company may be earning net income each year (as in BDCC'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 related to current and non-current liabilities and equity.

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.

Equity

- Shareholders may be unwilling to invest in additional common stock of the company.
- Shareholders risk the loss of their investments if the company declares bankruptcy.

There are several ratios that can be used to analyze the liquidity of a company.

Working Capital

Working capital is the difference between a company's current assets and current liabilities at a point in time. BDCC's working capital calculation is as follows:

	(000s)		
	2021	2020	2019
<i>Current Assets</i>			
Cash	\$ 20	\$ 30	\$ 50
Short-term Investments	36	31	37
Accounts Receivable	544	420	257
Inventories	833	503	361
Total Current Assets (a)	1,433	984	705
<i>Current Liabilities</i>			
Borrowings	825	570	100
Accounts Payable	382	295	219
Income Taxes Payable	48	52	50
Total Current Liabilities (b)	1,255	917	369
Net Working Capital (a-b)	\$ 178	\$ 67	\$ 336

In the schedule above, working capital amounts to \$178,000 at December 31, 2021. Between 2019 and 2021, working capital decreased by \$158,000 (\$336,000 – 178,000). BDCC is less liquid in 2021 than in 2019, though its liquidity position has improved since 2020 when it was only \$67,000.

In addition to 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 BDCC able to repay short-term creditors? The **current ratio** can help answer this question. It expresses working capital as a proportion of current assets to current liabilities and is calculated as:

$$\frac{\text{Current assets}}{\text{Current liabilities}}$$

The relevant BDCC financial data required to calculate this ratio is taken from the balance sheet, as follows:

		(000s)		
		<u>2021</u>	<u>2020</u>	<u>2019</u>
Current Assets	(a)	\$1,433	\$984	\$705
Current Liabilities	(b)	1,255	917	369
Current Ratio	(a/b)	1.14:1	1.07:1	1.91:1

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, 2021, \$1.14 of current assets exist 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 BDCC over the last three years? The ratio declined between 2019 and 2020 (from 1.91 to 1.07), then recovered slightly between the end of 2020 and 2021 (from 1.07 to 1.14). The overall decline may be a cause for concern, as it indicates that in 2021 BDCC had fewer current assets to satisfy current liabilities as they became due.

A second interpretation aid would be to compare BDCC’s current ratio to a similar company or that of BDCC’s industry as a whole. Information is available from 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 recognized 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, both Corporation A and Corporation B have a 2:1 current ratio. Are the companies equally able to repay their short-term creditors?

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	<i>Corp. A</i>	<i>Corp. B</i>
<i>Current Assets</i>		
Cash	\$ 1,000	\$ 10,000
Accounts Receivable	2,000	20,000
Inventories	37,000	10,000
Total Current Assets	\$ 40,000	\$ 40,000
<i>Current Liabilities</i>		
	\$ 20,000	\$ 20,000
Current Ratio	2:1	2:1

The companies have the same dollar amounts of current assets and current liabilities. However, they have different short-term debt paying abilities because Corporation B has more liquid current assets than does Corporation A. Corporation B has less inventory (\$10,000 vs. \$37,000) and more in cash and accounts receivable. If Corporation A needed more cash to pay short-term creditors quickly, it would have to sell inventory, likely at a lower-than-normal gross profit. So, 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 a company's ability to pay its debts as they become due. This weakness of the current ratio is partly remedied by the acid-test ratio discussed below.

Acid-Test Ratio

A more rigid test of liquidity is provided by the **acid-test ratio**; also called the **quick ratio**. To calculate this ratio, current assets are separated into *quick* current assets and *non-quick* current assets.

Quick Current Assets

Cash Short-term investments 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 cannot be converted into cash in a short period of time, if at all. Therefore, they are excluded in the calculation of this ratio. The acid-test ratio is calculated as:

$$\frac{\text{Quick current assets}}{\text{Current liabilities}}$$

The BDCC information required to calculate this ratio is:

		(000s)		
		<u>2021</u>	<u>2020</u>	<u>2019</u>
Cash		\$ 20	\$ 30	\$ 50
Short-term investments		36	31	37
Accounts receivable		544	420	257
Quick current assets	(a)	<u>\$ 600</u>	<u>\$ 481</u>	<u>\$ 344</u>
Current liabilities	(b)	<u>\$ 1,255</u>	<u>\$ 917</u>	<u>\$ 369</u>
Acid-test ratio	(a/b)	<u>0.48:1</u>	<u>0.52:1</u>	<u>0.93:1</u>

This ratio indicates how many quick asset dollars 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 appropriate in all situations. A lower ratio than 1:1 can often be found in successful companies. However, BDCC's acid-test ratio trend is worrisome.

There were \$0.48 of quick assets available to pay each \$1 of current liabilities in 2021. This amount appears inadequate. In 2020, the acid-test ratio of \$0.52 also seems to be too low. The 2019 ratio of \$0.93 is less than 1:1 but may be reasonable. Of particular concern to financial analysts would be BDCC's 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. Slow collection of receivables can result in a shortage of cash to pay current obligations. The effectiveness of management decisions relating to receivables can be analyzed by calculating the *accounts receivable collection period*.

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 BDCC's case, the sales terms are *net 30* meaning that amounts are due within 30 days of the invoice date).

The accounts receivable collection period is calculated as:

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$$\frac{\text{Average net accounts receivable}^2}{\text{Net credit sales (or revenues)}} \times 365$$

The BDCC financial information required to make the calculation is shown below (the 2019 calculation cannot be made because 2018 Accounts Receivable amount is not available). Assume all of BDCC's sales are on credit.

		(000s)	
		2021	2020
Net credit sales	(a)	\$3,200	\$2,800
Average accounts receivable [(Opening balance + closing balance)/2]	(b)	\$ 482 ³	\$ 338.5 ⁴
Average collection period [(b/a) × 365 days]		54.98 days	44.13 days

When Big Dog's 30-day sales terms are compared to the 54.98-day collection period, it can be seen that an average 24.98 days of sales (54.98 days – 30 days) have gone uncollected beyond the regular credit period in 2021. The collection period in 2021 is increasing compared to 2020. Therefore, some over-extension of credit and possibly ineffective collection procedures are indicated by this ratio. Quicker collection would improve BDCC's cash position. It may be that older or uncollectible amounts are buried in the total amount of receivables; this would have to be investigated.

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 2020 and 2021.

Number of Days of Sales in Inventory

The effectiveness of management decisions relating to inventory can be analyzed by calculating the number of days of sales that can be serviced by existing inventory levels.

The **number of days of sales in inventory** is calculated by dividing ending inventory by the cost of goods sold and multiplying the result by 365 days.

²Average 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.

³(\$420 + 544)/2 = \$482

⁴(\$257 + 420)/2 = \$338.5

$$\frac{\text{Ending inventory}}{\text{Cost of goods sold}} \times 365$$

The BDCC financial data for 2020 and 2021 required to calculate this ratio are shown below.

		(000s)	
		2021	2020
Cost of goods sold	(a)	\$2,500	\$2,150
Inventory	(b)	\$ 833	\$ 503
Number of days sales in inventory [(b/a) × 365 days]		121.62 days	85.39 days

The calculation indicates that BDCC is investing more in inventory in 2021 than in 2020 because there are 121.62 days of sales in inventory in 2021 versus 85.39 days in 2020. BDCC has approximately 4 months of sales with its existing inventory (122 days represents about 4 months). The increase from 2020 to 2021 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. However, lower inventory levels can have negative consequences since items that customers want to purchase may not be in inventory resulting in lost sales.

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. Increasing levels may indicate that inventory is becoming obsolete (consider clothing) or deteriorating (consider perishable groceries). Obsolete and/or deteriorating inventories may be 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? Remember that ratio analyses identify areas that require investigation. The resulting investigation will guide any required action.

The Revenue Portion of the Operating Cycle

As discussed in Chapter 4, the sale of inventory and resulting collection of receivables are part of a business's operating cycle as shown in Figure 12.1.

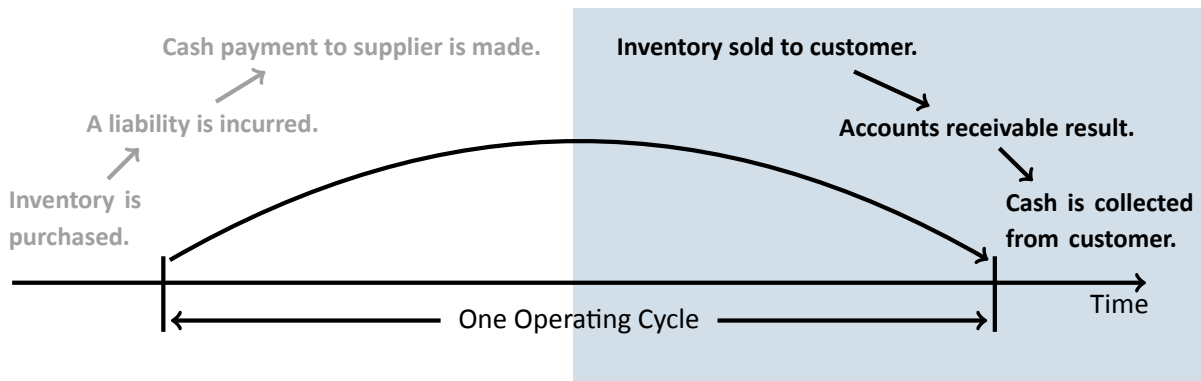


Figure 12.1: Sales and Collection Portion of the Operating Cycle

A business’s **revenue operating cycle** is a subset of the operating cycle and includes the purchase of inventory, the sale of inventory and creation of an account receivable, and the generation of cash when the receivable is collected. The length of time it takes BDCC to complete one revenue operating cycle is an important measure of liquidity and can be calculated by adding the number of days of sales in inventory plus the number of days it takes to collect receivables. The BDCC financial data required for this calculation follows.

	<i>2021</i>	<i>2020</i>
Number of days of sales in inventory	121.62 days	85.39 days
Accounts receivable collection period	54.98 days	44.13 days
Number of days to complete the revenue cycle	<u>176.6 days</u>	<u>129.52 days</u>

In 2021, 176.6 days were required to complete the revenue cycle, compared to 129.52 days in 2020. So, if accounts payable terms require payment within 60 days, BDCC may not be able to pay them because the number of days to complete the revenue cycle for both 2020 (129.52 days) and 2021 (176.6 days) are significantly greater than 60 days.

Analysis of BDCC’s Liquidity

Reflecting on the results of all the liquidity ratios, it appears that Big Dog Carworks Corp. is growing less liquid. Current assets, especially quick assets, are declining relative to current liabilities. The revenue operating cycle is increasing.

12.3 Profitability Ratios: Analyzing Operating Activities

Profitability ratios compare various expenses to revenues, and measure how well the assets of a corporation have been used to generate revenue.

Gross Profit Ratio

The **gross profit ratio**, as introduced briefly in Chapter 6, 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:

$$\frac{\text{Gross profit}}{\text{Net sales}} \text{ OR } \frac{\text{Gross profit}}{\text{Net sales}} \times 100$$

BDCC's gross profit ratios for the three years are:

		(000s)		
		2021	2020	2019
Gross profit	(a)	\$ 700	\$ 650	\$ 540
Net sales	(b)	\$ 3,200	\$ 2,800	\$ 2,340
Gross profit ratio	(a/b)	0.2188:1 or 21.88%	0.2321:1 or 23.21%	0.2308:1 or 23.08%

In other words, for each dollar of sales BDCC has \$0.22 of gross profit left to cover operating, interest, and income tax expenses (\$0.23 in each of 2020 and 2019). The ratio has not changed significantly 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. Changes in the gross profit ratio should be investigated, as it will impact future financial performance.

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:

$$\frac{\text{Income from operations}}{\text{Net sales}} \text{ OR } \frac{\text{Income from operations}}{\text{Net sales}} \times 100$$

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BDCC's operating profit ratio for the 2019, 2020, and 2021 fiscal years is calculated as follows:

		(000s)		
		2021	2020	2019
Income from operations	(a)	\$ 300	\$ 274	\$ 204
Net sales	(b)	\$ 3,200	\$ 2,800	\$ 2,340
Operating profit ratio	(a/b)	0.0938:1 or 9.38%	0.0979:1 or 9.79%	0.0872:1 or 8.72%

For each dollar of sales revenue in 2021, the company had \$0.09 left to cover interest and income tax expenses after deducting cost of goods sold and operating expenses. A review of the company's operating expenses (selling, general, and administrative expenses; employee benefits, and depreciation) show that they have all increased. As a result, and despite increasing sales revenue and gross profit, operating income has remained relatively flat. Although it seems reasonable that an increase in operating expenses would follow an increase in sales, the reasons for the operating expense increases should be investigated.

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:

$$\frac{\text{Net income}}{\text{Net sales (or revenues)}} \text{ OR } \frac{\text{Net income}}{\text{Net sales (or revenues)}} \times 100$$

BDCC's net profit ratios for the three years are calculated as follows:

		(000s)		
		2021	2020	2019
Net income	(a)	\$ 116	\$ 117	\$ 112
Net sales	(b)	\$ 3,200	\$ 2,800	\$ 2,340
Net profit ratio	(a/b)	0.0363:1 or 3.63%	0.418:1 or 4.18%	0.0479:1 or 4.79%

For each \$1 of sales in 2021, BDCC earned \$0.04 of net income. The net profit ratio has been relatively stable but needs to be compared with industry or competitors' averages for a better perspective.

Recall that revenues are generated from a business's asset holdings. The financial strength and success of a corporation depends on the efficient use of these assets. An analysis of asset investment decisions can be made by calculating several ratios, and is discussed next.

Sales to Total Assets Ratio

Are BDCC's sales adequate in relation to its 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 as:

$$\frac{\text{Net sales}}{\text{Average total assets}} \text{ OR } \frac{\text{Net sales}}{\text{Average total assets}} \times 100$$

BDCC's ratios are calculated as follows:

		(000s)	
		2021	2020
Net sales	(a)	\$ 3,200	\$ 2,800
Average total assets	(b)	\$ 2,299 ⁵	\$ 1,764.50 ⁶
Sales to total assets ratio	(a/b)	1.3919:1 or 139.19%	1.5869:1 or 158.69%

The ratio has decreased from 2020 to 2021. Each \$1 of investment in assets in 2020 generated sales of \$1.59. In 2021, each \$1 of investment in assets generated only \$1.39 in sales. Over the same period, BDCC's investment in assets increased. The ratios indicate that the additional assets are not producing revenue as effectively as in the past. It may be too soon to tell whether the increase in assets in 2020 will eventually create greater sales but an investigation is required.

As noted earlier, 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 BDCC. On the other hand, a higher ratio in comparison to other companies would be a positive indicator.

Return on Total Assets Ratio (ROA)

The return on total assets ratio or ROA is designed to measure the efficiency with which all of a company's assets are used to produce net income. The ratio is calculated as:

$$\frac{\text{Net income}}{\text{Average total assets}} \text{ OR } \frac{\text{Net income}}{\text{Average total assets}} \times 100$$

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.

⁵(\$2,112 + 2,486)/2 = \$2,299

⁶(\$1,417 + 2,112)/2 = \$1,764.50

12.3. Profitability Ratios: Analyzing Operating Activities ■ 465

BDCC's returns on total assets for 2020 and 2021 are calculated as follows:

		(000s)	
		2021	2020
Net income	(a)	\$ 116	\$ 117
Average total assets	(b)	\$ 2,299 ⁷	\$ 1,764.50 ⁸
Return on total assets ratio	(a/b)	0.0505:1 or 5.05%	0.0663:1 or 6.63%

The ratios indicate that Big Dog earned \$0.05 of net income for every \$1 of average total assets in 2021, a decrease from \$0.07 per \$1 in 2020. This downward trend indicates that assets are being used less efficiently. However, it may be that the increased investment in assets 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 the increase in assets. More information about the company's plans and projections would be useful. Recall that ratio analysis promotes the asking of directed questions for the purpose of more informed decision making.

Return on Equity Ratio (ROE)

The return on equity ratio measures the return to stockholders — how much net income was earned for the owners of a business. It is calculated as:

$$\frac{\text{Net income}}{\text{Average equity}} \text{ OR } \frac{\text{Net income}}{\text{Average equity}} \times 100$$

The 2020 and 2021 returns on equity ratios for BDCC are calculated as follows (note that the 2019 ratio is excluded because average equity cannot be calculated since 2018 ending balances are not provided):

		(000s)	
		2021	2020
Net income	(a)	\$ 116	\$ 117
Average equity	(b)	\$ 1,213 ⁹	\$ 1,121.50 ¹⁰
Return on equity ratio	(a/b)	0.0956:1 or 9.56%	0.1043:1 or 10.43%

In both years, stockholders earned, on average, \$0.10 for every \$1 invested in BDCC, or 10%. Industry averages could help with this analysis. For instance, if the industry as a whole earned only a 5% return on equity in 2021, it could be concluded that BDCC performed better than the industry average in terms of return on equity.

⁷(\$2,112 + 2,486)/2 = \$2,299

⁸(\$1,417 + 2,112)/2 = \$1,764.50

⁹(\$1,195 + 1,231)/2 = \$1,213

¹⁰(\$1,048 + 1,195)/2 = \$1,121.50

12.4 Leverage Ratios: Analyzing Financial Structure

The accounting equation expresses a relationship between assets owned by an entity and the claims against those assets. Although stockholders own a corporation, they alone do not finance the corporation; creditors also finance some of its activities. Together, creditor and stockholder capital are said to form the financial structure of a corporation. At December 31, 2021, the balance sheet of BDCC shows the following financial structure:

$$\begin{array}{rcl} \text{ASSETS} & = & \text{LIABILITIES} + \text{EQUITY} \\ \$2,486 & = & \$1,255 + \$1,231 \end{array}$$

Debt Ratio

The proportion of total assets financed by debt is called the debt ratio, and is calculated by dividing total liabilities by total assets.

$$\frac{\text{Total liabilities}}{\text{Total assets}} \text{ OR } \frac{\text{Total liabilities}}{\text{Total assets}} \times 100$$

In BDCC's case, these amounts are:

		(000s)	
		2021	2020
Total liabilities	(a)	\$ 1,255	\$ 917
Total assets	(b)	\$ 2,486	\$ 2,112
Debt ratio	(a/b)	0.5048:1 or 50.48%	0.4342:1 or 43.42%

In other words, 50.48% of BDCC's assets are financed by debt. Therefore, because assets are financed by debt (aka liabilities) and equity, we intuitively know that 49.52% of BDCC's assets must be financed by equity which is the topic of the next section.

Equity Ratio

The proportion of total assets financed by equity is called the equity ratio, and is calculated by dividing total equity by total assets. In BDCC's case, these amounts are:

		(000s)	
		2021	2020
Total equity	(a)	\$ 1,231	\$ 1,195
Total assets	(b)	\$ 2,486	\$ 2,112
Equity ratio	(a/b)	0.4952:1 or 49.52%	0.5658:1 or 56.58%

In 2021, 49.52% of the assets were financed by equity while in 2020 56.58% of the assets were financed by equity. Generally, this is considered an unfavourable trend because as equity financing decreases, we know that debt financing must be increasing as evidenced by the debt ratio above. The greater the debt financing, the greater the risk because principal and interest payments are part of debt financing.

Notice that the sum of the debt and equity ratios will always equal 100% because of the accounting equation relationship: $A = L + E$ where $A = 100\%$ and, in the case of BDCC, $L = 43.42\%$ in 2020 and $E = 56.58\%$ in 2020.

Debt to Equity Ratio

The proportion of creditor to stockholders' claims is called the debt to equity ratio, and is calculated by dividing total liabilities by equity. In BDCC's case, these amounts are:

		(000s)		
		2021	2020	2019
Total liabilities	(a)	\$ 1,255	\$ 917	\$ 369
Equity	(b)	\$ 1,231	\$ 1,195	\$ 1,048
Debt to equity ratio	(a/b)	1.02:1	0.77:1	0.35:1

In other words, BDCC has \$1.02 of liabilities for each dollar of equity at the end of its current fiscal year, 2021. The proportion of debt financing has been increasing since 2019. In 2019 there was only \$0.35 of debt for each \$1 of equity. In 2021, creditors are financing a greater proportion of BDCC than are stockholders. 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 stockholders to give up some of their control of BDCC. Creditor financing may also be more financially attractive to existing stockholders if it enables BDCC 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 increases risk because interest and principal have to be paid on this debt. Before deciding to extend credit, creditors often look at the total debt load of a company, and therefore the company's ability to meet interest and principal payments in the future. Total earnings of BDCC could be reduced if high interest payments have to be made, especially if interest rates rise. Creditors are interested in a secure investment and may evaluate stockholder commitment by measuring relative amounts of capital invested. From the creditors' perspective, the more capital invested by owners of the company, the greater the relative risk assumed by stockholders thus decreasing risk to creditors.

Although there is no single most appropriate debt to equity ratio, there are techniques for estimating the optimum balance. These are beyond the scope of introductory financial accounting. For now, it is sufficient to note that for BDCC the debt to equity ratio has increased considerably

over the three-year period which is generally unfavorable because of the risk associated with debt financing.

Times Interest Earned Ratio

Creditors are interested in evaluating a company's financial performance, in order to project whether the firm will be able to pay interest on borrowed funds and repay the debt when it comes due. Creditors are therefore interested in measures such as 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. BDCC's 2020 and 2021 ratios are calculated as follows:

		(000s)		
		2021	2020	2019
Income from operations	(a)	\$ 300	\$ 274	\$ 204
Interest expense	(b)	\$ 89	\$ 61	-0-
Times interest earned ratio	(a/b)	3.37:1	4.49:1	n/a

The larger the ratio, the better creditors are protected. BDCC's interest coverage has decreased from 2020 to 2021 (3.37 times vs. 4.49 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 over the past two years interest charges have increased compared to income from operations. 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 related increases in sales and income from operations.

12.5 Market Ratios: Analysis of Financial Returns to Investors

Investors frequently consider whether to invest or divest in shares of a corporation. 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 as:

$$\frac{\text{Net income}}{\text{Average number of common stock outstanding}}$$

EPS is quoted in financial markets and is disclosed on the income statement of publicly-traded companies. If there are preferred shareholders, they have first rights to distribution of dividends. Therefore, when calculating EPS, preferred shareholders' claims on net income are deducted from net income to calculate the amount available for common shareholders:

$$\frac{\text{Net income} - \text{preferred stock dividends}}{\text{Average number of common stock outstanding}}$$

BDCC has no preferred stock and thus no preferred stock dividends. Recall that 100,000 common shares are outstanding at the end of 2019, 2020, and 2021. For BDCC, EPS calculations for the three years are:

		(000s)		
		2021	2020	2019
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 2019 to 2020.

Price-earnings (P/E) Ratio

A price at which a common share of stock 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 investors about a company's future value compared to alternative investments.

The earnings performance of common stock is often expressed as a price-earnings (P/E) ratio. Price-earnings (P/E) ratio It is calculated as:

$$\frac{\text{Market price per share}}{\text{Earnings per share}}$$

This ratio is used as an indicator of the market's expectation of a company's future performance. Assume Company A has a current market value of \$15 per share and an EPS of \$1 per share. It will have a P/E ratio of 15. If Company B has a market value of \$4 per share and an EPS of \$0.50 per share, it will have a P/E ratio of 8. This means that the stock market expects Company A 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. Investors perceive shares of Company A as more valuable because the company is expected to earn greater returns in the future than is Company B.

Assume that BDCC's average market price per common share was \$4 in 2019, \$5 in 2020, and \$6 in 2021. Its P/E ratio would be calculated as:

		(000s)		
		<u>2021</u>	<u>2020</u>	<u>2019</u>
Market price per common share	(a)	\$ 6.00	\$ 5.00	\$ 4.00
Earnings per share (see above)	(b)	\$ 1.16	\$ 1.17	\$ 1.12
Price-earnings ratio	(a/b)	5.17	4.27	3.57

BDCC's P/E ratio has increased each year. Although industry and competitor's P/E ratio comparisons would be important to compare, BDCC's increasingly positive ratio also indicates that investors are "bullish" on BDCC. That is, the stock market indicates that it expects BDCC to be increasingly profitable in the coming years. Despite a relatively constant EPS ratio from 2019 to 2021, 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 maximize dividend revenue from stock investments, rather than realize an increasing market price of the shares. This type of investor is interested in information about the earnings available for distribution to shareholders and the actual amount of cash paid out as dividends rather than the market price of the shares.

The dividend yield ratio is a means to determine this. It is calculated as:

$$\frac{\text{Dividends per share}}{\text{Market price per share}}$$

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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 BDCC over the last three years is shown in the financial statements, as follows:

		(000s – except per share values)		
		2021	2020	2019
Dividends declared	(a)	\$ 80	\$ 70	\$ 60
Outstanding common shares	(b)	100	100	100
Dividends per share	(a/b)	\$ 0.80	\$ 0.70	\$ 0.60

The dividend yield ratio is therefore:

		2021	2020	2019
Dividends per share	(a)	\$ 0.80	\$ 0.70	\$ 0.60
Market price per share (given)	(b)	\$ 6.00	\$ 5.00	\$ 4.00
Dividend yield ratio	(a/b)	0.13:1	0.14:1	0.15:1

The company's dividend yield ratio decreased from 2019 to 2021. In 2019, investors received \$0.15 for every \$1 invested in stock. By 2021, this had decreased to \$0.13 for every \$1 invested. Though the decline is slight, the trend may concern investors who seek steady cash returns. Also notice that total dividends declared increased from 2019 to 2021 even though net income did not substantially increase, and despite the company's poor liquidity position noted in an earlier analysis. Investors might ask why such high levels of dividends are being paid given this situation.

12.6 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 management's plans.

However, there are some interpretations that can be made about BDCC from the foregoing ratio analyses even without other information. Although BDCC is experiencing growth in sales, net income has not substantially increased over the three-year period 2019 to 2021. The gross profit ratio is relatively constant. Their increasing operating expenses appear to be an issue. The sales to total assets and return on assets ratios have decreased due to a recent investment in property, plant and equipment assets and growth in current assets. Income from operations has not increased with the growth in the asset base. However, it may be premature to make conclusions regarding the timing of outlays for property, plant, and equipment.

The most immediate problem facing BDCC is the shortage of working capital and its poor liquidity. BDCC expanded its property, plant, and equipment in 2020 and experienced increases in revenue

that did not correspond to increases in accounts receivable and inventories. The company should therefore review its credit policies and monitor its investment in inventory to ensure that these expand in proportion to sales.

The plant expansion produced an increase in current liabilities (mainly borrowings). The company's ability to meet its debt obligations appears to be deteriorating. The ability of income from operations to cover interest expense has declined. The company's liquidity position is deteriorating, even though it continues to produce net income each year. BDCC should investigate alternatives to short-term borrowings, such as converting some of this to long-term debt and/or issuing additional common stock to retire some of its short-term debt obligations.

Despite these challenges, the stock market indicates that it expects BDCC 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 BDCC's operations through trend analysis of the company's financial statements.


12.7 Horizontal and Vertical Trend Analysis

LO2 – Describe horizontal and vertical trend analysis, and explain how they are used to analyze financial statements.

Trend analysis is the evaluation of financial performance based on a re-statement of financial statement dollar amounts to percentages. Horizontal analysis and vertical analysis are two types of trend analyses.


Horizontal analysis involves the calculation of percentage changes from one or more years over the base year dollar amount. The base year is typically the oldest year and is always 100%. The following two examples of horizontal analysis use an abbreviated income statement and balance sheet information where 2019 represents the base year. ***For demonstration purposes, the percentages have been rounded to the nearest whole number.***

12.7. Horizontal and Vertical Trend Analysis ■ 473



	2021	2020	2019
Sales ¹	\$100 200%	\$70 140%	\$50 100%
Gross profit	\$ 48 160%	\$45 150%	\$30 100%
Net income	\$ 14 140%	\$12 120%	\$10 100%


1. Sales in 2020 were 140% of 2019 sales calculated as $(\$70/\$50) \times 100$. Sales in 2021 were 200% of 2019 sales calculated as $(\$100/\$50) \times 100$.



	2021	2020	2019
Current assets ²	\$ 18 90%	\$ 22 110%	\$ 20 100%
Long-term investments	\$ -0- N/A	\$ 48 60%	\$ 80 100%
Total assets	\$252 105%	\$228 95%	\$240 100%

2. Current assets in 2020 were 110% of 2019 current assets calculated as $(\$22/\$20) \times 100$. Current assets in 2021 were 90% of 2019 current assets calculated as $(\$18/\$20) \times 100$.

An alternate method of performing horizontal analysis calculations is to simply calculate the percentage change between two years as shown in the following example.



	2021	% Change	2020
Sales ³	\$100	43%	\$70
Gross profit	\$ 48	7%	\$45
Net income	\$ 14	17%	\$12

3. Sales in 2021 increased 43% over 2020 calculated as $(\$100 - \$70) = \$30$; $(\$30/\$70) \times 100 = 43\%$.

Vertical analysis requires numbers in a financial statement to be restated as percentages of a base dollar amount. For income statement analysis, the base amount used is sales. For balance sheet analysis, total assets, or total liabilities and equity, are used as the base amounts. When financial statements are converted to percentages, they are called common-size financial statements. The following two examples of vertical analysis use information from an abbreviated income statement and balance sheet.

	2021		2020		2019 ¹	
Sales	\$100	100%	\$70	100%	\$50	100%
Gross profit	\$ 48	48%	\$45	64%	\$30	60%
Net income	\$ 14	14%	\$12	17%	\$10	20%

1. 2019 Gross profit was 60% of Sales calculated as $(\$30/\$50) \times 100$; 2019 Net income was 20% of Sales calculated as $(\$10/\$50) \times 100$.

	2021		2020		2019 ²	
Current assets	\$ 18	7%	\$ 22	10%	\$ 20	8%
Long-term investments	\$ -0-	N/A	\$ 48	21%	\$ 80	33%
Total assets	\$252	100%	\$228	100%	\$240	100%

2. 2019 Current assets were 8% of Total assets calculated as $(\$20/\$240) \times 100$. 2019 Long-term investments were 33% of Total assets calculated as $(\$80/\$240) \times 100$.

Notice that the same information was used for both the horizontal and vertical analyses examples but that the results are different because of how the dollar amounts are being compared.

Horizontal and vertical analyses of the balance sheets of Big Dog Carworks Corp. are as follows:

<i>Horizontal Analysis: Balance Sheet</i>					<i>Vertical Analysis (Common-size): Balance</i>		
			<i>Change</i>			<i>%</i>	
	<i>2021</i>	<i>2020</i>	<i>Difference</i>	<i>Per Cent</i>		<i>2021</i>	<i>2020</i>
Current assets	\$1,433 (a)	\$ 984 (b)	+\$449 (a-b)	+45.6 [(a-b)/b]	Current assets	57.6	46.6 (b/c)
PPE assets	1,053	1,128	-75	-6.6	PPE assets	42.4	53.4
Total	<u>\$2,486</u>	<u>\$2,112 (c)</u>	<u>+\$374</u>	<u>+17.7</u>	Total	<u>100.0</u>	<u>100.0</u>
Current liabilities	\$1,255	\$917	+\$338	+36.9	Current liabilities	50.5	43.4
Equity	1,231	1,195	+36	+3.0	Equity	49.5	56.6
Total	<u>\$2,486</u>	<u>\$2,112</u>	<u>+\$374</u>	<u>+17.7</u>	Total	<u>100.0</u>	<u>100.0</u>

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 PPE assets (6.6%) and a small increase in equity (3%). The percentage change must always be interpreted together with the absolute dollar amount of change to avoid incorrect conclusions; percentage can sometimes be misleading.

In the common-size balance sheet, 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 equity financing to debt financing from 2020 to 2021.

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The same analysis of BDCC's income statement is as follows:

<i>Horizontal Analysis: Income Statements</i>					<i>Vertical Analysis (Common-size): Income Statements</i>				
		<i>Change</i>							
		<i>2021</i>	<i>2020</i>	<i>Amount</i>	<i>Per</i>			<i>%</i>	<i>%</i>
						<i>2021</i>	<i>2020</i>		
Sales	\$3,200 (a)	\$2,800 (b)	+\$400 (a-b)	+14	[(a-b)/b]	Sales	100	100	(b/c)
Cost of Goods Sold	2,500	2,150	+\$350	+16		Cost of Goods Sold	78	77	
Gross Profit	700	650 (c)	+\$ 50	+8		Gross Profit	22	23	
Expenses	584	533	+\$ 51	+10		Expenses	18	19	
Net Income	\$ 116	\$ 117	-\$ 1	-1		Net Income	4	4	

Although sales and gross profit increased in dollar amounts, net income decreased slightly from 2020 to 2021 (1%). This net decrease resulted because cost of goods sold increased at a faster rate than sales (16% vs. 14%).

Notice the relative change in the components. For example, cost of goods sold increased in 2021 relative to sales (78% vs. 77%), while expenses in 2021 relative to sales decreased (18% vs. 19%). The overall changes were almost offsetting, as net income remained fairly stable.

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:

What caused this change?
Is this 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 trend analysis above. Initially, it was stated that operating expenses were increasing between 2019 and 2021. 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. The increase in cost of goods sold (78% vs. 77% of sales) may warrant further investigation.

The ratios covered in this chapter are summarized in Figure 12.2.

Analysis of liquidity:	Calculation of ratio:	Indicates:
1. Working Capital	Current assets – Current liabilities	The excess of current assets available after covering current liabilities (expressed as a dollar amount).
2. Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$	The amount of current assets available to pay current liabilities.
3. 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.)
4. Accounts receivable collection period	$\frac{\text{Average net accounts receivable}}{\text{Net credit sales (or revenues)}} \times 365$	The average time needed to collect receivables.
5. Number of days of sales in inventory	$\frac{\text{Ending inventory}}{\text{Cost of goods sold}} \times 365$	How many days of sales can be made with existing inventory
6. 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.

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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	$\frac{\text{Net income}}{\text{Net sales (or revenues)}} \times 100$	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	$\frac{\text{Net income}}{\text{Average total assets}}$	How efficiently a company uses its assets as resources to earn net income.
6. Return on equity	$\frac{\text{Net income}}{\text{Average equity}}$	The adequacy of net income as a return on equity.
Leverage ratios:	Calculation of ratio:	Indicates:
1. Debt ratio	$\frac{\text{Total liabilities}}{\text{Total assets}}$	The proportion of total assets financed by debt.
2. Equity ratio	$\frac{\text{Total equity}}{\text{Total assets}}$	The proportion of total assets financed by equity.
3. Debt to equity ratio	$\frac{\text{Total liabilities}}{\text{Equity}}$	The proportion of creditor financing to stockholder financing.
4. Times interest earned ratio	$\frac{\text{Income from operations}}{\text{Interest expense}}$	The ability of a company to pay interest to long-term creditors.
Market ratios:	Calculation of ratio:	Indicates:
1. Earnings per share	$\frac{\text{Net income} - \text{Preferred stock dividends}}{\text{Average number of common stock outstanding}}$	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 stock.

Figure 12.2: Summary of Financial Statement Analysis Ratios

Schematically, the various analytical tools can be illustrated as shown in Figure 12.3.

Liquidity		Profitability		Financial Structure	Market Measures	Trend Analysis
<i>Short-term cash needs</i>	<i>Current asset performance</i>	<i>Returns on sales</i>	<i>Returns on balance sheet items</i>			
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 equity		Dividend yield ratio	

Figure 12.3: Categorization of Financial Statement Analytical Tools

Summary of Chapter 12 Learning Objectives

L01 – Describe ratio analysis, and explain how the liquidity, profitability, leverage, and market ratios are used to analyze and compare financial statements.

Ratio analysis measures the relative magnitude of two selected numerical values taken from a company's financial statements and compares the result to prior years and other similar companies. Financial ratios are an effective tool for measuring: (a) liquidity (current ratio, acid-test ratio, accounts receivable collection period, and number of days of sales in inventory); (b) profitability (gross profit ratio, operating profit ratio, net profit ratio, sales to total assets ratio, return on total assets, and return on equity); (c) leverage (debt ratio, equity ratio, debt to equity ratio, and times interest earned ratio); and (d) market ratios (earnings per share, price-earnings ratio, and dividend yield ratio). Ratios help identify the areas that require further investigation.

L02 – Describe horizontal and vertical trend analysis, and explain how they are used to analyze financial statements.

Horizontal analysis involves the calculation of percentage changes from one or more years over the base year dollar amount. The base year is typically the oldest year and is always 100%. Vertical analysis requires that numbers in a financial statement be restated as percentages of a base

dollar amount. For income statement analysis, the base amount used is sales. For balance sheet analysis, total assets, or total liabilities and equity, are used as the base amounts. When financial statements are converted to percentages, they are called common-size financial statements.

Discussion Questions

1. Ratios need to be evaluated against some base. What types of information can be used to compare ratios against?
2. Explain what *liquidity* means. When a corporation is illiquid, what are the implications for stockholders? ...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.
 - a. Identify and explain six ratios (and any associated calculations) that evaluate a corporation’s profitability.
 - b. 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.

Exercises

EXERCISE 12–1 (LO1)

The following are condensed comparative financial statements of Stockwell Inc. for the three years ended December 31, 2015.

Balance Sheet At December 31				
<i>Assets</i>				
	<i>2015</i>	<i>2014</i>	<i>2013</i>	
<i>Current</i>				
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	
<i>Property, plant and equipment assets,</i> <i>at carrying amount</i>	260	150	76	
Total Assets	\$380	\$230	\$146	
<i>Liabilities</i>				
<i>Current</i>				
Accounts Payable	\$100	\$ 80	\$ 50	
<i>Non-current</i>				
Bonds Payable, 4%	50	50	-0-	
	150	130	50	
<i>Equity</i>				
Common Stock	200	80	80	
Retained Earnings	30	20	16	
	230	100	96	
Total Liabilities and 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	<u>52</u>	<u>40</u>	<u>45</u>
Operating Expenses	35	32	33
Income from Operations	<u>17</u>	<u>8</u>	<u>12</u>
Interest Expense	2	2	-0-
Income before Income Taxes	<u>15</u>	<u>6</u>	<u>12</u>
Income Taxes	5	2	4
Net Income	<u><u>\$ 10</u></u>	<u><u>\$ 4</u></u>	<u><u>\$ 8</u></u>

Additional information:

- i. The company's accounts receivable at December 31, 2012 totaled \$20.
- ii. The company's merchandise inventory at December 31, 2012 totaled \$20.
- iii. The company's property, plant and equipment assets at December 31, 2012 totaled \$70.
- iv. Credit terms are net 60 days from date of invoice.
- v. Number of common stock outstanding: 2013–80, 2014–80, 2015–400.

Required:

- a. Calculate liquidity ratios and discuss.
- b. What is your evaluation of
 - i. The financial structure of the corporation?
 - ii. The proportion of stockholder and creditor claims to its assets?
 - iii. The structure of its short-term and long-term credit financing?
- c. What are some other observations you can make about the financial performance of Stockwell?

The following information relates to three companies in the same industry:

<i>Company</i>	<i>Latest market price</i>	<i>Earnings per share</i>	<i>Dividends per share</i>
A	\$ 35	\$ 11	\$ -0-
B	40	5	4
C	90	10	6

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.

EXERCISE 12-3 (LO1)

Consider the following information:

Salinas Limited Balance Sheet At December 31, 2012			
<i>Assets</i>		<i>Liabilities and Equity</i>	
Cash	\$ 72	Accounts Payable	\$ 60
Accounts Receivable	88	Bank Loan, non-current	150
Merchandise Inventory	100	Preferred Stock	60
Prepaid Expenses	40	Common Stock	250
Property, Plant, and Equipment, at carrying amount	320	Retained Earnings	100
Total Assets	<u>\$620</u>	Total Liabilities and Equity	<u>\$620</u>

Salinas Limited		
Income Statement		
For the Year Ended December 31, 2012		
Sales		\$240
Cost of Goods Sold		144
Gross Profit		96
<i>Operating Expenses</i>		
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 stock dividends have been paid and the total annual preferred dividend entitlement is \$6, and that the number of common stock outstanding is 10.

Required: Calculate the following ratios and percentages

- a. Current ratio
- b. Return on total assets
- c. Sales to total assets
- d. Acid-test ratio
- e. Times interest earned
- f. Earnings per common stock
- g. Accounts receivable collection period
- h. Return on equity

EXERCISE 12–4 (LO2)

The following data are taken from the records of Cronkite Corp.:

	<i>2012</i>	<i>2011</i>
Sales	\$2,520	\$1,440
Cost of Goods Sold	<u>1,890</u>	<u>960</u>
Gross Profit	630	480
Other Expenses	<u>510</u>	<u>430</u>
Net Income	<u><u>\$ 120</u></u>	<u><u>\$ 50</u></u>

Required: Perform horizontal analysis on the above data and interpret your results.

EXERCISE 12–5 (LO2)

Assume you are an accountant analyzing 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			
	<i>2012</i>	<i>2011</i>	<i>2010</i>
Sales	\$250	\$150	\$120
Cost of Goods Sold	<u>190</u>	<u>100</u>	<u>60</u>
Gross Profit	60	50	60
Other Expenses	<u>35</u>	<u>34</u>	<u>35</u>
Net Income	<u><u>\$ 25</u></u>	<u><u>\$ 16</u></u>	<u><u>\$ 25</u></u>

Required:

- a. Prepare a vertical analysis of Escalade Corporation's income statement for the three years.
- b. What inferences can be drawn from this analysis?

EXERCISE 12–6 (LO1)

The following information is taken from the partial balance sheet of Quail Productions Corp.

	2018	2017
<i>Current assets</i>		
Cash	\$ 10	\$ 15
Marketable investments	35	35
Accounts receivable	200	150
Inventory	600	400
<i>Current liabilities</i>		
Accounts payable	500	400
Notes payable	245	180

Required:

- Describe the purpose of and calculate the current ratio for each year.
- Describe the purpose of and calculate the acid-test ratio for both years.
- What observations can you make from a comparison of the two types of ratios?

EXERCISE 12–7 (LO1)

The following information is taken from the records of Black Spruce Co. Ltd.:

	2019	2018	2017
Sales	\$252	\$141	\$120
Gross profit	63	48	54
Net income	12	5	15

Required: Analyze the gross profit and net profit ratios using the above data. Comment on any trends that you observe.

EXERCISE 12–8 (LO1)

In the left-hand column, a series of independent transactions is listed. In the right-hand column, a series of ratios is listed.

<i>Transaction</i>	<i>Ratio</i>	<i>Effect on ratio</i>
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 property, plant, and equipment	Return on total assets	
Issued additional shares for cash	Debt to stockholders' equity ratio	
Declared a stock dividend on common shares	Earnings per share	
Purchased supplies on account	Current ratio	
Paid a current creditor in full	Acid-test ratio	
Paid an account payable	Number of days of sales in inventory	

Required: For each transaction indicate whether the ratio will increase (I), decrease (D), or remain unchanged (No Change). Assume all ratios are greater than 1:1 before each transaction where applicable.

EXERCISE 12–9 (LO1)

Consider the following financial statement data:

<i>Balance Sheet</i>	
Cash	\$ 20
Accounts receivable	20
Merchandise inventory	40
Plant, at carrying amount	140
	<u>\$220</u>
Accounts payable	\$ 20
Non-current borrowings	60
Common stock (8 shares issued)	80
Retained earnings	60
	<u>\$220</u>

<i>Income Statement</i>	
Sales	\$100
Cost of goods sold	50
Gross profit	<u>50</u>
Operating expenses	14
Income from operations	<u>36</u>
<i>Less: Interest</i>	6
Income before income taxes	30
<i>Less: Income taxes</i>	10
Net income	<u><u>\$ 20</u></u>

Assume that the average of all balance sheet items is equal to the year-end figure and that all sales are on credit.

Required:

- a. Calculate the following ratios:
 - i. Return on total assets
 - ii. Return on stockholders' equity
 - iii. Times interest earned ratio
 - iv. Earnings per share
 - v. Number of days of sales in inventory
 - vi. Accounts receivable collection period
 - vii. Sales to total assets ratio
 - viii. Current ratio
 - ix. Acid-test ratio
 - x. Debt to stockholders' equity ratio.

- b. Which of these ratios are measures of liquidity?

EXERCISE 12–10 (LO1)

Assume a company has the following financial information:

Cash and short-term investments	\$ 6
Prepaid expenses	-0-
Capital assets	90
Total liabilities	40
Stockholders' equity	140
Sales	420
Credit sales	300
Current ratio	2.5:1
Acid-test ratio	1:1
Gross profit ratio	30%

Assume current assets consist of cash, short-term investments, accounts receivable, inventory, and prepaid expenses, and that ending balances are the same as average balances for the year.

Required: Calculate

- a. Current liabilities
- b. Inventory
- c. Accounts receivable collection period
- d. Number of days of sales in inventory
- e. Revenue operating cycle

EXERCISE 12–11 (LO1)

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:

Problems

PROBLEM 12–1 (LO1)

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.

PROBLEM 12–2 (LO1)

The incomplete balance sheet of Hook Limited is given below.

Hook Limited
Balance Sheet
At December 31, 2011
Assets

<i>Current</i>			
Cash	\$30,000		
Accounts Receivable	?		
Merchandise Inventory	?		
		\$?
<i>Property, plant and equipment assets</i>		?	
<i>Less: Accumulated Depreciation</i>	100,000		?
Total Assets		\$?
<i>Liabilities</i>			
<i>Current</i>			
Accounts Payable	\$50,000		
Accrued Liabilities	?		
		\$120,000	
<i>Non-current</i>			
8% Bonds Payable			?
<i>Equity</i>			
Common Stock			?
Retained Earnings			?
Total Liabilities and Equity		\$?

Additional information for 2011 year-end:

- a. The amount of working capital is \$150,000.
- b. The issued value of the stock 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 stockholder'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 to 1.

Required: Complete Hook Limited's balance sheet.

Chapter 13

Proprietorships and Partnerships

Chapter 1 introduced the three forms of business organizations — corporations, proprietorships, and partnerships. The corporation has been the focus in Chapters 1 through 12. This chapter will expand on some of the basic accounting concepts as they apply to proprietorships and partnerships.

Chapter 13 Learning Objectives

LO1 – Describe the characteristics of a proprietorship, including how its financial statements are different from those of a corporation.

LO2 – Describe the characteristics of a partnership including how its financial statements are different from those of a corporation.

Concept Self-Check

Use the following questions as a self-check while working through Chapter 13.

1. What are some of the characteristics of a proprietorship, that are different from those of a corporation?
2. What is the journal entry to record the investment of cash by the owner into a proprietorship?
3. How are the closing entries for a proprietorship different than those recorded for a corporation?
4. Why is there only one equity account on a sole proprietorship's balance sheet and multiple accounts in the equity section of a corporate balance sheet?
5. What is mutual agency as it relates to a partnership?
6. How is a partnership different than a corporation?

NOTE: The purpose of these questions is to prepare you for the concepts introduced in the chapter. Your goal should be to answer each of these questions as you read through the chapter. If, when you complete the chapter, you are unable to answer one or more the Concept Self-Check questions, go back through the content to find the answer(s). Solutions are not provided to these questions.

13.1 Proprietorships

LO1 – Describe the characteristics of a proprietorship including, how its financial statements are different from those of a corporation.

As discussed in Chapter 1, a proprietorship is a business owned by one person. It is not a separate legal entity, which means that the business and the owner are considered to be the same entity. As a result, for example, from an income tax perspective, the profits of a proprietorship are taxed as part of the owner's personal income tax return. Unlimited liability is another characteristic of a proprietorship meaning that if the business could not pay its debts, the owner would be responsible even if the business's debts were greater than the owner's personal resources.

Investing in a Proprietorship

When the owners of a corporation, known as stockholders, invest in the corporation, shares are issued. The shares represent how much of the corporation is owned by each stockholder. In a proprietorship, there is only one owner. When that owner invests in their business, the journal entry is:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash A+		XXX	
	Owner's Capital OE+			XXX
	To record the owner's investment into their business.			

Distribution of Income in a Proprietorship – Withdrawals

A corporation distributes a portion of income earned to its owners, the stockholders, in the form of dividends. In a proprietorship, the owner distributes a portion of the business's income to her/himself in the form of **withdrawals**. Typically, the owner will withdraw cash but they can withdraw other assets as well. The journal entry to record a cash withdrawal is:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Withdrawals XOE+ (OE)		XXX	
	Cash (A)			XXX
	To record the owner's withdrawal of cash.			

Closing Entries for a Proprietorship

The closing entries for a corporation involved four steps:

Entry 1: Close the revenue accounts to the Income Summary account

This would be identical for a proprietorship.

Entry 2: Close the expense accounts to the Income Summary account

This would also be identical for a proprietorship.

Entry 3: Close the income summary to retained earnings

Instead of closing the balance in the income summary to retained earnings, a proprietorship would close the income summary to the Owner's Capital account.

Entry 4: Close dividends to retained earnings

The equivalent to dividends for a proprietorship is withdrawals. There is no Retained Earnings account in a proprietorship. A corporation separates investments made by the owners (stockholders) into a Common Stock account while dividends and accumulated net incomes/losses are recorded in retained earnings. In a proprietorship, all owner investments, withdrawals, and net incomes/losses are maintained in the Owner's Capital account. Therefore, the fourth closing entry for a proprietorship closes withdrawals to this Owner's Capital account.

Figure 13.1 compares the closing entries for a proprietorship and a corporation.

Proprietorship			Corporation		
Entry 1: Close the revenue accounts to the Income Summary account.					
Revenues	XXX		Revenues	XXX	
Income Summary		XXX	Income Summary		XXX
Entry 2: Close the expense accounts to the Income Summary account.					
Income Summary	XXX		Income Summary	XXX	
Expenses		XXX	Expenses		XXX
Entry 3: Close the Income Summary account					
...to the Owner's Capital account.			...to the Retained Earnings account.		
Income Summary	XXX		Income Summary	XXX	
Owner's Capital		XXX	Retained Earnings		XXX
<i>When there is a net income.</i>			<i>When there is a net income.</i>		
OR			OR		
Owner's Capital	XXX		Retained Earnings	XXX	
Income Summary		XXX	Income Summary		XXX
<i>When there is a net loss.</i>			<i>When there is a net loss.</i>		
Entry 4: Close					
...withdrawals to the Owner's Capital account.			...dividends to the Retained Earnings account.		
Owner's Capital	XXX		Retained Earnings	XXX	
Withdrawals		XXX	Dividends		XXX

Figure 13.1: Comparing Closing Entries for a Proprietorship and Corporation

Financial Statements

The financial statements for a proprietorship are much the same as for a corporation with some minor differences. As shown in Figure 13.2, the income statements only differ in that the proprietorship does not include income tax expense since its profits are taxed as part of the owner's personal income tax return.

Proprietorship		Corporation	
ABC Consulting Income Statement Year ended December 31, 2015		ABC Inc. Income Statement Year ended December 31, 2015	
Revenues	\$400	Revenues	\$400
Operating expenses	180	Operating expenses	180
Income from operations	<u>\$220</u>	Income from operations	<u>\$220</u>
Other revenues and expenses		Interest revenue	\$20
Interest revenue	\$20	Loss on sale of equipment	<u>(5)</u>
Loss on sale of equipment	<u>(5)</u>		15
Net income	<u><u>\$235</u></u>	Income before tax	<u>\$235</u>
		Income tax expense	50
		Net income	<u><u>\$185</u></u>

Figure 13.2: Comparing the Income Statement for a Proprietorship and for a Corporation

The statement of equity for each of a proprietorship and corporation includes the same elements: beginning equity, additional investments by the owner(s), net income/loss, distribution of income to the owner(s), and the ending balance in equity. However, the statements are structured differently because in a proprietorship, all the equity items are combined in one account, the Owner's Capital account. In a corporation, equity is divided between common stock and retained earnings. These differences are illustrated in Figure 13.3.

Proprietorship		Corporation			
ABC Consulting Statement of Owner Equity Year ended December 31, 2015		ABC Inc. Statement of Shareholders' Equity Year ended December 31, 2015			
			Share Capital	Retained Earnings	Total Equity
Owner's capital, January 1, 2015	\$12,000	Balance, January 1, 2015	\$9,000	\$3,000	\$12,000
Add: Owner investment	\$1,000	Issuance of common stock	1,000		1,000
Net income	235	Net income/loss		185	185
Total	<u>1,235</u>	Dividends		(150)	(150)
Less: Withdrawals	150	Balance, December 31, 2015	<u>\$10,000</u>	<u>\$3,035</u>	<u>\$13,035</u>
Owner's capital, December 31, 2015	<u><u>\$13,085</u></u>				

Figure 13.3: Comparing the Statement of Equity for a Proprietorship and for a Corporation

Although both statements are based on identical dollar amounts, notice that the total equity at December 31, 2015 for the proprietorship is \$13,085 which is \$50 more than the \$13,035 shown for the corporation. The \$50 difference is the income tax expense deducted on the corporation's income tax.

The balance sheet for each of a proprietorship and corporation includes the same elements: assets, liabilities, and equity. However, the equity section of the statement differs because in a proprietorship, all the equity items are combined in one account, the owner's capital account. In a corporation, equity is divided between common stock and retained earnings. These differences are illustrated in Figure 13.4.

Proprietorship		Corporation	
ABC Consulting Balance Sheet December 31, 2015		ABC Inc. Balance Sheet December 31, 2015	
Assets		Assets	
Cash	\$ 4,000	Cash	\$ 3,950
Other assets	<u>86,000</u>	Other assets	<u>86,000</u>
Total assets	<u>\$90,000</u>	Total assets	<u>\$89,950</u>
Liabilities		Liabilities	
	\$76,915		\$76,915
Equity		Equity	
Owner's capital	<u>13,085</u>	Common stock	\$10,000
Total liabilities and equity	<u>\$90,000</u>	Retained earnings	<u>3,035</u>
		Total equity	13,035
		Total liabilities and equity	<u>\$89,950</u>

Figure 13.4: Comparing the Balance Sheet for a Proprietorship and for a Corporation

The \$50 difference between the proprietorship's and corporation's balances in each of cash and total equity is because the corporation paid \$50 income tax which the proprietorship is not subject to. The equity sections of the two balance sheets are different only in terms of the types of accounts used.

13.2 Partnerships

LO2 – Describe the characteristics of a partnership, including how its financial statements are different from those of a corporation.

As discussed in Chapter 1, a partnership is a business owned by more than one person. Partners should have a partnership contract that details their agreement on things such as each partner’s rights and duties, the sharing of incomes/losses and withdrawals, as well as dispute and termination procedures. A partnership is not a separate legal entity, which means that the business and the partners are considered to be the same entity. As a result, for example, from an income tax perspective, each partner’s share of the profits is taxed as part of that partner’s personal income tax return. Unlimited liability is another characteristic of a partnership, meaning that if the business could not pay its debts, the partners would be responsible even if the business’s debts were greater than their personal resources.

The exception to this would be the formation of a **limited liability partnership (LLP)** that is permitted for professionals such as lawyers and accountants. In an LLP, the **general partner(s)** is/are responsible for the management of the partnership and assume(s) unlimited liability, while the **limited partners** have limited liability but also limited roles in the partnership as specified in the partnership agreement. Partnerships also have a limited life and are subject to *mutual agency*. **Mutual agency** means that a partner can commit the partnership to any contract because each partner is an authorized agent of the partnership. For example, one partner could sign a contract to purchase merchandise that falls within the scope of the business’s operations.

Investing in a Partnership

Recall that when the owners of a corporation, known as stockholders, invest in the corporation, shares are issued. Recall as well that in a proprietorship there is only one owner whose investments into the business are credited to their capital account. A partnership is similar to a proprietorship in that each partner’s investment into the business is credited to an owner’s capital account. The difference is that in a partnership there will be more than one owner’s capital account. For example, assume Doug Wharton, Lisa Bartwiz, and Tahanni Butti started a partnership called WBB Consulting and invested cash of \$20,000, \$15,000, and \$40,000, respectively. The journal entry to record the investment is:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash A+		75,000	
	Wharton, Capital OE+			20,000
	Bartwiz, Capital OE+			15,000
	Butti, Capital OE+			40,000
	To record each partner’s investment into the business.			

Distribution of Income in a Partnership – Withdrawals

Recall that a corporation distributes a portion of income earned to its owners, the stockholders, in the form of dividends. In a proprietorship and partnership, the owner/partners distribute a portion of the income to themselves in the form of withdrawals. Assume Wharton, Bartwiz, and Butti each withdraw \$5,000. The journal entry is:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Wharton, Withdrawals XOE+ (OE)		5,000	
	Bartwiz, Withdrawals XOE+ (OE)		5,000	
	Butti, Withdrawals XOE+ (OE)		5,000	
	Cash (A)			15,000
	To record the partners' withdrawal of cash.			

Closing Entries for a Partnership

The closing entries for a partnership are much the same as those for a proprietorship except that for a partnership there is more than one withdrawals account and more than one capital account. The only complexity with the closing entries for a partnership is with closing the Income Summary account to the capital accounts. The complexity stems from the partnership agreement which details how incomes/losses are to be allocated. Let us review several scenarios.

Example 1: Assume WBB Consulting earned \$60,000 during the year and the partnership agreement stipulates that incomes/losses are to be allocated equally. The journal entry to close the income summary (a temporary holding account) to the partners' capital accounts would be:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Income Summary		60,000	
	Wharton, Capital OE+			20,000
	Bartwiz, Capital OE+			20,000
	Butti, Capital OE+			20,000
	To close the income summary based on equal allocation.			

Example 2: Assume WBB Consulting had a net loss of \$70,000 during the year and the partnership agreement stipulates that incomes/losses are to be allocated on a fractional basis of 2:1:4, respectively. The journal entry to close the income summary to the partners' capital accounts would be:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Wharton, Capital (OE)		20,000	
	Bartwiz, Capital (OE)		10,000	
	Butti, Capital (OE)		40,000	
	Income Summary			70,000
	To close the income summary based on 2:1:4 fractional allocation; calculations: $2/(2+1+4) \times 70,000 = 20,000$; $1/(2+1+4) \times 70,000 = 10,000$; $4/(2+1+4) \times 70,000 = 40,000$.			

Example 3: Assume WBB Consulting had a net income of \$100,000 during the year and the partnership agreement stipulates that incomes/losses are to be allocated on the ratio of capital investments. The journal entry to close the income summary to the partners' capital accounts would be:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Income Summary		100,000	
	Wharton, Capital OE+			26,667
	Bartwiz, Capital OE+			20,000
	Butti, Capital OE+			53,333
	To close the income summary with the allocation based on a ratio of capital investments; calculations: $(20,000/75,000) \times 100,000 = 26,667$ (rounded to the nearest whole dollar); $(15,000/75,000) \times 100,000 = 20,000$; $(40,000/75,000) \times 100,000 = 53,333$ (rounded to the nearest whole dollar).			

Example 4: Assume WBB Consulting had a net income of \$60,000 during the year and the partnership agreement stipulates that incomes/losses are to be allocated based on salaries of \$70,000 to Wharton; \$20,000 to Bartwiz; zero to Butti; and the remainder equally. The journal entry to close the income summary to the partners' capital accounts would be:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Income Summary		60,000	
	Butti, Capital (OE)		10,000	
	Wharton, Capital OE+			60,000
	Bartwiz, Capital OE+			10,000
	To close the income summary with the allocation based on salaries and the remainder allocated equally; calculations:			

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	Wharton	Bartwiz	Butti	Total
Net income				60,000
Salaries:	70,000	20,000	0	-90,000
Remainder to be allocated:				-30,000
-30,000x1/3	-10,000	-10,000	-10,000	30,000
Balance of net income to be allocated				0
Total to be allocated to each partner	60,000	10,000	-10,000	60,000

The sum of the totals **must** reconcile (be equal to) the net income/loss being allocated.

Notice in Example 4 that Butti is receiving a negative allocation which results in a debit to her Capital account.

Example 5: Assume WBB Consulting had a net income of \$90,000 during the year and the partnership agreement stipulates that incomes/losses are to be allocated based on a combination of: (a) 20% interest of each partner’s beginning-of-year capital balance; (b) salaries of \$70,000 to Wharton, \$20,000 to Bartwiz, \$15,000 to Butti; and (c) the remainder equally. The journal entry to close the income summary to the partners’ capital accounts would be:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Income Summary		90,000	
	Wharton, Capital OE+			64,000
	Bartwiz, Capital OE+			13,000
	Butti, Capital OE+			13,000
	To close the income summary with the allocation based on a combination of interest and salaries with the remainder allocated equally; calculations:			

	Wharton	Bartwiz	Butti	Total
Net income				90,000
Interest:				
20%x20,000; 20%x15,000; 20%x40,000	4,000	3,000	8,000	-15,000
Salaries:	70,000	20,000	15,000	-105,000
Remainder to be allocated:				-30,000
-30,000x1/3	-10,000	-10,000	-10,000	30,000
Balance of net income to be allocated				0
Total to be allocated to each partner	64,000	13,000	13,000	90,000

The sum of the totals **must** reconcile (be equal to) the net income/loss being allocated.

The total income allocated to each partner is carried into the net income line of the Statement of Owners’ Equity (as shown next).

Financial Statements

The income statement for a partnership is identical to that for a proprietorship. The statement of equity for a partnership is similar to a proprietorship's except that there is a Capital account and Withdrawals account for each of the partners.

Assume that on January 1, 2015, the first year of operations for WBB Consulting, the partners, Wharton, Bartwiz, and Butti, invested \$20,000, \$15,000, and \$40,000, respectively. During 2015 they each withdrew \$5,000. The statement of stockholders' equity would appear as illustrated in Figure 13.5 given a net income for the year of \$90,000 allocated as shown in Example 5 previously.

	Wharton	Bartwiz	Butti	Totals
Capital, January 1, 2015	\$ 0	\$ 0	\$ 0	\$ 0
Add: Investments by partners	20,000	15,000	40,000	75,000
Net income	64,000	13,000	13,000	90,000
Subtotals	\$84,000	\$28,000	\$53,000	\$165,000
Less: Withdrawals by partners	5,000	5,000	5,000	15,000
Capital, December 31, 2015	\$79,000	\$23,000	\$48,000	\$150,000

Figure 13.5: Statement of Owners' Equity for a Partnership

In the equity section on the balance sheet there will be more than one owner's capital account as shown in Figure 13.6.

Assets	
Cash	\$ 35,000
Other assets	143,000
Total assets	\$ 178,000
Liabilities	
	\$ 28,000
Equity	
Wharton, capital	\$79,000
Bartwiz, capital	23,000
Butti, capital	48,000
Total liabilities and equity	\$ 178,000

Figure 13.6: Balance Sheet for a Partnership

Summary of Chapter 13 Learning Objectives

L01 – Describe the characteristics of a proprietorship, including how its financial statements are different from those of a corporation.

A proprietorship is a business owned by one person. It is not a separate legal entity, which means that the business and the owner are considered to be the same entity. The profits of a proprietorship are taxed as part of the owner's personal income tax return. Unlimited liability is another characteristic of a proprietorship meaning that if the business could not pay its debts, the owner would be responsible even if the business's debts were greater than the owner's personal resources. Owner investments, owner withdrawals, and net incomes/losses are closed to one permanent account: the Owner's Capital account.

L02 – Describe the characteristics of a partnership, including how its financial statements are different from those of a corporation.

A partnership is a business owned by more than one person. Partners should have a partnership contract that details their agreement on things such as each partner's rights and duties, the sharing of incomes/losses and withdrawals, as well as dispute and termination procedures. A partnership is not a separate legal entity, which means that the business and the partners are considered to be the same entity. Each partner's share of the profits is taxed as part of that partner's personal income tax return. Unlimited liability is another characteristic of a partnership meaning that if the business could not pay its debts, the partners would be responsible even if the business's debts were greater than the partners' personal resources. The exception to this would be the formation of a limited liability partnership (LLP) that is permitted for professionals such as lawyers and accountants. In an LLP, the general partner(s) is/are responsible for the management of the partnership and assume(s) unlimited liability while the limited partners have limited liability but also limited roles in the partnership as specified in the partnership agreement. Partnerships also have a limited life and are subject to *mutual agency*. Mutual agency means that a partner can commit the partnership to any contract because each partner is an authorized agent of the partnership. The closing entries for a partnership are the same as those for a proprietorship except there is more than one capital account and more than one withdrawals account. The closing of the income summary to each partner's capital account is based on the allocation details in the partnership agreement.

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 proprietorship, partnership, and corporation differ?
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?

Exercises

EXERCISE 13–1 (LO2)

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, 2015			
Cash	\$41,000		
Accounts Receivable	68,400		
Merchandise Inventory	27,000		
Accounts Payable		\$45,800	
B. White, Capital		30,000	
B. White, Withdrawals	7,000		
C. Green, Capital		20,000	
C. Green, Withdrawals	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 cash during 2015. The partners share profits and losses equally.

Required:

- a. Prepare an income statement for the year.
- b. Prepare a statement of owners' equity for the year in the following format:

Statement of Owners' Equity			
For the Year Ended December 31, 2015			
	<i>White</i>	<i>Green</i>	<i>Total</i>
Opening Balance	\$	\$	\$
Add: Investments during 2015			
Net Income			
	_____	_____	_____
	\$	\$	\$
Deduct: Withdrawals			
Ending Balance	_____	_____	_____
	\$	\$	\$
	=====	=====	=====

- c. Prepare a balance sheet at December 31, 2015.
- d. Prepare closing entries at year end.

EXERCISE 13–2 (LO1,2)

Refer to EXERCISE 13–1.

Required: Prepare the equivalent statement of equity at December 31, 2015 assuming that the partnership is instead:

- a. A proprietorship owned by B. White called White's (Combine C. Green balances and transactions with those of B. White.)
- b. A corporation named BW and CG Ltd. with 100 common shares issued for \$1 per share to each of B. White and C. Green. Assume opening retained earnings equal \$29,800 and that 20,000 common shares were issued during 2015 for \$20,000. Assume the net income of \$52,600 is net of income tax.

EXERCISE 13–3 (LO2)

Refer to EXERCISE 13–1.

Required: Prepare the journal entry to allocate net income to each of the partners assuming the following unrelated scenarios:

- a. Net income is allocated in a fixed ratio of 5:3 (White: Green).
 - b. 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).
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EXERCISE 13–4 (LO2)

Walsh and Abraham began a partnership by investing \$320,000 and \$400,000, respectively. They agreed to share net incomes/losses by allowing a 10% interest allocation their investments, an annual salary allocation of \$75,000 to Walsh and \$150,000 to Abraham, and the balance 1:3.

Required: Prepare the journal entry to allocate net income to each of the partners assuming the following unrelated scenarios:

- a. Net income for the first year was \$210,000.
 - b. A net loss for the first year was realized in the amount of \$95,000.
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EXERCISE 13–5 (LO1)

You are given the following data for the proprietorship of R. Black.

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R. Black Proprietorship Trial Balance December 31, 2018		
	<i>Debit</i>	<i>Credit</i>
Cash	\$ 10,000	
Accounts receivable	20,000	
Merchandise inventory	30,000	
Accounts payable		\$ 25,000
R. Black, capital		5,000
R. Black, withdrawals	7,000	
Sales		166,000
Cost of goods sold	100,000	
Rent expense	24,000	
Income taxes expense	5,000	
Totals	\$196,000	\$196,000

Black contributed \$5,000 capital during the year.

Required:

- a. Prepare an income statement for the year.
- b. Prepare a statement of owner capital for the year in the following format:

R. Black Proprietorship Statement of Owner Capital For the Year Ended December 31, 2018	
Balance at Jan. 1, 2018	\$
Contributions	
Net income	
Withdrawals	
Balance at Dec 31, 2018	\$

- c. Prepare a balance sheet at December 31, 2018.
- d. Prepare closing entries at year-end.

Refer to EXERCISE 13–5. Assume that the proprietorship is instead a corporation named R. Black Ltd., with 1,000 common shares issued on January 1, 2018 for a stated value of \$5 per share. Assume there are no opening retained earnings and consider withdrawals to be dividends. Assume income taxes expense applies to corporate earnings.

Required:

- Prepare an income statement for the year ended December 31, 2018.
- Prepare a statement of stockholders' equity.
- Prepare a balance sheet at December 31, 2018.
- Prepare closing entries at year-end.

EXERCISE 13–7 (LO2)

Assume the following information just prior to the admission of new partner I:

<i>Assets</i>		<i>Liabilities</i>	
Cash	\$ 5,000	Accounts payable	\$ 8,000
Accounts receivable	43,000		
		<i>Partners' Capital</i>	
		G, Capital	\$30,000
		H, Capital	10,000
	\$48,000		40,000
			\$48,000

Required: Prepare journal entries to record the following unrelated scenarios:

- New partner I purchases partners G's partnership interest for \$40,000.
- 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.
- New partner I contributes land with a fair value of \$100,000. Relative ownership interests after this transaction are:

<i>Partner</i>	<i>Ownership interest</i>
G	20%
H	5%
I	75%
	100%

EXERCISE 13–8 (LO2)

Assume the following information just prior to the withdrawal of Partner X:

<i>Assets</i>		<i>Liabilities</i>	
Cash	\$20,000	Accounts payable	\$ 5,000
Inventory	50,000		
		<i>Partners' Capital</i>	
		X, Capital	\$10,000
		Y, Capital	20,000
		Z, Capital	35,000
			65,000
	<u>\$70,000</u>		<u>\$70,000</u>

Required: Prepare journal entries to record the following unrelated scenarios:

- Partner X sells his interest to new partner T for \$25,000.
- Partner X sells his interest to partner Y for \$30,000.
- 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)
	<u>\$ 8,000</u>

Partner Y receives a 60% share of the partnership interest of X. Partner Z receives 40%.

EXERCISE 13–9 (LO2)

Smith, Jones, and Black are partners, sharing profits equally. They decide to admit Gray for an equal partnership (25%). The balances of the partners' capital accounts are:

Smith, capital	\$ 50,000
Jones, capital	40,000
Black, capital	10,000
	<u>\$100,000</u>

Required: Prepare journal entries to record admission of Gray, using the bonus method:

- a. assuming the bonus is paid to the new partner; Gray invests \$5,000 cash;
- b. assuming the bonus is paid to existing partners; Gray invests \$60,000 cash; the remaining partners benefit equally from the bonus.

Problems

PROBLEM 13–1 (LO2)

On January 1, 2015, Bog, Cog, and Fog had capital balances of \$60,000, \$100,000, and \$20,000 respectively in their partnership. In 2015 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 2015 net income to partners.
2. Assume all the income statement accounts for 2015 have been closed to the income summary account. Prepare the entry to record the division of the 2015 net income.

Solutions To Discussion Questions

Chapter 1 Solutions

1. Generally accepted accounting principles (GAAP) are a set of principles and assumptions that guide the preparation of financial statements within the United States of America.
2. The revenue recognition principle assumes that revenue is earned by the entity at the time when a service is provided or when a sale is made, not necessarily when cash is received.
3. The matching concept states that revenue is recognized in the time period when goods and services are provided and that the assets of the entity that have been used up during the time period (expenses) must be matched with the asset inflows (revenues) during the same period.
4. Accounting information should be relevant, complete and free from error. It should also be comparable, verifiable, timely and understandable. Accounting information should only be disclosed if it is material – that is, of sufficient size or importance to influence the judgement of a reasonably knowledgeable user. Accounting information should also be disclosed in such a manner that the benefits of doing so outweigh the costs.
5. An asset is anything of value that is owned by the entity. Assets are economic resources controlled by an entity. They have some future value to the entity, usually for generating revenue.
6. A liability is an obligation to pay an asset or to provide services or goods in the future. Until the obligations are paid, creditors have claims against the assets of the entity.
Equity represents the amount of assets owing to the owners of the entity. The total assets of an entity belong either to the stockholders or to the creditors.
7. The exchange of assets or obligations by a business entity, expressed in monetary terms like dollars, is called a financial transaction. The exchange of cash for land or a building is an example of such a transaction.
8. The three forms of business organization are corporations, sole proprietorships, and partnerships.
9. A business entity is a unit of accountability that exists independently from other units. A set of accounting records is kept for each unit or entity. The entity exists separately from

its owners. This concept is important because it keeps separate all the various activities in which the owner is involved; lumping all the activities together would not yield useful information for keeping track of the financial performance each financial unit.

10. Financial statements evaluate the performance of an entity and measure its progress. Financial information is collected, then summarized and reported in the financial statements (balance sheet, income statement, statement of cash flows, and statement of stockholders' equity).
11. The date line on the income statement, statement of stockholders' equity, and statement of cash flows represents a period of time. The income statement details the revenues and expenses that occurred over a given period of time. The statement of stockholders' equity shows how equity changed over a given period of time. The statement of cash flows shows how the balance in cash changed over a given period of time. The date line on the balance sheet is a point in time because each account listed on the balance sheet identifies the account balance on a specific date.
12. The purpose of the income statement is to communicate the inflow of assets, in the form of revenues, and the outflow or consumption of assets, in the form of expenses, over a period of time. Total inflows greater than total outflows creates net income or profit, which is reported on the Income statement and in retained earnings in the equity section of the balance sheet. The purpose of the balance sheet is to communicate what the entity owns (its assets), what the entity owes (its liabilities), and the difference between assets and liabilities (its equity) at a point in time.

If revenue is recorded on the income statement, there is usually a corresponding increase in assets on the balance sheet. Similarly, if expenses are recorded on the income statement, there is generally a decrease in assets or increase of liabilities on the balance sheet.
13. Revenue is an increase in an entity's assets or a decrease in liabilities in return for services performed or goods sold, expressed in monetary units like dollars. An expense is an asset belonging to the entity that is used up or obligations incurred in selling goods or performing services.
14. Net income is the difference between revenues and expenses. It communicates whether the activities of the entity are being conducted profitably. Thus it is one measure of the success of the entity. Net income is one of the criteria used to determine the amount of dividends to be declared.
15. The statement of stockholders' equity shows why common stock and retained earnings have changed over a specified period of time – for instance, when stocks are issued or net income is earned. The statement of cash flows explains to the users of the financial statements the entity's sources (inflows) and the uses (outflows) of cash over a specified period of time.
16. Financial statements are prepared at regular intervals to keep a number of interested groups informed about the financial performance of an entity. The timing is determined in response to the needs of management in running the entity or of outside parties, such as bankers to aid in granting loans to the entity, stockholders, or others interested in evaluating the

progress of the entity. They are generally used as a means to inform investing and lending decisions.

17. The accounting equation has the following form:

$$\begin{array}{rcccl} \text{ASSETS} & = & \text{LIABILITIES} & + & \text{EQUITY} \\ \text{(economic resources} & & \text{(creditors' claims to assets)} & & \text{(owners' claims to assets –} \\ \text{owned by an entity)} & & & & \text{residual claims)} \end{array}$$

The entity has assets, which are the resources it owns. The total assets owned by an entity must always equal the total claims of creditors and owners, who have the residual claims.

A company's accounting equation is expanded to include major categories of the balance sheet, like cash and common stock. An expanded form of the accounting equation could be as follows:

$$\begin{array}{rcccl} \text{ASSETS} & = & \text{LIABILITIES} & + & \text{EQUITY} \\ \text{Cash+Accounts Receivable} & & \text{Accounts Payable} & & \text{Common Stock} \\ \text{+Equipment+Truck} & & & & \text{+Retained Earnings} \end{array}$$

18. The double entry accounting system reflects the fact that each financial transaction affects at least two items in the accounting equation, in order to maintain the equality of the equation. For example,
- A truck is sold for cash: The asset truck decreases and the asset cash increases.
 - An obligation is paid: The liability accounts payable decreases and the asset cash decreases.
 - An account is collected: The asset cash increases and the asset accounts receivable decreases.

In this way, the equation always remains in balance after each transaction is recorded.

19. A year-end is the last day of the fiscal year of the entity. The income statement, statement of cash flows, and statement of stockholders' equity reflect financial translations for the year up to this date. The balance sheet reflects the financial position of the entity at the year-end date. Interim financial statements may be prepared more frequently, say quarterly or monthly; these are prepared for each entity only if required by certain users, usually stockholders of large corporations with many stockholders. Year-end financial statements must be prepared for all entities.
20. A fiscal year refers to a 12-month accounting period and that may not coincide with the calendar year. A company whose fiscal year-end coincides with the calendar year has a December 31 year-end.

Chapter 2 Solutions

1. The use of a transactions worksheet is impractical in actual practice because the record

keeping and the calculation of totals becomes convoluted. This method is therefore not very efficient or convenient, especially for a business with a high volume of transactions.

2. An *account* is an accounting record designed to classify and accumulate the dollar effect of financial transactions. In a simplified account called a T-account, the term “debit” is used to describe the left side of the account, while the term “credit” refers to the right side.
 3. The association of “good” and “bad” or “increase” and “decrease” with credits and debits is not a valid association. To an accountant, “debit” means only “place an amount of the left side of an account” and “credit” means only “place an amount on the right side of an account.”
 4. A debit, which is always on the left side, records an increase in assets and expenses. A credit, which is always on the right side, records a decrease in assets and expenses. For example,
 - a. If an asset like a truck is purchased for cash, the asset account “Truck” is debited and the Cash account is credited.
 - b. If rent expense is incurred and paid with cash, the account “Rent expense” is debited. The Cash account is credited.
 5. A debit, which is always on the left side, records a decrease in liabilities, equity, and revenue. A credit, which is always on the right side, records an increase in liabilities, equity, and revenue. For example,
 - a. A cash sale is made. Cash is debited, Sales is credited.
 - b. We incur an expense, so we debit the expense account and credit a liability account like Accounts Payable.
 - c. We issue some common stock for cash. The general ledger account Common Stock is credited and Cash is debited.
- Assets, Expenses* *Liabilities, Equity, Revenues*
6. Increases are debited. Increases are credited.
 Decreases are credited. Decreases are debited.
 7. A trial balance is a list of each account contained in the general ledger of an entity, together with its individual debit or credit balance. It is prepared in order to establish the equality of debits with credits before the preparation of the financial statements
 8. A trial balance is used to prepare the financial statements. It shows the totals of each revenue and expense account that will appear on the income statement and the asset, liability, and equity balances that will appear on the balance sheet.
 9. A general journal is a chronological record of an entity’s financial transactions. It is often called a book of original entry because each transaction is recorded in the general journal first before it is posted to the entity’s accounts.

10. The positioning of a debit-credit entry in the journal is similar in some respects to programming methods. In the following entry,

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec. 1	Accounts Receivable		XX	
	Sales			XXX
	To record a sale on account.			

The positions represent the instructions “Post \$XX to the debit side of the Accounts Receivable account” (thus increasing the accounts receivable) and “Post \$XXX to the credit side of the Sales account” (thus increasing sales).

11. A general ledger is a book that contains the separate asset, liability, equity, revenue, and expense accounts of an entity. It is often referred to as a *book of final entry* and it is prepared so that the balance of each account can be found easily at any time.
12. A chart of accounts is a list of account names and numbers used in the general ledger, normally listed in the order of presentation on the financial statements. For example, accounts that appear on the balance sheet or on the income statement are grouped together. This facilitates the preparation of the financial statements.
13. The steps in the accounting cycle involve analyzing transactions, journalizing them in the general journal, posting from the general journal into the general ledger, preparing the trial balance, and generating financial statements are steps followed each accounting period. These steps form the core of the accounting cycle. Additional steps involved in the accounting cycle will be introduced in Chapter 3.

Chapter 3 Solutions

- The sequence of financial transactions that occurs continuously during an accounting time period is called the *operating cycle*. Operations begin with some cash on hand. The cash is used to purchase supplies and pay expenses while revenue is being generated. When revenue is earned, cash is collected, beginning the cycle over again. While some transactions are being completed, others are only beginning.
- No, the operating cycle does not have to be complete before income can be measured. Revenue can be recorded as earned when the product is sold or the service performed regardless of whether cash is collected. To measure income, expenses must be matched to revenues or the relevant time period. This usually can be done whether or not the operating cycle is complete.
- Accrual accounting matches expenses to revenues for a particular time period. The accrual method is the basis on which accounts are adjusted to reach this objective. Under

this method, expenses are matched to the revenues during the period that the revenues are generated. The revenue recognition assumption helps determine when revenues are earned, thus allowing expenses to be matched to these revenues. Revenues are not generally matched to expenses by convention. The rationale is that revenues are recognized before expenses; therefore expenses should be matched to revenues.

4. Under the going concern concept, it is assumed that operating cycles that are incomplete at the end of financial periods will be completed during the (assumed) unlimited life of the entity. Since accountants must prepare financial statements even though operating cycles are incomplete, accrual accounting techniques are employed to more accurately measure economic activity during a given time period.
5.
 - The cost of goods that are transferred to customers (such as items sold); these expenses can be matched to revenue generated relatively easily.
 - The cost of assets only partially consumed during the time period like trucks and equipment; these expenses are as easily matched with revenue.
 - Some expenses incurred during the accounting period are not easily identified with revenue generated, such as salaries of administrative staff. These are matched to the period in which they are incurred, rather than to related revenue.
6. Adjusting entries are changes made at the end of an operating cycle to more accurately reflect economic activity during the period. For instance, depreciation is calculated on plant and equipment assets and charged to the income statement.
7. At the end of the accounting period, an accountant must determine the amount of future benefits (assets like Prepaid Insurance) that belong on the balance sheet and how much should be recorded in the income statement (as Insurance Expense, in this example). The appropriate amounts must be transferred by means of adjusting entries.
8. Plant and equipment accounts are handled differently than other asset accounts. The expired portion of the cost of such an asset is estimated based on its useful life and recorded as depreciation expense. This requires no cash outlay, despite being an expense. Plant and equipment asset accounts themselves are not reduced by the depreciation expense; rather, a contra asset account is set up in order to show a reduced balance on the balance sheet.
9. A contra account is used to reduce the value of a related balance sheet item. For instance, the account Accumulated Depreciation-Equipment is credited by the amount of depreciation expense recorded each year. The balance in this account is netted against the related account (Equipment, in this example) so that the asset is shown at carrying amount on the balance sheet.
10. At the end of the accounting period, the amount of the liability that belongs on the balance sheet must be determined. The account balance is adjusted through the use of an adjusting entry to the related revenue account (Repair Revenue, in this example).
11. Accruals are assets and liabilities that increase during an accounting period but are not recognized in the normal course of recording financial transactions. They are recorded through

the use of accrual adjusting entries at the end of the accounting period. Examples of accounts that accrue are:

	<u>Examples of Income Statement Account</u>	<u>Related Balance Sheet Account</u>
Revenues:	Interest earned	Interest receivable
	Rent earned	Unearned rent
Revenue		
Expenses:	Interest expense	Interest payable
	Rent expense	Prepaid rent
	Insurance expense	Prepaid insurance
	Salaries expense	Salaries payable

Related balance sheet accounts are eventually reduced when cash is received or paid, as applicable.

12. An adjusted trial balance is prepared after posting the adjusting entries in order to establish the equality of debits and credits, and before preparing the financial statements.
13. The adjusted trial balance conveniently summarizes the general ledger accounts in order of their appearance in the financial statements. This facilitates preparation of the financial statements.
14. The eight steps in the accounting cycle are:
 - a. Transactions are analyzed and recorded in the general journal.
 - b. The journal entries are posted to general ledger accounts.
 - c. An unadjusted trial balance is prepared to ensure debits equal credits.
 - d. The account balances are analyzed, and adjusting entries are prepared and posted.
 - e. An adjusted trial balance is prepared to prove the equality of debits and credits.
 - f. The adjusted trial balance is used to prepare financial statements.
 - g. Closing entries are journalized and posted.
 - h. A post-closing trial balance is prepared to ensure closing entries have been appropriately recorded and to ensure equality of debits and credits.
15. The first two steps in the accounting cycle occur continuously throughout the accounting period:
 - a. Transactions are analyzed and recorded in the general journal.
 - b. The journal entries are posted to general ledger accounts.
16. The next six steps in the accounting cycle occur only at the end of the accounting period:
 - a. An unadjusted trial balance is prepared to ensure debits equal credits.

- b.** The account balances are analyzed, and adjusting entries are prepared and posted.
- c.** An adjusted trial balance is prepared to prove the equality of debits and credits.
- d.** The adjusted trial balance is used to prepare financial statements.
- e.** Closing entries are journalized and posted.
- f.** A post-closing trial balance is prepared to ensure closing entries have been appropriately recorded and to ensure equality of debits and credits.

These steps differ from the others because they don't deal with individual transactions but address account balances. The adjusted balances are used to prepare financial statements.

17. Revenues must be accrued during the current accounting period if they have been earned and even if they have not yet been satisfied with cash during in the current accounting period. An account receivable is an example. Expenses must be accrued during the current accounting period if they relate to the revenue recognized during the current period or the current time period itself (for example, salaries) even if they have not yet been paid in cash. An account payable is an example. Cash outlays are recorded as prepaid expenses if cash is paid in advance of expense recognition. Prepaid Insurance is an example. For each such asset and liability, the accountant must determine at the end of the accounting period the appropriate balance that should be recorded on the balance sheet. These accounts are adjusted as appropriate through adjusting entries.
18. The need for regular financial information requires that revenue and expense accounts of a business be accumulated for usually no more than one year by convention, and that financial statements be prepared for that period. Using a consistent time period allows revenue and expenses for one period to be compared to a preceding period. A one-year cycle reduces effects of seasonal variations in business activity, for instance, but also allows for business performance to be evaluated by owners and creditors regularly and predictably.
19. Temporary accounts include all revenues and expense categories, as well as the dividend account, that are reduced to zero at the end of the fiscal year when they are closed to the Retained earnings account. Permanent accounts have a continuing balance from one fiscal year to the next: these include all balance sheet accounts.
20. An income summary account is an account used only at year-end to accumulate all revenue and expense balances, and to reduce their general ledger accounts to zero at the end of the fiscal year. This account summarizes the Net income (or Net Loss) for the period. It is closed to the Retained earnings account at year-end.
21. A post-closing trial balance is a listing of balance sheet accounts and their balances after all temporary accounts have been closed. It proves the equality of general ledger debit and credit balances before the next accounting period commences.

Chapter 4 Solutions

1. The economic resources of Big Dog Carworks Corp. are its assets: cash, accounts receivable, inventories, prepaid expenses and property, plant and equipment.
2. The financial statements are the balance sheet, the income statement, the statement of stockholders' equity, and the statement of cash flows. Notes to the financial statements are also included. The statements report the financial position of the company at year-end, the results of operations for the year, changes in common stock and retained earnings, sources and uses of cash during the year, and information in the notes that is not quantifiable or that provides additional supporting information to the financial statements.
3. Fundamentally, accounting measures the financial progress of an entity. The purpose of financial statements is to communicate information about this progress to external users, chiefly investors and creditors.
4. $ASSETS = LIABILITIES + EQUITY$
 $\$284,645 = 241,145 + 43,500.$
5. Net assets equal \$43,500 ($\$284,645 - 241,145$). Net assets are synonymous with equity. They represent the amount of total assets attributable to the shareholders after taking into account the claims of creditors.
6. The individual assets of Big Dog Carworks Corp. as shown on the balance sheet are cash, accounts receivable, inventories, prepaid expenses, and property, plant, and equipment. Its liabilities are borrowings, accounts payable, and income taxes payable.
7. Per Note 3(d), property, plant, and equipment are depreciated on a straight-line basis over their estimated useful lives. Land is not depreciated.
8.
 - a. Current asset accounts: Per Note 3(a), revenue and expenses are accrued. This will give rise to current assets and current liabilities like accounts receivable, inventory, prepaid expenses, accounts payable, income taxes payable, and accrued liabilities. In addition, accounts receivable are carried at net realizable value. Per Note 3(e), inventory is carried at lower of cost and net realizable value. These amounts must be adjusted to the correct balance. Prepaid expenses would be adjusted to reflect the unused portion at the end of the period.
 - b. Non-current asset accounts: Per Note 3(d), buildings are depreciated at 4% per year using the straight-line method. Equipment is depreciated at 10% per year on a straight-line basis; motor vehicles are depreciated on a straight-line basis over five years.
 - c. Current liability accounts: income taxes payable are adjusted at the end of the period to reflect the estimated amount of taxes incurred for the period. All expenses that are incurred but not yet paid are added to the unrecorded accrual accounts. Examples are salaries payable for partial periods and interest owed but not yet paid.

- d. Non-current liability accounts: borrowings must be analyzed to determine current and non-current amounts, as shown in Note 5.
9. The balance sheet is classified in order to facilitate the analysis of its information. For instance, comparing amounts that will be needed to be satisfied within the upcoming year (current liabilities) with resources available to satisfy these claims (current assets) allows readers to assess the relative ability of the corporation to meet its short-term obligations as they become due.
 10. Big Dog Carworks Corp. makes it easier to compare financial information from period to period by presenting comparative annual financial data for two years.
 11. The auditor is H. K. Walker, Chartered Professional Accountant. The audit report states that the financial statements of BDCC have been examined in accordance with generally accepted auditing standards. It also states that, in the auditor's opinion, the statements present fairly the financial position of BDCC and the results of its operations and changes in financial position for the year just ended. There are no concerns raised in the report.
 12. The auditor's report indicates that GAAP have been consistently applied in BDCC's financial statements (see last sentence of the report).
 13. Though the financial statements are produced under the direction of management, they belong to the stockholders. Stockholders are the owners of the company.
 14. Management is responsible for demonstrating that the internal controls of a company are effective.

Chapter 5 Solutions

1. A business providing a service holds no inventory for resale. Thus, a business that sells goods must match the cost of the goods sold with the revenue the sales generate. The Income Statement will show this, as well as the Gross Profit (also known as Gross Margin)—the difference between Sales and Cost of Goods Sold. A service business Income Statement would not show these items.
2. Gross Profit is the result of deducting Cost of Goods Sold from Sales (or Net Sales). For example, if a car is sold for \$16,000 but cost \$12,000, the Gross Profit calculation would be

Sales	\$16,000
Cost of Goods Sold	12,000
Gross Profit	<u>4,000</u>

The profit on the sale, before considering operating and other expenses, is \$4,000. The Gross Profit percentage is $\$4,000/\$16,000$ or 25 per cent. That means for every \$1 of Sales, the business earns \$0.25 on average to cover operating and other expenses.

3. The Merchandise Inventory account collects information regarding the purchase of inventory, return to supplier of inventory, purchase discounts, transportation costs, and inventory shrinkage adjustments.
4. The sales and collection cycle starts off when a sale is made, often creating an Account Receivable. The Account Receivable is subsequently removed when cash is collected. If merchandise is returned because it is say, the wrong model or defective, a Sales Returns and Allowances records this amount and the Account Receivable is reduced. To speed up collections, discounts may be offered in return for prompt payments. If so, a Sales Discount may be given.

Assuming a perpetual inventory system, the purchase and payment cycle starts with the purchase of merchandise, which becomes the inventory held for resale; the purchase generally creates an Account Payable. The Account Payable is removed once the account is paid by a cash disbursement. Purchases may be returned if the inventory item is wrong or defective. If so, the Account Payable would be reduced and a credit to Merchandise Inventory would be recorded. Discounts may be offered by the supplier to speed up payment by the purchaser. If so, the purchaser would be given a purchase discount which is debited to Account Payable and credited to Merchandise Inventory.

5. The contra accounts used for sales are
 - a. Sales Returns and Allowances, which accumulates merchandise returned to the seller by the customer because of some defect or error.
 - b. Sales Discounts, which accumulates discounts taken by customers when payments are made to the seller within the discount period.
6. (Appendix) In a perpetual inventory system, the balances in Merchandise Inventory and Cost of Goods Sold are updated with each transaction involving purchases and sales. In a periodic inventory system, the balances in Merchandise Inventory and Cost of Goods Sold are not known until an inventory count is performed. The advantage of a perpetual system is that account balances are maintained in real time and therefore always known which is not the case for a periodic system where account balances have to be estimated until an inventory count is performed.

Chapter 6 Solutions

1.
 - a. The amount of inventory on hand is important to management for two reasons. First, management wants to ensure there is ample inventory to meet all customers' orders. Second, because the cost of carrying inventory (for instance, rental of warehouse space, insurance) can be quite high, management wants to keep the inventory as low as possible.

- b.** Investors and creditors are concerned with the inventory because inventory is a large asset. They will want to assess its current amount and trends compared to other years and competitors' levels to help determine the financial strength of the company before investing or lending money, or for use as collateral, for instance.
- 2. Accountants must ensure the inventory is not obsolete or unsalable and that it is properly counted and valued, using an acceptable inventory cost flow assumption that is applied consistently from year to year.
- 3. The cost of inventory is the invoice price of the goods less purchase discounts, plus transportation, 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.
- 4. Flow of goods is the physical movement of the goods themselves as they enter the firm and are sold, especially when dealing with similar items, while the flow of costs is the costs assigned to the flow of goods in the firm using specific identification, FIFO, LIFO, or weighted average cost bases.

GAAP does not require that the flow of costs basis be similar to the physical flow of goods, except when individual units of inventory can be identified by, for example, serial numbers. However, it does require that once the cost basis is selected, that it be followed consistently from period to period.

- 5. Two factors are considered in costing inventory: the quantity and the assigned value per unit. Assigning the value is often the more difficult aspect, as this involves tracking the laid-down costs of many items. Physical quantities can be tracked by computerized accounting systems and verified or determined by physical count at year-end.
- 6. Consistency in inventory costing is necessary for comparing a company's performance from year to year. GAAP does allow a company to change its inventory valuation method; however, the company must restate inventory and cost of goods sold effects on prior years using the new method. In practice this change is rarely made.
- 7. If the ending inventory is overstated at the end of 2018, then cost of goods sold is understated; therefore, the 2018 net income is overstated by \$5,000. In 2019, the opening inventory would be overstated and cost of goods sold would be overstated; therefore, the net income would be understated by \$5,000.
- 8. Inventory should be valued at less than cost when the lower of cost and net realizable value (LCNRV) principle is applied, perhaps due to factors such as physical deterioration, obsolescence, or changes in price levels.
- 9. The primary reason for the use of the LCNRV method and the LCM method of inventory valuations are to prevent overstatement. If the likely value of inventory has declined below cost, it is prudent to recognize the loss immediately, rather than when the goods are eventually sold. Net realizable value is the expected selling cost of inventory, less any applicable costs related to the sale. Market is the current replacement cost of inventory.

10. When inventory is valued at LCNRV or LCM, cost refers to the invoice price of the goods less purchase discounts, plus transportation, 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.
11. The inventory cost flow assumptions permissible under GAAP are specific identification, FIFO, LIFO, and weighted average cost.
12. Estimating inventory is useful for two reasons:
- It is useful for inventory control. When a total inventory amount is calculated under a periodic inventory system through physical count and valuation, an estimate can help check the accuracy.
 - It is useful for the preparation of interim financial statements. Under a periodic inventory system, inventory on hand at any point in time is not readily available. To take a physical count often would be costly and inconvenient. An estimate offers a way of determining a company's inventory at any point in time in a cost-effective manner.
13. Under the gross profit method, the percentage of profit remaining after accounting for cost of goods sold (the gross profit percentage) is assumed to remain the same from year to year. By applying the rate to sales, gross profit and then cost of goods sold can be estimated. Opening inventory and purchases will be known from the accounting records, so cost of goods available for sale can be determined. The difference between the cost of goods sold and cost of goods available for sale is the ending inventory amount.

Under the retail inventory method, mark-up on goods purchases then sold is considered to be constant. Both cost and selling prices of goods acquired are then valued at retail by using the mark-up amount. From this, the ending inventory at retail is calculated. By applying the cost percentage (costs of goods available for sale divided by retail costs of goods available for sale) to the retail ending inventory, its value at cost can be calculated.

- i. Example – gross profit method:

Sales		\$100
<i>Cost of Goods Sold:</i>		
Opening Inventory (from records)	80	
Purchases (from records)	70	
Cost of Goods Available for Sale	<u>150</u>	
Ending Inventory	(a)?	(b)?
Gross Profit		<u>\$ (c)?</u>

If the gross profit percentage average is 25%, the following can be estimated:

(c) Gross profit	= 25% of \$100	= \$25
(b) Cost of goods sold	= \$100 – \$25 (c)	= \$75
(a) Ending inventory	= \$150 – \$75 (b)	= \$75

Ending inventory (a) would be \$75.

- ii. Example – retail inventory method; assumed mark-up = 200%:

	<u>At Retail</u>	<u>At Cost</u>
Sales	\$500	\$500
Cost of Goods Sold:		
Opening Inventory (records)	\$(b)	\$80
Purchases (records)	(b)	300
Cost of Goods Available for Sale	<u>(c)</u>	<u>380</u>
Ending Inventory	<u>(d)?</u>	<u>(e)?</u>
Cost of Goods Sold	<u>(a)?</u>	<u>(f)?</u>
Gross Profit (same as Sales)	<u>\$-0-</u>	<u>(g)?</u>

- (a) Cost of Goods restated at retail to equal sales = \$500
- (b) Opening Inventory and Purchases re-stated at retail = $\$300 \times 200\% = \600 ;
= $80 \times 200\% = 160$
- (c) Cost of Goods Available at retail = $\$600 (b) + 160 (b)$
= \$760
- (d) Ending Inventory at retail = $\$760 (c) - 500 (a)$
= Cost of Goods Available at retail
= \$260
- (e) Inventory at cost = Inventory at retail/200%
= \$130
- (f) Cost of Goods Sold at cost = $\$380 - 130(e) = \250
- (g) Gross Profit at cost = $\$500 - \$250(e) = \$250$

14. The gross profit method is particularly useful in cases where goods have been stolen or lost in a fire; in such cases it is not possible to determine the balance in the ending inventory by a physical count when the periodic inventory system is used.
15. The retail inventory method assumes an average inventory cost flow assumption because the cost percentage used to calculate ending inventory and cost of goods sold is based on a constant mark-up.

Chapter 7 Solutions

1. The fraud triangle are the three things antifraud experts say are needed in order to commit financial statement fraud: incentive, opportunity, and the ability to rationalize the fraud. Internal control is the system, plan, or organization established to ensure, as far as practical, the orderly and efficient conduct of business. In part, it is used to ensure accurate record-keeping and the timely preparation of financial statements, safeguard the assets of the business, and promote efficiency.
2. A bank reconciliation is a comparison of the items shown on the bank statement with the entries made in the records of the entity. A reconciliation leads to the update of the accounting records and the correction of errors, if any. Thus, control over cash is enhanced.

3. Different reconciling items that may appear in a bank reconciliation are as follows:

Book Reconciling Items

Book errors
NSF checks
Bank charges
Collection of AR

Bank Reconciling Items

Outstanding deposits
Outstanding checks
Bank errors

4. The steps in preparing a bank reconciliation are (for which there is no specific order):

- a. Cancelled checks returned by the bank are compared with checks recorded as cash disbursements (both outstanding checks from previous months and checks written in current month's cash disbursements). Any outstanding checks must be deducted from the bank statement ending balance.
 - b. Other disbursements made by the bank are examined. These could include NSF (not sufficient funds) checks or bank service charges. These must be deducted from the company's Cash account balance in the general ledger.
 - c. The deposits shown on the bank statement are compared with the amounts recorded in the company records.
 - d. The prior month's bank reconciliation is reviewed for outstanding deposits at the current date.
 - e. Errors in the bank statement and in the company's record must be entered on the reconciliation.
5. A check received from trade customers that has been deposited but cannot be cleared by the bank because the customer's own bank balance is less than the amount of the check is an NSF (Not Sufficient Funds) check.
6. A petty cash system reimburses petty cash for an amount equal to the amounts disbursed when the fund has been depleted.
7. When a petty cash fund is established, a regular check is written for the amount to be held in the petty cash fund. The general ledger account Petty Cash is debited and Cash is credited. The check is cashed and the funds are held by the petty cash fund custodian.
- When the balance of cash in the funds held by the custodian is low, a check is written to reimburse the fund for the amount of all receipts held. The check is recorded as a debit to the applicable expense accounts and a credit to the Cash account in the general ledger.
8. Allowance for doubtful accounts is a contra accounts receivable account showing the estimated amount that will not be collected. To set it up, bad debt expense is debited and the allowance is credited for the estimated amount. In this way, the bad debt expenses for the period are matched with revenues for that period.
9. The income statement method for calculating the estimated amount of doubtful accounts assumes that a certain percentage of sales made on account will become uncollectible. The percentage is applied to credit sales and is chosen on the basis of bad debt experience of

previous years. The estimated bad debt expense is calculated independently of any current balance in the Allowance for Doubtful Accounts general ledger account.

10. Aging of accounts receivable is the detailed analysis of trade accounts receivable based on time that has elapsed since the creation of the receivable. An estimated loss percentage is applied to each time category to estimate an uncollectible amount. The estimated bad debt expense consists of the difference between the current balance in the Allowance for Doubtful Accounts general ledger account and the amount required to be set up based on this analysis.
11. The usual balance in the Accounts Receivable general ledger account is a debit. Occasionally, as a result of double payments, merchandise returns, or allowances granted for example, a credit balance occurs in some accounts. Theoretically, the credit balance should be transferred to liabilities. In practice, the net amount of accounts receivable is reported on the balance sheet unless the credits would materially distort the numbers reported.

Chapter 8 Solutions

1. To capitalize a cost means to record an expenditure as an asset instead of an expense.
2. An expenditure is a cash disbursement. A capital expenditure is one that
 - a. Benefits more than the current accounting period, and these benefits are reasonably assured;
 - b. Is material in amount.

A revenue expenditure is an expense and does not have the characteristics belonging to a capital expenditure. NOTE: An expense is known as a revenue expenditure because its purpose is to generate revenue in the period in which it was expended (i.e., the current accounting period).

3. The purchase of a computer for business use qualifies as a capital expenditure when it benefits more than one accounting period. However, its purchase price may not be immaterial, depending on the company's capitalization policy. The annual maintenance or repairs made to the computer to keep it running are revenue expenditures if the cash disbursements are frequent, small, and do not extend the life of the computer. Purchase of a part that significantly enhances performance or extends the useful life of the computer might be capitalized, again depending on materiality.
4. Purchasing land and buildings for a lump sum means that no distinction is made between the two items at the time the purchase price is negotiated. The purchase price must be apportioned between the Land and Building accounts because buildings are subject to depreciation. The purchase price, therefore, is allocated on the basis of relative fair values of the land and the buildings.

5. As a matter of expediency, large companies set a dollar limit to help determine whether a disbursement is to be treated as a revenue or a capital expenditure because efforts required to capitalize and amortize an inexpensive item are so much greater than the benefits to be derived. The concept of materiality is used to determine the amount at which an expenditure is considered capital in nature.
6. When one asset is exchanged for another, the cost of the asset acquired is determined by the fair value of the asset given up. If the fair value of the asset given up is not known, then the fair value of the asset acquired becomes the cost of the new asset.
7. Depreciation is the process of allocating the cost of a tangible, long-lived asset to each accounting period that will benefit from its use. The amount to be allocated is based on an estimate of the asset's useful life, residual value, and method of depreciation to be used.
8. As time elapses, the economic benefits provided by an asset may decrease, so that the efficiency of the asset is greater during its initial years and less later on. If a car is free from initial defect, it should not require any repairs in its first year of use, but it will need regular maintenance (e.g., oil changes). Eventually, it will likely require repairs, such as a replacement battery or new valves. The annual maintenance costs will increase, costing the user more to use the car. Therefore, the value of the car or the value of its services each year will decrease, so depreciation should be lower in subsequent years.
9. A usage method of depreciation is useful when the use of an asset varies from period to period and when wear and tear is the major cause of depreciation. A time-based method, such as straight-line depreciation, assumes that each period receives services of equal value from the use of the asset; time-based methods ignore asset usage. The preferable method is a matter of judgment.

The sports car may wear out in two ways. The distance travelled has a large bearing on the value of the car; however, the passage of time also does, as an older model generally sells for less than its original cost. In terms of the useful life of the car, it will only last for a certain number of miles and it only renders services if it is driven. A usage method is likely best to measure depreciation, since the car is not necessarily driven for equal times during each period; the less it is driven, the more periods it will last.

10. Under the declining balance method, the calculation of depreciation is made without an adjustment for residual value. The asset cannot be depreciated below a reasonable residual value. The arithmetic of this formula is such that it will never reduce the asset balance to zero. Under the straight-line method, there is an adjustment made for residual value. This difference is not inconsistent, since both methods eventually result in a balance considered to be the residual value.
11. Under the declining balance method, a constant depreciation rate is applied in each accounting period to the remaining carrying amount (cost less accumulated depreciation). Both the depreciation expense and the carrying amount decline every period. Therefore, it is called the declining balance method.

Under the straight-line method, the depreciation expense for each accounting period is the same over the useful life of the asset.

12. If an asset is expected to have a 10-year life, then, each year 10 per cent of its life is over ($100\%/10 \text{ years} = 10\%$). The double-declining balance is double this rate or 20% per year, calculated on the carrying amount of the asset at the end of the previous year.
13. Partial-year depreciation can be calculated using the half-year rule or by pro-rating depreciation expense over the number of months (rounded) that the asset was in use.
14. Either changes in estimated residual value or useful life may affect the calculation of depreciation expense. In both cases, no change is made to depreciation expense already recorded. The effects of the changes are spread over the remaining future periods.
15. Subsequent capital expenditures affect depreciation calculations in the same manner as changes in accounting estimates. The effects are accounted for prospectively (over the remaining future periods).
16. At the end of each reporting period, the recoverable amount (fair value less estimated costs of disposal) of an asset must be compared to its carrying value. If the recoverable amount is lower, the carrying value must be adjusted downward (a credit to the asset account) and an impairment loss must be recorded (a debit to an expense account). Subsequent years' depreciation expense calculations must also be adjusted.
17. Estimates of future events are commonplace in accounting, and necessary to provide more meaningful information to financial statement users, within reason. Depreciation is one example. The benefits of matching the use of a capital asset to the revenue of future periods which it helps to produce is deemed to be useful information under GAAP. To facilitate this, depreciation methods rely on estimates, and estimates of future events are subject to error. Accounting is intended to produce financial information that are not precise but rather that present a fair representation of the entity. If the estimates used subsequently prove to be incorrect, accountants change them.
18. 18. Lump sum is one price is negotiated for the entire purchase of building and land. A lump sum purchase price must be apportioned between the PPE assets acquired on the basis of their respective market values, perhaps established by a municipal assessment or a professional land appraiser.
19. A gain or loss on disposal does not occur when the carrying amount of an asset is the same as the proceeds of disposition.
20. A trade-in involves acquiring a long-lived asset by giving up a similar asset to the one being acquired (i.e., exchanging it) as part of the purchase price. It is not quite the same as an outright sale, which involves giving up a long-lived asset and receiving just cash for it. A trade-in impacts the gain/loss on sale by the difference between the carrying amount of the old asset and the fair value of the old asset.
21. The trade-in allowance may be higher or lower than the fair value of the used asset on the open market. Dealers often give more trade-in allowance on a used car than it is actually worth to make purchasers think that they are getting a better deal on the new car.

22. The cost of the new asset is calculated as the sum of cash paid plus the fair value of the trade-in.
23. Intangible assets, unlike property, plant, and equipment, cannot be touched or otherwise sensed. They are the same as PPE in that they represent future economic benefits to an entity over more than one accounting period, and so are similarly capitalized.
24. A patent is an exclusive right granted by the state to an inventor to produce and sell an invention for a specified period of time. A patent's useful life may be affected by economic factors based on demand and competition. The 20-year life may be excessive; a shorter life may be more realistic. For example, if a company develops a unique computer and patents it, even though it cannot be reproduced by other firms for 20 years, nothing stops a competitor from studying it, improving it, and patenting this improved computer. Although the "unique" computer may be useful for many years, it may be technologically obsolete before the patent expires.
25. A copyright is the exclusive right granted by the state to publish a literary or artistic work. It exists for the lifetime of the author and for a specific period of time after death. Similarly, a trademark is a legal right granted by the state, in this case for an entity to use a symbol or a word as a trademark to identify one of its products or services. A copyright would be granted for a piece of music or a novel. Examples of trademarks are the word "Coke"® on soft drink bottles and the stylised 'M'® of the McDonald's® logo.
26. Goodwill is a long-lived asset that represents the capitalized value of superior earnings potential of an acquired company. Goodwill is an asset but it is not an intangible asset. Such factors as favorable customer relations, loyal and competent employees, possession of valuable patents or copyrights, high-quality products, or effective management help create goodwill. Goodwill cannot be identified separately because it relates to the total entity acquired. Its useful life is considered indefinite unless its value is impaired because these attributes are assumed to continue into the future. Goodwill can only be purchased in an arms-length transaction because it is otherwise difficult to attach a value to it.
27. Intangible assets are generally measured and recorded at cost. The measurement basis should be disclosed, along with
 - the type of amortization method for each class of intangible asset;
 - opening and ending balances for cost, accumulated amortization, and carrying value, and disclosure of any changes;
 - whether they are internally generated; and
 - whether they have finite or indefinite lives.

Chapter 9 Solutions

1. A current liability is a form of debt that is expected to be paid within the longer of one year

of the balance sheet date or one operating cycle. A long-term liability is also a form of debt but it is expected to be paid beyond one year of the balance sheet date or the next operating cycle, whichever is longer. Current and long-term liabilities must be shown separately on the balance sheet.

2. Examples of known current liabilities are accounts payable, sales taxes payable, short-term notes payable, and payroll liabilities.
3. Known current liabilities are those where the payee, amount, and timing of payment are known. These are different from estimated current liabilities where the amount is not known and must be estimated.
4. Examples of estimated current liabilities include warranties and income taxes.
5. Estimated current liabilities are those where the amount is not known and must be estimated. The amount of an estimated current liability is probable and can be reliably estimated. A contingent liability is either not probably or it cannot be reliably estimated. Contingent liabilities are not recorded whereas estimated current liabilities are recorded.
6. A bond is a debt security that necessitates periodic interest payments during its life as well as a future repayment of the borrowed amount. A bond indenture is the contract that binds the corporation to the bondholders; it specifies the terms with which the corporation must comply and may restrict further borrowing by the corporation. A trustee may be used to serve as an impartial intermediary between the corporation and the bondholders, and so better balance the rights and needs of these two groups.
7. A bondholder has the following rights:
 - a. The right to receive the face value of the bond at a specified maturity date in the future, that is, the right to receive the amount of money that was invested;
 - b. The right to receive periodic interest payments at a specified per cent of the bond's face value; this interest represents the bondholder's return on investment; and
 - c. The right to have the corporation pledge some secured assets to protect the bondholder's investment; this safeguard restricts excess borrowing and, in the event that interest or the face amount of the bonds cannot be paid, allows for the sale of these assets to generate the funds necessary for repayment.
8. Bond issues with different characteristics are disclosed separately in the financial statements, or more usually, in a note. The interest rate, maturity date, and any restrictions imposed on the corporation in the bond indenture, together with any assets pledged, also must be disclosed.
9. The different possibilities in the redemption of bonds before their maturity follow:
 - a. The bonds can be repurchased on the open market if this option is financially advantageous to the issuer.

- b.** The issuer may exercise a call provision if it is financially advantageous. A call provision, sometimes included in a bond indenture, permits early redemption at a specified price, usually higher than the face value.
 - c.** The bondholder or issuer may exercise a conversion feature if provided for in the bond indenture, whereby the bonds can be converted into corporate shares.
- 10. If the bond contract interest rate is the same as the prevailing market interest rate, the bond will sell “at par”. If the bond contract interest rate is higher than the prevailing market interest rate, the bond will sell at a premium. Prospective bondholders will bid up the price of the bonds because the bonds pay a rate of interest higher than other securities with similar features and risks. This creates a premium over the face value of the bonds. If the bond contract interest rate is lower than the prevailing market interest rate, the bond will sell at a discount because prospective bondholders will not be willing to pay the face value of the bonds. The issuer will have to accept a lower price so the effective interest rate will equal that of other securities with similar features and risks.
- 11. Under GAAP, an unamortized premium (discount) is added to (deducted from) the face value of the bond so that the liability is recorded at its carrying amount on the balance sheet.
- 12. If the bond contract interest rate is greater than that required in the market, then the bonds are sold at a premium. If the investment market operates efficiently, investor should earn only the market rate of interest. By paying a premium over the face value, the overall return to the investor is reduced from the bond contract rate to the market rate in effect at the issue date.
- 13. The *effective interest method* of amortization calculates different amounts of amortization from one period to another is the preferred method. GAAP does allow for straight line method to be used as well.
- 14. A loan, like a bond issue, is a means for an entity to raise investment capital through creditors. Both can be secured, and generally have fixed rates of interest and specified terms of repayment. However, loans are repaid with blended payments of interest and principal over the life of the liability. While the total payment on a loan is constant, the relative portion of interest decreases with each payment because loan principal is being reduced with each preceding payment. The portion of principal repayment increases. Bonds pay interest only to investors at regular intervals over the life of the issue plus a payment for the face value of the bond when it matures.
- 15. If money is borrowed today for one year, at the end of that year the money to be repaid is increased by the amount of interest charged. The future value is therefore the principal plus interest. If a certain sum must be repaid in one year, the value in today’s money would exclude the interest to be earned in the future. This is its present value. The time value of money is represented by interest. Interest is added to the principal to obtain the future value, and it is removed from a future sum to arrive at the present value.
- 16. The price of a bond is determined by combining the present value of the following future cash flows associated with the bond:

- a. a single amount, the face value, to be paid at maturity; and
- b. semi-annual interest payments made during the bond's life.

Chapter 10 Solutions

1. The corporate form of organization offers the following advantages:
 - a. It is a legal entity with unlimited life; its existence is separate from its owners; and it has many of the rights and responsibilities of an individual.
 - b. It has limited liability; the owners are liable only for the amount they invest in the corporation.
 - c. Acquiring capital is facilitated by being able to issue shares (ownership units) with different risk and reward structures to many owners.
 - d. Corporations may pay income taxes at rates that may be lower than rates for individuals.
2. The owners of the corporation are liable for only the amount they have each invested. If the corporation fails, its assets are used to pay the creditors. If assets are not sufficient to pay all creditors, the shareholders have no further liability. Creditors are protected to some degree by disclosure of the corporation's limited liability.
3. Some of the rights of common stockholders are as follows:
 - a. The right to participate in the management of the corporation by voting at stockholders' meetings (1 share generally equals 1 vote).
 - b. The right to participate in dividends when they are declared by the corporation's board of directors.
 - c. The right to participate in a distribution of assets on liquidation.
 - d. The right to appoint auditors.
The rights may be printed on the share certificate itself; they are detailed in the articles of incorporation.
4. The shareholders elect a board of directors, which appoints the officers of the corporation. The officers execute the policies approved by the board of directors. The directors are not involved in the daily management of the corporation.
5.
 - a. The two main classes of shares are:
 - i. Preferred Stock – a class of shares that has a preference over common stock. Holders of preferred stock are entitled to payment of dividends before common stockholders and usually have prior claims on a corporation's assets on liquidation. A fixed dividend rate may be attached to the shares. Some preferred stock may have voting privileges.

- ii. **Common Stock** – the class of shares that are the basic ownership units in a corporation. Ownership of common stock carries the right to vote, to share in dividends, and to share in the assets of the corporation if it is liquidated; however, all other claims to the assets of a corporation rank ahead of the common stockholders' claims.
- b.** Terms relating to the present status of a corporation's shares:
- i. **Authorized Shares** – the designated number of shares within each class of shares that a corporation may issue.
 - ii. **Unissued Shares** – the shares of common stock in each class that a corporation is authorized to issue but has not yet issued.
 - iii. **Issued Shares** – the total number of authorized shares that have been issued in the name of shareholders; issued shares may not actually be in the hands of stockholders (e.g., treasury stock).
 - iv. **Outstanding Shares** – authorized shares that have been issued and are actually in the hands of shareholders.
 - v. **Reacquired Shares** – shares that have been re-purchased from shareholders, have not been cancelled, and have not been reissued (also called treasury stock).
6. Shares are preferred in that their owners
- a.** Generally assume less risk than common stockholders. When a corporation is dissolved, preferred stockholders have first claim on the remaining assets after the creditors have been paid; and
 - b.** Have a prior claim to the earnings of the corporation. Preferred stockholders must be paid specified dividends before any payments are made to common stockholders.

Preferred stockholders are similar to common stockholders in that both

- a.** Own stock certificates, evidence of corporate ownership;
- b.** Have the legal guarantee that all shares of the same class will be treated equally with respect to rights and privileges attached to them;
- c.** Have the right to dividends declared by the board of directors; and
- d.** Have the right to participate in distribution of assets on liquidation of the corporation.

Preferred stockholders differ from common stockholders in that

- a.** Common stockholders can participate in the management of the corporation by voting at stockholders' meetings (though some preferred stock may have voting privileges);
- b.** Common stockholders can appoint auditors;
- c.** Common stockholders assume more risk than preferred stockholders. However, common stockholders have more potential for receiving substantial dividends and increases in the value of their shares if the corporation is successful; and

14. Dividend preferences that may be attached to preferred stock are
- Preferred stockholders are entitled to dividends before any dividends are distributed to common stockholders;
 - Preferred stock may be cumulative; undeclared dividends can accumulate from one year to the next; and
 - Preferred stockholders may participate with common stockholders in dividend distributions beyond their usual preferred dividends.

Preferred stock has returns that are more predictable and thus attract investors with a lower tolerance for risk. These advantages do not mean that purchasing preferred stock is necessarily better than purchasing common shares. Holding common stock has its own advantages. Common stockholders generally have legal control of the corporation. Ownership of common stock carries the right to vote, to earn potentially unlimited dividends, and to have share values increase on stock markets.

15. If preferred stock is cumulative, undeclared dividends from previous years are accumulated and must be paid along with the current dividend. The unpaid dividends are called dividends in arrears. They are not a liability of the corporation unless dividends have been declared by the board of directors.
16. A stock dividend is a dividend in the form of shares of the corporation. Retained earnings decrease and common stock increases. A share split is an action taken by the corporation to increase the number of shares outstanding and reduce the per-share market value. No journal entry is required to record a stock split, and there is no effect on the accounting records.
17. A stock dividend increases the number of shares held by each stockholder but the ownership percentage remains the same. If a 10 per cent stock dividend is distributed, each stockholder holds more shares but the percentage of ownership remains the same, illustrated as follows:

<i>Stockholders</i>	<i>Ownership</i>			
	<i>Before Stock Dividend</i>		<i>After Stock Dividend</i>	
	<i>Shares</i>	<i>%</i>	<i>Shares</i>	<i>%</i>
W	250	25%	275	25%
X	250	25%	275	25%
Y	250	25%	275	25%
Z	250	25%	275	25%
	1,000	100%	1,100	100%

Chapter 11 Solutions

1. A statement of cash flows (SCF) provides external readers of a corporation's financial statements with a summary of the cash transactions that took place in the company in a particular period. For example, a reader could determine the amount of proceeds from the sale of plant and equipment assets, or whether plant and equipment assets were acquired. It communicates how the company is financing its activities (internally from operations or externally from other sources), and why cash increased or decreased.

Its advantage over the balance sheet is that the balance sheet reports the financial position of the company at a particular point in time, while the SCF reports the changes in cash that occurred from one balance sheet date to another.

An income statement reports earnings on an accrual basis, which is important. However, investors and creditors are also interested in determining how a corporation has generated and used cash during a fiscal period, because cash is an important determinant of liquidity. The SCF provides this information succinctly to readers.

2. These activities are important to readers who wish to evaluate the financial position and the results of operations of a particular company in order to make certain decisions, such as whether or not to invest in it. The extent of cash flows resulting from financing and investing decisions can help readers identify the underlying, longer-range activities of the firm that may affect future earnings, such as whether plant and equipment assets are being acquired, or debt is being retired. The SCF makes these activities explicit.
3. An increase in accounts receivable during a fiscal year is recorded by a debit. The offsetting credit to the Cash account denotes a use of cash. In effect, cash has been diminished because amounts owing by customers has increased, instead of being collected.
4. The declaration of cash dividends has no effect on cash flow, since it does not involve the use of cash; it merely sets up a dividend payable in the books of the company. The payment of a dividend declared decreases cash flow, since it involves the outlay of cash. Whether the dividend was declared in prior years or in the current year has no effect; only the payment reduces cash. Changes in the dividends payable account balance from one year to the next also affect cash flows. A net reduction in dividends payable (a debit) increases cash outflow (a credit). A net increase in dividends payable decreases cash outflow.
5. Buying or selling short-term investments may decrease or increase the amount of cash available to the company if they are considered part of cash and cash equivalents. If they are considered part of C&CE, transactions involving short-term investments have no effect on cash flow from operating activities.
6. Net income for a period usually consists of sales less cost of sales, operating expenses, and other expenses like interest and income taxes. If there are a large number of credit sales and the amount of accounts receivable over the last year has increased, then there is less cash inflow compared to sales revenue recorded on the income statement. If many expenses are

prepaid, then cash has been used but the expenses have not decreased net income. Similarly, if inventory levels have increased from one year-end to the next, cash has decreased but cost of goods sold is unaffected on the income statement.

Depreciation of property, plant, and equipment decreases net income but not cash. Losses and gains on sale of property, plant, and equipment assets affect net income, but do not affect cash flows. Cash may also be used to purchase property, plant, and equipment, pay off borrowings, and pay dividends, as examples. These investing and financing activities affect cash, but are not reflected on the income statement.

7. Main balance sheet account transactions that use cash are (a) operations of the company (net cash outflow from operating activities during the period), (b) purchase of property, plant and equipment assets, (c) retirement of debt and common stock, and (d) payment of dividends. The balance sheet accounts are analyzed by looking at the opening and ending balances of the account, determining the reasons for the change in the account, and recording the effects as a cash inflow or outflow from operating, financing, or investing activities.

Chapter 12 Solutions

1. Comparisons can be made using published industry statistics, statistics of previous years, statistics of leading competitors, or internally-developed ratios.
2. Liquidity is a corporation's ability to pay current liabilities as they become due. Being "illiquid" means creditors that have provided the corporation with goods and services on account, or with other forms of short-term borrowing, cannot be paid. Implications of being illiquid:

Creditors:

- a. Can refuse to provide further goods or services on account.
- b. Can sue for payment.
- c. Can put the corporation into receivership or bankruptcy.
- d. Can refuse to lend additional cash.
- e. Can demand repayment of all debts, including long-term debt.

Stockholders:

- a. May be unwilling to invest in additional common stock of the corporation
 - b. Risk the loss of their investments if the company becomes bankrupt
3. Net income is based on accrual accounting and not cash basis accounting. For example, if \$1,000,000 of sales are on account, this transaction increases net income but not cash. As an additional example, the corporation may have large sums of capital tied up in inventory which means there is less cash available to pay the liabilities.

4. *Current ratio*: Indicates how many current asset dollars exist to pay current liabilities.
- Acid-test ratio*: Indicates whether or not the corporation is able to meet the immediate demands of creditors, without considering current assets tied up in inventory or prepaid expenses.
- Accounts receivable collection period*: Indicates the average time needed to collect receivables.
- Number of days of sales in inventory*: Indicates how many days of sales can be made with inventory on hand.
- Revenue operating cycle*: Indicates how long it is between the purchase of inventory and the subsequent collection of cash from sales of inventory.
5. **a.** Working capital is the difference between current assets and current liabilities. The current ratio is computed by dividing current assets by current liabilities. It is one measure of whether or not the corporation is able to repay short-term creditors. The acid-test ratio, on the other hand, is a more severe test of liquidity. It is computed by dividing quick assets (cash, short-term investments, accounts receivable) by current liabilities.
- b.** The current ratio is only a rough indication of how able an entity is to pay its current liabilities as they become due. The relative liquidity of components of current assets is not considered in the calculation of this ratio. The acid-test ratio is often used as a more severe test of liquidity.
6. The ability to pay short-term creditors as amounts become due depends on the liquidity of the current assets. If, for example, company X's current assets consist of cash and company Y's current assets consist of inventory, company Y will not be able to pay its creditors easily because of a lack of cash.
7. Taking too long to collect accounts receivable will reduce the amount of cash available to pay liabilities as they become due. The same is true if there is an over-investment in inventory.
8. An acceptable number of days to collect accounts receivable and to convert inventory to sales depends on several factors, including the industry in which the corporation does business and the state of the economy. Management judgment and experience are crucial. If accounts receivable are collected too slowly, or if credit is extended too liberally, debts may not be collected in a timely manner, or at all. If accounts receivable collections are too short, potential credit sales may be lost. Similarly, higher number of days of sales in inventory indicates that more cash is tied up in inventory. On the other hand, a lower number of days of sales in inventory may indicate that inventory levels are too low. Potential sales may be lost.
9. Advantages of decreasing number of days of sales in inventory might be that
- a.** The amount of assets tied up in inventory is reduced.
- b.** The dangers of obsolescence or deterioration are reduced.

- c. Less storage space is used for inventory, so that warehousing expenses are reduced.

A disadvantage of decreasing number of days of sales in inventory is that stock can be reduced to the point where sales are lost.

10. The revenue operating cycle indicates the number of days that elapse between the purchase of inventory and the subsequent collection of cash after a sale is made. It is computed by adding the number of days needed to turn over inventory and the average number of days needed to collect receivables. It is useful in evaluating liquidity because a comparison can be made of the number of days needed to complete the cycle and the number of days within which the payables are due. Management can determine how long it will take the corporation to pay reinvest in inventory with cash generated by the revenue operating cycle.
11.
 - a. Ratios that measure margins on sales:
 - i. *Gross profit ratio*: indicates the amount of revenue left to cover other expenses after deducting cost of goods sold. It is calculated by dividing gross profit by net sales.
 - ii. *Operating profit ratio*: indicates the amount of revenue left to cover interest and income taxes expenses after deducting cost of goods sold and operating expenses. It is calculated by dividing income from operations by net sales.
 - iii. *Net profit ratio*: Indicates the percentage of sales revenue left in the business after payment of operating expenses, interest, and income taxes. It is calculated by dividing net income by net sales.
 - b. Same as above.
12. Analysts and investors are concerned with the financial structure of a corporation because the higher the reliance on debt, the more substantial claim the creditors have against the assets of the corporation. The corporation is also more vulnerable to rises in interest rates and economic downturns, which in turn affects future earnings expectations.
13. Reliance on creditor financing can be positive, since financing a corporation by issuing additional shares results in a dilution of existing shareholders' control of the corporation. Also, creditor financing is beneficial to shareholders when the return is greater than the interest paid on the debt. However, interest has to be paid on the debt and, ultimately, the debt itself has to be repaid. Interest reduces the income of the corporation. If interest rates paid on debt are higher than the returns generated from the borrowed funds, net income is reduced. The corporation is more susceptible to economic downturns and interest rate increases as its reliance on debt grows.
14. *Short-Term Financing Advantages*:
 - a. Usually does not require interest payment to the creditors
 - b. Easily obtained

Disadvantages:

- a. Payment is required within a short time

- b. More risky, because it has to be renewed more frequently

Long-Term Financing Advantages:

- a. More secure, because renewal is infrequent
- b. Principal repayment not required for a long time

Disadvantages:

- a. Must pay interest, and legal documents are often signed to enforce this.
 - b. More work to acquire (must present financial statements, may have to be audited)
15. a. *Earnings per share*: Indicates the amount of net income that has been earned on each common share. It is calculated by dividing (net income less preferred share dividends) by number of common shares outstanding.
- b. *Price-earnings ratio*: Indicates the reasonableness of the market price in relation to per-share earnings. It is calculated by dividing market price per share by earnings per share.
- c. *Dividend yield*: Indicates the short-term cash return that could be expected from an investment in a company's shares. It is calculated by dividing dividends declared by outstanding common shares.
16. Horizontal analysis is the comparison of the change in one item on financial statements (such as merchandise inventory) during two or more accounting periods. Vertical analysis is the analysis of the composition of a financial statement by restating all items in that statement as percentages of a total. Generally sales is used as the income statement base and total assets (or total liabilities and equity) is used as the balance sheet base. Comparing the percentages of a particular item between two or more years shows the change in composition of the statement components.

Chapter 13 Solutions

1. A partnership is an unincorporated form of business organization in which the entity is owned by two or more persons. Five characteristics of a partnership are:
- a. *Limited life* – if a partner is admitted, withdraws, or dies, the existing partnership is dissolved and the business continues under a new partnership agreement.
 - b. *Unlimited liability* – in general, each partner is personally liable for the debts that the partnership cannot pay. In the event that a partner cannot pay his/her share of partnership debts, the other partners can be called on to pay personally for such debts.
 - c. *Mutual agency* – each partner can make binding agreements not only on the partnership, but also on the other partners.

- d. *Co-ownership of assets*** – all assets contributed to the partnership by individual partners are jointly owned by all partners.
- e. *Sharing of profits and losses*** – if the partnership agreement does not stipulate how profits and losses will be shared, all profits and losses are shared equally.

2. The advantages of a partnership are:

- a.** The knowledge, skills, and financial resources of two or more persons can be combined.
- b.** Partnerships can be formed relatively easily and quickly.
- c.** A partnership can act promptly as a business enterprise in all matters. A corporation may be restricted in its actions on certain matters by its charter, by laws, or by statute.
- d.** Many of the formal government reports required of a corporation are not required of the partnership.
- e.** Income taxes are not levied against partnerships. The partners, however, report on their individual tax returns their share of partnership income.

The disadvantages of partnerships are:

- a.** Liability is usually unlimited. Partners are liable for all debts of the partnership.
- b.** The life of the partnership is limited. Death, withdrawal, or admission of a partner; agreement to terminate; bankruptcy; and incapacity of a partner are all terminate a partnership.
- c.** The partnership is a mutual agency; that is, each partner may act in business matters as the agent of the partnership.
- d.** The ability of a partnership to raise funds may be limited.

3. Although a proprietorship, partnership, and corporation engage in the same equity transactions of investment, distribution of income, and incomes/losses, how they are recorded is different.

In a proprietorship, there is only one equity account: owner's capital. Investments by the owner, distributions of income known as withdrawals, and incomes/losses are all recorded in the owner's capital account.

In a partnership, there is a capital account for each partner. A partner's investments, distributions of income in the form of withdrawals, and a share of incomes/losses are all recorded in the partner's capital account.

In a corporation, there are two types of equity accounts: common stock and retained earnings. Investments by the owners, known as shareholders, are recorded in common stock. Distributions of income, known as dividends, along with incomes/losses are recorded in retained earnings.

4. Profits and losses are divided equally among partners if no agreement exists. Otherwise, several methods may be followed to allocate profits or losses. Formulas often consider three

factors – a return to each partner based on relative levels of services rendered, a return on capital invested, and a further division of remaining profits and losses according to a fixed ratio.

5. Salary and interest allocations are included in the division of profits and losses because the time and effort contributed by individual partners to the business and the amount of contributed capital may differ among partners.
6. The balance sheet of a partnership merely shows the ending capital balance of each partner. If many partners exist, a total capital amount is shown and the details of each partner's capital account appear in a statement of shareholders' equity.

Chapter 1 Solutions

EXERCISE 1–1

- a. Partnership
 - b. GAAP
 - c. Ethics
 - d. Financial accounting
 - e. Managerial accounting
 - f. Separate legal entity
 - g. Limited liability
 - h. Unlimited liability
-

EXERCISE 1–2

- a. Violation: Historical Cost
- b. Violation: Economic entity
- c. Violation: Economic entity
- d. Violation: Revenue recognition
- e. Violation: Full Disclosure
- f. Correct: Matching

- g.** Correct: Time Period
h. Violation: Full Disclosure

EXERCISE 1–3

- a.** 30,000
b. 9,000
c. 95,000
- d.** In **a**, debt financing = $(20,000/50,000) \times 100 = 40\%$. In **b**, debt financing = $(9,000/10,000) \times 100 = 90\%$. In **c**, debt financing = $(15,000/95,000) \times 100 = 15.79\%$ (rounded to two decimal places). Therefore, the greatest percentage of debt financing is reflected in **b**.
- e.** In **a**, equity financing = $100 - 40 = 60\%$. In **b**, equity financing = $100 - 90 = 10\%$. In **c**, equity financing = $100 - 15.79 = 84.21\%$. Therefore, the greatest percentage of equity financing is reflected in **c**.

EXERCISE 1–4

ASSETS	=	LIABILITIES	+	EQUITY
Cash + Equipment	=	Accounts Payable	+	Common Stock + 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)		

EXERCISE 1–5

- a.** 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 ending equity – 10,000 beginning equity). Given that during the year no common stock was issued and no dividends were declared, \$10,000 is the amount of net income earned during 2015.

b. 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 ending equity – 10,000 beginning equity). Given that during the year no common stock was issued and \$5,000 of dividends were declared, \$15,000 is the amount of net income earned during 2015 [calculated as net income – \$5,000 dividends = \$10,000 increase in equity; net income = 10,000 + 5,000 or 15,000].

c. 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 ending equity – 10,000 beginning equity). Given that during the year \$12,000 of common stock was issued and no dividends were declared, a net loss of \$2,000 was realized for 2015 (calculated as net income + \$12,000 common stock issued = \$10,000 increase in equity; net income = \$10,000 – \$12,000; net income is therefore a negative \$2,000 which represents a net loss).

d. 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 ending equity – 10,000 beginning equity). Given that during the year \$8,000 of common stock was issued and \$12,000 of dividends were declared, \$14,000 is the amount of net income earned during 2015 (calculated as net income + \$8,000 common stock issued – \$12,000 dividends = \$10,000 increase in equity; net income = \$10,000 – \$8,000 + \$12,000; net income = \$14,000).

EXERCISE 1–6

a. L	h. A	o. L
b. A	i. A	p. E
c. L	j. E	q. A
d. A	k. E	r. E
e. A	l. A	s. E
f. E	m. E	t. A
g. L	n. E	

EXERCISE 1–7

1. ASSETS = Cash + Accounts Receivable + Unused Supplies + Land + Building + Equipment
 = \$33,000 + \$82,000 + \$2,000 + \$25,000 + \$70,000 + \$30,000
 = \$242,000 Total Assets
2. LIABILITIES = Notes Payable + Accounts Payable
 = \$15,000 + \$27,000
 = \$42,000 Total Liabilities
3. ASSETS = LIABILITIES + EQUITY
 EQUITY = \$242,000 Total Assets – \$42,000 Total Liabilities
 = \$200,000 Total Equity

Since equity is \$200,000 and retained earnings is \$40,000, common stock must be \$160,000.

EXERCISE 1–8

EDW Inc. Income Statement Month Ended March 31, 2015				EDW Inc. Statement of Shareholders' Equity Month Ended March 31, 2015		
Revenues				Share Capital	Retained Earnings	Total Equity
Service revenue	\$20,000			\$ -0-	\$ -0-	\$ -0-
Expenses				Opening balance		
Wages expense	\$9,000		Opening balance	2,000		2,000
Miscellaneous rxpense	2,500		Net income		6,000	6,000
Insurance expense	1,500		Ending balance	<u>\$2,000</u>	<u>\$6,000</u>	<u>\$8,000</u>
Office supplies expense	1,000	14,000				
Net income		<u>\$6,000</u>				

EDW Inc. Balance Sheet March 31, 2015			
Assets		Liabilities	
Cash	\$1,000	Accounts payable	\$5,000
Accounts receivable	4,000		
Equipment	8,000	Equity	
		Common stock	\$2,000
		Retained earnings	<u>6,000</u>
		Total equity	8,000
Total Assets	<u>\$13,000</u>	Total liabilities and equity	<u>\$13,000</u>

NOTE:

The \$2,000 amount for shares issued was calculated using $A = L + E$ or, using the accounts in the order given in the alphabetized information; $4,000 + 1,000 + 8,000 = 5,000 - 1,500 - 2,500 - 1,000 + 20,000 + \text{Common Stock} - 9,000$; $13,000 = 11,000 + \text{Common Stock}$; $13,000 - 11,000 = 2,000$ Common Stock.

Alternatively, you could have inserted all the values from the alphabetized information into the financial statements and then solved for the unknown Common Stock amount. There is often more than one approach to solving math related questions.

EXERCISE 1–9

Algonquin Inc. Income Statement Year Ended July 31, 2015			Algonquin Inc. Statement of Stockholders' Equity Year Ended July 31, 2015			
Revenues				<i>Common</i>	<i>Retained</i>	<i>Total</i>
Service Revenue		\$81,000		<i>Stock</i>	<i>Earnings</i>	<i>Equity</i>
Expenses			Opening Balance	\$10,000	\$6,000	\$16,000
Advertising expense	\$5,000		Net income		5,000	5,000
Insurance expense	7,000		Dividends		(2,000)	(2,000)
Salaries expense	64,000	76,000	Ending balance	<u>\$10,000</u>	<u>\$9,000</u>	<u>\$19,000</u>
Net Income		<u>\$5,000</u>				

Algonquin Inc. Balance Sheet July 31, 2015					
	Assets		Liabilities		
	Cash	\$9,000	Accounts Payable	\$3,000	
	Accounts receivable	17,000	Notes payable	18,000	
	Machinery	14,000	Total liabilities		\$21,000
				Equity	
			Common stock	\$10,000	
			Retained earnings	9,000	
			Total equity		19,000
Total Assets		<u>\$40,000</u>	Total liabilities and equity		<u>\$40,000</u>

EXERCISE 1–10

Algonquin Inc. Income Statement Year Ended July 31, 2015			Algonquin Inc. Statement of Stockholders' Equity Year Ended July 31, 2015			
<i>Revenues</i>				<i>Common</i>	<i>Retained</i>	<i>Total</i>
Service Revenue		\$81,000		<i>Stock</i>	<i>Earnings</i>	<i>Equity</i>
<i>Expenses</i>			Opening Balance	\$7,000	\$6,000	\$13,000
Advertising Expense	\$5,000		Shares issued	3,000		3,000
Insurance expense	7,000		Net income		5,000	5,000
Salaries expense	64,000	76,000	Dividends		(2,000)	(2,000)
Net income		<u>\$5,000</u>	Ending balance	<u>\$10,000</u>	<u>\$9,000</u>	<u>\$19,000</u>

550 ■ Solutions To Exercises

Algonquin Inc. Balance Sheet July 31, 2015					
<i>Assets</i>			<i>Liabilities</i>		
Cash	\$9,000		Accounts Payable	\$3,000	
Accounts Receivable	17,000		Notes Payable	18,000	
Machinery	14,000		Total liabilities	21,000	\$21,000
			<i>Equity</i>		
			Common stock	\$10,000	
			Retained earnings	9,000	
			Total equity	19,000	
Total assets	\$40,000		Total liabilities and equity	\$40,000	

NOTE:

Given that additional shares were issued for cash of \$3,000 during the year ended July 31, 2015 and common stock had a balance of \$10,000 at July 31, 2015, the end of the year, the beginning balance in common stock must have been \$7,000.

EXERCISE 1–11

Wallaby Inc. Income Statement Month Ended March 31, 2015				Wallaby Inc. Statement of Stockholders' Equity Month Ended March 31, 2015			
<i>Revenues</i>				<i>Common Stock</i>			
Fees Earned		\$12,000		Opening balance	\$6,400	Retained Earnings	\$4,000
<i>Expenses</i>				<i>Total Equity</i>			
Equipment rental expense	\$9,400		Net Loss	(1,300)	(1,300)	\$10,400	
Wages expense	3,400		Ending balance	\$6,400	\$2,700	\$9,100	
Fuel expense	500	13,300					
Net Loss		\$1,300					

Wallaby Inc. Balance Sheet March 31, 2015					
<i>Assets</i>			<i>Liabilities</i>		
Cash	\$6,000		Rent payable	\$2,500	
Accounts receivable	1,600		Note payable	18,000	
Truck	22,000		Total liabilities	20,500	\$20,500
			<i>Equity</i>		
			Common stock	\$6,400	
			Retained earnings	2,700	
			Total equity	9,100	
Total assets	\$29,600		Total liabilities and equity	\$29,600	

EXERCISE 1–12

Adams Ltd.
Income Statement
For the Month Ended January 31, 2015

<i>Revenue</i>		
Service Revenue		\$3,335
<i>Expenses</i>		
Rent expense	\$300	
Repairs expense	500	
Salaries expense	1,000	
Miscellaneous expense	335	
Total expenses		2,135
Net Income		\$1,200

Adams Ltd.
Statement of Stockholders' Equity
For the Month Ended January 31, 2015

	<i>Common Stock</i>	<i>Retained Earnings</i>	<i>Total Equity</i>
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, 2015

<i>Assets</i>		
Cash		\$1,000
Land		1,000
Building		2,500
Total assets		\$4,500
<i>Liabilities</i>		
Accounts payable		\$300
<i>Equity</i>		
Common stock	\$3,000	
Retained earnings	1,200	
Total equity		4,200
Total liabilities and equity		\$4,500

EXERCISE 1–13

Mitch's Architects Ltd.
Income Statement
For the Year Ended December 31, 2015

Revenues		
Consulting fees earned		\$150,000
Expenses		
Office rent expense	\$60,000	
Salaries and benefits expense	40,000	
Utilities expense	12,000	
Insurance expense	5,000	
Supplies and postage expense	2,400	119,400
Net income		\$ 30,600

EXERCISE 1–14

Mitch's Architects Ltd.
Statement of Shareholders' Equity
For the Year Ended December 31, 2015

	Share Capital	Retained Earnings	Total Equity
Opening balance*	\$20,400	\$ 6,000	\$26,400
Shares issued**	10,000		10,000
Net income		30,600	30,600
Dividends***		(1,000)	(1,000)
Ending balance	\$30,400	\$ 35,600	\$66,000

* Common stock opening balance (\$30,400 – 10,000)

* Retained earnings opening balance (\$5,000 balance + 1,000 dividends)

** Common stock issued during the current year given in the question as \$10,000

*** Dividends paid during the current year given in the question as \$1,000

EXERCISE 1–15

Mitch's Architects Ltd.
Balance Sheet
At December 31, 2015

<i>Assets</i>		<i>Liabilities</i>		
Cash	\$ 23,000	Accounts payable	\$30,000	
Accounts receivable	24,000	Unearned consulting fees	15,000	
Office supplies inventory	2,000	Total liabilities		\$ 45,000
Prepaid insurance	7,000	<i>Equity</i>		
Truck	40,000	Common stock	\$30,400	
Office equipment	15,000	Retained earnings	35,600	
		Total equity		66,000
Total assets	\$111,000	Total liabilities and equity		\$111,000

EXERCISE 1–16

Gillespie Corp.
Income Statement
For the Year Ended May 31, 2015

Revenues	
Service revenue	\$382,000
Rent revenue	90,000
Total Revenue	472,000
 Expenses	
Warehouse rent expense	100,000
Salaries and benefits expense	110,000
Utilities expense	42,000
Insurance expense	15,000
Shop supplies expense	6,000
Net income	\$199,000

Gillespie Corp.
Statement of Stockholders' Equity
At May 31, 2015

	Common Stock	Retained Earnings	Total Equity
Opening balance	\$ 5,000	\$ 140,000	\$ 145,000
Net income		199,000	199,000
Dividends		(10,000)	(10,000)
Ending balance	\$ 5,000	\$ 329,000	\$ 334,000

Gillespie Corp.
Balance Sheet
For the Year Ended May 31, 2015

<i>Assets</i>		<i>Liabilities</i>	
Cash	\$ 50,000	Accounts payable	\$130,000
Accounts receivable	85,000	Unearned service revenue	25,000
Prepaid advertising	17,000	Total liabilities	\$155,000
Shop supplies	52,000	<i>Equity</i>	
Building	240,000	Common stock	\$ 5,000
Office equipment	45,000	Retained earnings	329,000
		Total equity	334,000
Total assets	\$489,000	Total liabilities and equity	\$489,000

EXERCISE 1–17

Using the same calculation as the retained earnings column in the statement of stockholders' equity:

Opening retained earnings + Net income (or minus net loss) – Dividends = Ending retained earnings

- a. $\$50,000 + \text{Net income ?} - 20,000 = \$40,000$
 Net income = $\$40,000 - 50,000 + 20,000 = \$10,000$
- b. Retained earnings opening balance ? + $150,000 - 40,000 = \$130,000$
 Retained earnings opening balance = $\$130,000 - 150,000 + 40,000 = \$20,000$
- c. $\$75,000 - 35,000 - \text{Dividends ?} = \$40,000$
 Dividends = $\$40,000 - 75,000 + 35,000 = 0$

EXERCISE 1–18

a.	Assets	=	Liabilities	+	Equity	
Balances at April 1, 2015	\$100,000		\$60,000		\$40,000	
					10,000	April net income(loss)

Balances at April 30, 2015	<u>\$180,000</u>	=	<u>\$130,000</u>	+	<u>\$50,000</u>
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b.	Assets	=	Liabilities	+	Equity	
Balances at April 1, 2015	\$100,000		\$60,000		\$40,000	
					\$50,000	Shares issued in April
					(40,000)	April net income(loss)

Balances at April 30, 2015	<u>\$180,000</u>	=	<u>\$130,000</u>	+	<u>\$50,000</u>
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c.	Assets	=	Liabilities	+	Equity	
Balances at April 1, 2015	\$100,000		\$60,000		\$40,000	
					14,000	April net income(loss)
					(4,000)	Dividends paid in April

Balances at April 30, 2015	<u>\$180,000</u>	=	<u>\$130,000</u>	+	<u>\$50,000</u>
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EXERCISE 1–19

a.		Assets	=	Liabilities	+	Equity	
Balances at June 1, 2015	\$160,000			\$100,000		\$60,000	
						\$70,000	June net income(loss)
						(20,000)	Dividends paid in June
Balances at June 30, 2015	<u>\$200,000</u>	=		<u>\$90,000</u>	+	<u>\$110,000</u>	
b.		Assets	=	Liabilities	+	Equity	
Balances at June 1, 2015	\$160,000			\$100,000		\$60,000	
						\$40,000	Shares issued in June
						\$90,000	June net income(loss)
						(80,000)	Dividends paid in June
Balances at June 30, 2015	<u>\$200,000</u>	=		<u>\$90,000</u>	+	<u>\$110,000</u>	
c.		Assets	=	Liabilities	+	Equity	
Balances at June 1, 2015	\$160,000			\$100,000		\$60,000	
						\$130,000	Shares issued in June
						(\$80,000)	June net income(loss)
						-0-	Dividends paid in June
Balances at June 30, 2015	<u>\$200,000</u>	=		<u>\$90,000</u>	+	<u>\$110,000</u>	

EXERCISE 1–20

- a. 3 Purchased a truck for cash.
- b. 1 Issued common stock for cash.
- c. 2 Incurred a bank loan as payment for equipment.
- d. 3 Made a deposit for electricity service to be provided to the company in the future.
- e. 4 Paid rent expense.
- f. NT Signed a new union contract that provides for increased wages in the future.
- g. NT Wrote a letter of complaint to the State Governor about a mail strike and hired a messenger service to deliver letters.
- h. 4 Received a collect telegram from the State Governor; paid the messenger.
- i. 1 Billed customers for services performed.
- j. 5 Made a cash payment to satisfy an outstanding obligation.
- k. 3 Received a payment of cash in satisfaction of an amount owed by a customer.

- l. 1 Collected cash from a customer for services rendered.
- m. 4 Paid cash for truck operation expenses.
- n. 5&4 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.)
- o. 7 Issued shares in the company to pay off a loan.

Chapter 2 Solutions

EXERCISE 2-1

a.	b.				
L	CR	Unearned consulting fees	A	DR	Vehicles
A	DR	Prepaid insurance	E	DR	Depreciation expense
A	DR	Office supplies	R	CR	Interest income
A	DR	Notes receivable	E	DR	Interest expense
R	CR	Insurance fee revenue	A	DR	Furniture
L	CR	Unearned insurance fee revenue	L	CR	Utilities payable
E	DR	Salary and benefits expense	L	CR	Unearned rent revenue
A	DR	Small tools and supplies	E	CR	Retained earnings
R	CR	Service fees earned	L	CR	Salaries and benefits payable
R	CR	Service fees revenue	E	DR	Compensation expense
L	CR	Notes payable	R	CR	Interest earned
A	DR	Buildings	E	DR	Meals and mileage expense
L	CR	Rent payable	L	CR	Unearned service fees
E	CR	Common stock	A	DR	Equipment

EXERCISE 2-2

a.	b.				
L	DR	Unearned consulting fees	A	CR	Vehicles
A	CR	Prepaid insurance	E	CR	Depreciation expense
A	CR	Office supplies	R	DR	Interest income
A	CR	Notes receivable	E	CR	Interest expense
R	DR	Insurance fee revenue	A	CR	Furniture
L	DR	Unearned insurance fee revenue	L	DR	Utilities payable
E	CR	Salary and benefits expense	L	DR	Unearned rent revenue
A	CR	Small tools and supplies	E	DR	Retained earnings
R	DR	Service fees earned	L	DR	Salaries and benefits payable
R	DR	Service fees revenue	E	CR	Compensation expense
L	DR	Notes payable	R	DR	Interest earned
A	CR	Buildings	E	CR	Meals and mileage expense
L	DR	Rent payable	L	DR	Unearned service fees
E	DR	Common stock	A	CR	Equipment

EXERCISE 2–3

	Assets		Liabilities		Equity	
	<i>Debit</i> (increase)	<i>Credit</i> (decrease)	<i>Debit</i> (decrease)	<i>Credit</i> (increase)	<i>Debit</i> (decrease)	<i>Credit</i> (increase)
1. Purchased a \$10,000 truck on credit.	10,000			10,000		
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		

EXERCISE 2–4

	<i>Debit</i>	<i>Credit</i>
1. Issued common stock for cash.	Cash	Common stock
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 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.	No entry	No entry
10. Collected cash for repairs to be made for customers next month.	Cash	Unearned revenue
11. Transferred this month's portion of prepaid insurance that was used to Insurance Expense.	Insurance expense	Prepaid expenses

EXERCISE 2-5

#	Cash		#	Accounts Receivable		#	Prepaid Rent		#	Office Supplies		#	Equipment	
1	13,000					20	5,000		17	3,000		7	1,000	
3	10,000		6	7,000										
4		2,000												
7		1,000	11		5,000									
			18	8,000										
8		5,000	Bal	<u>10,000</u>		Bal	<u>5,000</u>		Bal	<u>3,000</u>		Bal	<u>1,000</u>	
9		1,500												
10		25	#	Vehicle		#	Furniture		#	Computer		#	Accounts Payable	
11	5,000		12	30,000		14	3,000		29	2,500		2		200
12		10,000										13	200	
13		200										14		3,000
15	2,000											17		3,000
16	2,000		Bal	<u>30,000</u>		Bal	<u>3,000</u>		Bal	<u>2,500</u>		Bal		<u>6,000</u>
20		5,000												
Bal	<u>7,275</u>													

#	Loan Payable		#	Notes Payable		#	Unearned Service Revenue		#	Common Stock		#	Service Revenue	
3		10,000	5		5,000	16		2,000	1		13,000	6		7,000
9	1,350		12		20,000									
			19		2,500							15		2,000
Bal		<u>8,650</u>	Bal		<u>27,500</u>	Bal		<u>2,000</u>	Bal		<u>13,000</u>	Bal		<u>17,000</u>

#	Electricity Expense		#	Vehicle/Travel Expense		#	Repairs Expense		#	Rent Expense		#	Salaries Expense	
2	200		10	25		5	5,000		8	5,000		4	2,000	
Bal	<u>200</u>		Bal	<u>25</u>		Bal	<u>5,000</u>		Bal	<u>5,000</u>		Bal	<u>2,000</u>	

#	Interest Expense	
9	150	
Bal	<u>150</u>	

Debits 74,150
Credits 74,150

EXERCISE 2–6BOLA Co.
Trial Balance
At August 31, 2016

	Debit	Credit
Cash	\$ 7,275	
Accounts receivable	10,000	
Prepaid rent	5,000	
Office supplies inventory	3,000	
Equipment	1,000	
Vehicle	30,000	
Furniture	3,000	
Computer	2,500	
Accounts payable		\$ 6,000
Loan payable		8,650
Notes payable		27,500
Unearned service revenue		2,000
Common stock		13,000
Service revenue		17,000
Electricity expense	200	
Vehicle/travel expense	25	
Repairs expense	5,000	
Rent expense	5,000	
Salaries expense	2,000	
Interest expense	150	
	<u>\$74,150</u>	<u>\$74,150</u>

EXERCISE 2–7

BOLA Co.
Income Statement
For the Month Ended August 31, 2016

<i>Revenues</i>		
Service revenue		\$17,000
<i>Expenses</i>		
Electricity expense	\$ 200	
Vehicle/Travel expense	25	
Repairs expense	5,000	
Rent expense	5,000	
Salaries expense	2,000	
Interest expense	150	12,375
Net income		<u>\$ 4,625</u>

BOLA Co.
Statement of Stockholders' Equity
For the Month Ended August 31, 2016

	Common Stock	Retained Earnings	Total Equity
Opening balance	\$ —	\$ —	\$ —
Shares issuance	13,000		13,000
Net income		4,625	4,625
Ending balance	<u>\$ 13,000</u>	<u>\$ 4,625</u>	<u>\$17,625</u>

BOLA Co.
Balance Sheet
At August 31, 2016

<i>Assets</i>		<i>Liabilities</i>	
Cash	\$ 7,275	Accounts payable	\$ 6,000
Accounts receivable	10,000	Loan payable	8,650
Prepaid rent	5,000	Note payable	27,500
Office supplies inventory	3,000	Unearned service revenue	2,000
Equipment	1,000	Total liabilities	<u>\$44,150</u>
Vehicle	30,000	<i>Equity</i>	
Furniture	3,000	Common stock	\$13,000
Computer	2,500	Retained earnings	4,625
		Total equity	<u>17,625</u>
Total assets	<u>\$61,775</u>	Total liabilities and equity	<u>\$61,775</u>

EXERCISE 2-8

Cash		Bank Loan		Common Stock		Repair Revenue	
(1) 5,000	(2) 900	(8) 2,500	(5) 7,500		(1) 5,000		(3) 1,500
(5) 7,500	(8) 2,500						
(6) 500	(10) 2,000						
Accounts Receivable		Accounts Payable		Electricity Expense			
(3) 1,500	(6) 500	(10) 2,000	(4) 2,000	(7) 200			
			(7) 200				
Prepaid Rent		Rent Expense					
(2) 900	(11) 300	(11) 300					
Supplies		Supplies Expense					
(4) 2,000	(9) 800	(9) 800					

EXERCISE 2-9

Cross Corporation
Trial Balance
At December 31, 2015

	<i>Account Balances</i>	
	<i>Debits</i>	<i>Credits</i>
Cash	\$120,400	
Commissions earned		5,000
Common stock		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	—
Total	\$285,000	\$285,000

EXERCISE 2-10

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		3,000	
	Common stock			3,000
	(a) To record the issuance of common stock.			
	Equipment		2,000	
	Accounts payable			2,000
	(b) To record the purchase of equipment on account.			
	Rent expense		400	
	Cash			400
	(c) To record the payment of rent for the month.			
	Supplies		4,000	
	Accounts payable			4,000
	(d) To record the purchase of supplies.			
	Accounts receivable		2,500	
	Repair revenue			2,500
	(e) To record repair revenue.			
	Accounts payable		2,000	
	Cash			2,000
	(f) To record the payment on account.			
	Cash		500	
	Accounts receivable			500
	(g) To record collection of an amount owed.			
	Cash		1,000	
	Equipment			1,000
	(h) To record the sale of equipment.			

EXERCISE 2-11

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		XX	
	Common stock			XX
	(1) To record issuance of common stock.			
	Unused supplies		XX	
	Cash			XX
	Accounts payable			XX
	(2) To record the purchase of supplies.			
	Cash		XX	
	Repair revenue			XX
	(3) To record revenue earned.			
	Accounts receivable		XX	
	Repair revenue			XX
	(4) To record revenue earned.			
	Prepaid expense		XX	
	Cash			XX
	(5) To record expense paid in advance.			
	Supplies expense		XX	
	Accounts payable			XX
	(6) To record supplies purchased and used.			
	Rent expense		XX	
	Accounts payable			XX
	(7) To record rent expense.			
	Cash		XX	
	Unused supplies			XX
	(8) To record the sale of supplies.			
	Electricity expense		XX	
	Prepaid expense			XX
	(9) To record electricity expense for the month.			
	Accounts payable		XX	
	Cash			XX
	(10) To record payment on account.			
	Cash		XX	
	Bank loan			XX
	(11) To record the issuance of a bank loan.			

EXERCISE 2-12

a. General Ledger T-accounts with transactions:

Cash		Accounts Payable		Common Stock		Service Revenue	
Jan. 1	10,000	Jan. 5	200	Jan. 1	10,000	Jan. 11	1,300
11	1,300	9	4,000			31	1,600
		30	1,800				
Bal.	5,300					Bal.	2,900

Accounts Receivable		Rent Expense	
Jan. 31	1,600	Jan. 5	200

Unused Supplies		Truck Operation Expense	
Jan. 9	4,000	Jan. 28	450
Bal.	3,800		

Salaries Expense		Supplies Expense	
Jan. 30	1,800	Jan. 31	200

b. Trial balance is as follows:

Elgert Corporation			
Trial Balance			
January 31, 2015			
	<i>Debit</i>		<i>Credit</i>
Cash	\$5,300		
Accounts receivable	1,600		
Unused supplies	3,800		
Accounts payable			\$450
Common stock			10,000
Service revenue			2,900
Rent expense	200		
Truck operation expense	450		
Salaries expense	1,800		
Supplies expense	200		
Total	\$13,350		\$13,350

c. Income statement, statement of stockholders' equity, and the balance sheet are as follows:

Elgert Corporation			
Income Statement			
For the Month Ended January 31, 2015			
<i>Revenue</i>			
Service revenue			\$2,900
 <i>Expenses</i>			
Rent expense	\$200		
Truck operation expense	450		
Salaries expense	1,800		
Supplies expense	200		
Total expenses	2,650		
Net income			\$250

Elgert Corporation			
Statement of Stockholders' Equity			
For the Month Ended January 31, 2015			
	<i>Common Stock</i>	<i>Retained Earnings</i>	<i>Total Equity</i>
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, 2015

<i>Assets</i>			
Cash			\$5,300
Accounts receivable			1,600
Unused supplies			3,800
Total assets			\$10,700
<i>Liabilities</i>			
Accounts payable			\$450
<i>Equity</i>			
Common stock	\$10,000		
Retained earnings	250		10,250
Total liabilities and equity			\$10,700

EXERCISE 2–13

1. Adjusting Entry required to correct the error:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		1,500	
	Accounts payable			150
	Advertising expense			1,350

2. Adjusting Entry required to correct the error:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Salaries expense		4,400	
	Cash			4,400

3. Adjusting Entry required to correct the error:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Repairs expense		1,500	
	Prepaid repairs			1,500

4. Adjusting Entry required to correct the error:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		5,000	
	Revenue		5,000	
	Unearned revenue			5,000
	Accounts receivable			5,000

5. Adjusting Entry required to correct the error:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Rent expense		5,500	
	Cash			5,500

6. Adjusting Entry required to correct the error:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Revenue		4,000	
	Unearned revenue			4,000

7. Adjusting Entry required to correct the error:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Accounts receivable		8,000	
	Accounts payable			8,000

8. Adjusting Entry required to correct the error:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Prepaid rent		10,000	
	Rent expense			10,000

Chapter 3 Solutions

EXERCISE 3–1

a. and c.

Graham Corporation
General Ledger

ASSETS	=	LIABILITIES	+	EQUITY
Interest Receivable		Interest Payable		Interest Earned
(a) 110		(c) 90		(a) 110
Prepaid Insurance		Salaries Payable		Rent Earned
1,800		(d) 450		(e) 500
(b) 1,200				
Bal. 600		Unearned Rent		Insurance Expense
		700		(b) 1,200
		(e) 500		Interest Expense
		Bal. 200		(c) 90
				Salaries Expense
				(d) 450

b.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Interest receivable		110	
	Interest earned			110
	(a)			
	Insurance expense		1,200	
	Prepaid insurance			1,200
	(b)			
	Interest expense		90	
	Interest payable			90
	(c)			
	Salaries expense		450	
	Salaries payable			450
	(d)			
	Unearned rent		500	
	Rent earned			500
	(e)			

d.

<i>Revenues</i>	
Interest earned	\$110
Rent earned	500
<i>Expenses</i>	
Insurance expense	\$1,200
Interest expense	90
Salaries expense	450

EXERCISE 3–2

a. The adjustments column is as follows:

	Lauer Corporation					
	Trial Balance		Adjustments		Adjusted Trial Balance	
	<i>Dr.</i>	<i>Cr.</i>	<i>Dr.</i>	<i>Cr.</i>	<i>Dr.</i>	<i>Cr.</i>
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
Common stock		2,700				2,700
Revenue		25,000				25,000
Rent earned			(f)	600		600
Advertising expense	700				700	
Commissions expense	2,000				2,000	
Depreciation expense			(c)	1,500	1,500	
Insurance expense			(a)	300	300	
Rent expense	5,500		(b)	500	6,000	
Salaries expense	8,000		(e)	1,000	9,000	
Interest expense	100		(d)	400	500	
Totals	\$35,900	\$35,900	\$4,300	\$4,300	\$38,800	\$38,800

b. The general journal is as follows:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Insurance expense		300	
	Prepaid insurance			300
	(a) To record expiry of prepaid insurance.			
	Rent expense		500	
	Prepaid rent			500
	(b) To record expiry of prepaid rent.			
	Depreciation expense		1,500	
	Accumulated depreciation – truck			1,500
	(c) To record truck depreciation.			
	Interest expense		400	
	Accounts payable			400
	(d) To accrue interest.			
	Salaries expense		1,000	
	Salaries payable			1,000
	(e) To accrue unpaid salaries.			
	Unearned rent		600	
	Rent earned			600
	(f) To record expiry of unearned rent.			

EXERCISE 3–3

a. The general journal is as follows:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Rent expense		200	
	Prepaid rent			200
	(a) To adjust prepaid rent account to the proper balance.			
	Office supplies expense		400	
	Unused office supplies			400
	(b) To record the ending balance of supplies on hand.			
	Income taxes expense		5,000	
	Income taxes payable			5,000
	(c) To record income taxes for the period.			
	Unearned commissions		1,000	
	Commissions earned			1,000
	(d) To record the proper balance in the Unearned Commissions account.			
	Salaries expense		300	
	Salaries payable			300
	(e) To accrue salaries for the period.			

b. 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 [(a):200 + (b):400 + (c):5,000 – (d):1,000 + (e):300].

EXERCISE 3–4

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec. 31	Advertising expense		500	
	Prepaid advertising			500
	To record the expired portion of advertising for the period.			
Dec. 31	Supplies expense		400	
	Unused supplies			400
	To record the remaining amount of supplies on hand.			
Dec. 31	Depreciation expense – equipment		250	
	Accumulated depreciation – equipment			250
	To record the depreciation for the period.			
Dec. 31	Maintenance expense		200	
	Telephone expense		100	
	Utilities expense		400	
	Commissions expense		800	
	Accounts payable			1,500
	To record expenses incurred but not yet paid for the period.			
Dec. 31	Salaries expense		700	
	Salaries payable			700
	To record salaries accrued for the period.			
Dec. 31	Unearned subscriptions		5,000	
	Subscription revenue			5,000
	To record subscriptions earned for the period.			

EXERCISE 3–5

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec. 31	Depreciation expense – truck		1,200	
	Accumulated depreciation – truck			1,200
	To record additional truck depreciation for the year (\$2,500 – 1,300) (\$10,000/4 years = \$2,500/year).			

EXERCISE 3–6

Interest expense for the year should be $\$12,000 \times 10\% = \$1,200$. The needed adjusting entry is:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec. 31	Interest expense		100	
	Interest payable			100
	To record interest accrued at December 31 (\$1,200 – 1,100).			

EXERCISE 3–7

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Insurance expense		600	
	Prepaid insurance			600
	(a) To record expiry of 6 months insurance.			
	Supplies expense		200	
	Unused supplies			200
	(b) To adjust supplies on hand to physical count.			
	Telephone expense		50	
	Accounts payable			50
	(c) To record account payable at year end.			

EXERCISE 3–8

1.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Accounts receivable		Dr	
	Revenue			Cr

2.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		Dr	
	Unearned revenue			Cr

3.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Unearned revenue		Dr	
	Revenue			Cr

4.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Repairs expense		Dr	
	Accounts payable			Cr

5.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Prepaid repairs expense		Dr	
	Cash			Cr

6.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Repairs expense		Dr	
	Prepaid repairs expense			Cr

7.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Salaries expense		Dr	
	Accrued salaries payable			Cr

8.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Depreciation expense		Dr	
	Accumulated depreciation, equipment			Cr

1. Last pay date was Monday, March 28, 2016, for work done until Friday, March 25, 2016.
 Number of remaining business days from last pay date to March 31, 2016 is 4 days.
 Total payroll per day: 65 employees × \$80 day = \$5,200 per day
 Total accrued salaries to March 31, 2016: \$5,200 per day × 4 days = \$20,800
 Total payroll per week: \$5,200 × 5 working days per week = \$26,000 per week

2.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Mar 31, 2016	Salaries expense		20,800	
	Accrued salaries payable			20,800

3.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Apr 4, 2016	Salaries expense*		5,200	
	Accrued salaries payable		20,800	
	Cash			26,000

* 5 days per week – 4 days accrued = 1 day not yet expensed × \$5,200 per day = \$5,200

EXERCISE 3–10

1. Adjusting entry for \$70,000 of revenue earned but not yet billed to the customer.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Accounts receivable		70,000	
	Revenue			70,000

2. Adjusting entry for \$4,500 of salaries from the last pay date of October 14.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Salaries expense		4,500	
	Accrued salaries payable			4,500

3. Adjusting entry for \$40,000 of cash received from a customer for revenue not yet earned.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		40,000	
	Unearned revenue			40,000

4. Adjusting entry for \$500 of utilities for October, but not yet paid.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Utilities expense		500	
	Accounts payable			500

5. Adjusting entry for \$1,300 of cash paid to a supplier for advertising not yet published.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Prepaid advertising expenses		1,300	
	Cash			1,300

6. Adjusting entry for October depreciation expense for equipment.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Depreciation expense		1,000	
	Accumulated depreciation, equipment			1,000

Self-Check Trail balance accounts:

Quertin Quick Fix Ltd. Trial Balance At October 31, 2016						
	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance	
	Debit	Credit	Debit	Credit	Debit	Credit
Cash	\$ 80,000		\$ 40,000	\$ 1,300	\$118,700	
Accounts receivable	325,000		70,000		395,000	
Office supplies	5,000				5,000	
Prepaid expenses	15,000		1,300		16,300	
Equipment	150,000				150,000	
Accumulated depreciation, equipment	1,500			1,000		\$ 2,500
Land	150,000				150,000	
Accounts payable		\$225,000		500		225,500
Accrued salaries payable		5,000		4,500		9,500
Unearned service revenue		10,000		40,000		50,000
Notes payable		210,000				210,000
Common stock		10,000				10,000
Retained earnings		37,800				37,800
Service revenue		300,000		70,000		370,000
Advertising expense	1,500				1,500	
Depreciation expense	800		1,000		1,800	
Maintenance service expenses	1,000				1,000	
Rent expense	14,000				14,000	
Salaries expense	45,000		4,500		49,500	
Utilities expense	12,000		500		12,500	
	\$799,300	\$799,300	\$117,300	\$117,300	\$915,300	\$915,300

EXERCISE 3–11

Bernard Inc.
Adjusted Trial Balance
December 31, 2015

	<i>Debits</i>	<i>Credits</i>
Prepaid advertising	\$1,000	
Supplies	750	
Equipment	21,750	
Accumulated depreciation – equipment		\$1,500
Accounts payable		13,250
Salaries payable		700
Unearned subscriptions		10,000
Common stock		8,000
Subscription revenue		5,000
Advertising expense	500	
Commissions expense	800	
Depreciation expense – equipment	250	
Maintenance expense	200	
Salaries expense	10,200	
Supplies expense	2,500	
Telephone expense	100	
Utilities expense	400	
Totals	\$38,450	\$38,450

EXERCISE 3–12

1. Close revenue accounts to income summary account.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Services revenue		276,000	
	Income summary			276,000

2. Close expense accounts to income summary account.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Income summary		110,780	
	Salaries expense			41,700
	Insurance expense			3,700
	Interest expense			150
	Shop supplies expense			750
	Advertising expense			4,050
	Depreciation expense			2,380
	Repairs expenses			7,800
	Rent expense			22,500
	Income tax expense			4,500
	Utilities expense			23,250

3. Close the income summary account to retained earnings.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Income summary		165,220	
	Retained earnings			165,220

4. Close dividends to retained earnings.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Retained earnings		5,000	
	Cash dividends			5,000

EXERCISE 3-13

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec. 31	Commissions earned		20,000	
	Subscriptions revenue		17,630	
	Income summary			37,630
	To close revenue accounts to Income summary.			
Dec. 31	Income summary		58,400	
	Depreciation expense – machinery ...			900
	Depreciation expense – warehouse ...			1,200
	Insurance expense			1,800
	Interest expense			2,365
	Salaries expense			33,475
	Supplies expense			15,800
	Utilities expense			2,860
	To close expense accounts to Income summary.			
Dec. 31	Retained earnings		20,770	
	Income summary			20,770
	To close net loss in Income summary to Retained earnings.			
Dec. 31	Retained earnings		14,000	
	Dividends			14,000
	To close Dividends to Retained earnings.			

Willis Inc.
Post-Closing Trial Balance
December 31, 2015

	<i>Debits</i>	<i>Credits</i>
Accounts payable		\$4,400
Accounts receivable	\$3,600	
Accumulated depreciation – machinery		\$2,800
Accumulated depreciation – warehouse		8,000
Bank loan		47,600
Cash	12,000	
Interest payable		1,200
Land	15,000	
Machinery	20,000	
Retained earnings*		1,230
Salaries payable		1,970
Common stock		52,100
Supplies	2,500	
Unearned fees		800
Warehouse	67,000	
Totals	\$120,100	\$120,100

*calculated as \$36,000 adjusted retained earnings balance + \$37,630 total revenues closed to re-

tained earnings –\$58,400 total expenses closed to retained earnings –\$14,000 dividends closed to retained earnings.

Chapter 4 Solutions

EXERCISE 4–1

- a. The balance sheet is as follows:

Joyes Enterprises Ltd.
Balance Sheet
At December 31, 2016

<i>Assets</i>			
<i>Current</i>			
Cash		\$2,000	
Accounts receivable		8,000	
Merchandise inventory		19,000	
Prepaid insurance		1,000	
Total current assets		\$30,000	
<i>Property, plant, and equipment</i>			
Land		5,000	
Buildings	\$25,000		
<i>Less: Accum. Dep'n.</i>	1,000	24,000	
Equipment	20,000		
<i>Less: Accum. Dep'n.</i>	4,000	16,000	
Net property, plant, and equipment		45,000	
Total Assets		\$75,000	
<i>Liabilities</i>			
<i>Current liabilities</i>			
Bank loan		\$5,000	
Accounts payable		7,000	
Income taxes payable		3,000	
Total current liabilities		\$15,000	
<i>Non-current liabilities</i>			
Mortgage payable		5,000	
Total liabilities		20,000	
<i>Equity</i>			
Common stock		48,000	
Retained earnings		7,000	
Total equity		55,000	
Total liabilities and equity		\$75,000	

- b.** Current assets total \$30,000. Current liabilities total \$15,000. The company appears to have sufficient resources to meet its obligations in the next year.
- c.** Total equity is \$55,000. Total liabilities equal \$20,000. The ratio is $\$55,000 / \$20,000 = 2.75$ to 1.
-

EXERCISE 4–2

- a. The building should likely be a non-current asset, as its useful life is generally greater than one fiscal year. Short-term investments are current assets because they are readily marketable, by definition. Unused office supplies are likely current assets, as they will usually be used in the next fiscal period. The Notes payable (due 2022) is due in 2022 and therefore a non-current liability, as it will not be paid within the next fiscal year. Salaries payable is likely a current liability, as it will be paid in the next fiscal year in all likelihood. The last line on the balance sheet should read “Total Liabilities and Equity”. The balance sheet lists a building account but not a land account. Sometimes a company owns a building without owning land, but it is more likely that these two assets should have been separated when they were acquired. Retained earnings should be shown in the equity section. There is no accumulated depreciation recorded for the long-lived assets and there are no income taxes payable recorded. The reasons for these omissions should be investigated.
- b. The balance sheet is as follows:

Abbey Limited
Balance Sheet
At November 30, 2015

<i>Assets</i>		
<i>Current</i>		
Cash	\$1,000	
Short-term investments	3,000	
Accounts receivable	6,000	
Merchandise inventory	3,000	
Unused supplies	100	
Total current assets	\$13,100	
<i>Property, plant, and equipment</i>		
Building*	12,000	
Equipment	1,500	
Truck	1,350	
Net property, plant, and equipment	14,850	
Total assets		\$27,950
 <i>Liabilities</i>		
<i>Current</i>		
Accounts payable	\$5,600	
Notes payable	2,000	
Salaries payable	250	
Total current liabilities	\$7,850	
<i>Non-current</i>		
Notes payable (due 2022)	1,000	
Mortgage payable	7,000	
Total Non-current liabilities	8,000	
Total liabilities		15,850
 <i>Equity</i>		
Common stock	11,100	
Retained earnings	1,000	
Total equity	12,100	
Total liabilities and equity		\$27,950

*Land may need to be separated out.

c. Additional disclosure should be considered for:

- Depreciation rates for plant and equipment.
- Details about cost and accumulated depreciation amounts for property, plant, and equipment.

- Details about debt, including interest rates, due dates, any assets securing the debt, repayment amounts and intervals, and when terms will be re-negotiated.
- Details about common stock.

EXERCISE 4–3

3	Land used in the normal course of business operations	5	Accrued salaries payable
5	Notes payable, due in four months	1	Prepaid advertising
3	Truck	8	Advertising expense
2	Land held for investment	5	Unearned revenue
4	Copyright	8	Service revenue
5	Accounts payable	1	Cash
8	Cash dividends	6	Mortgage payable, due in fifteen years
3	Building	5	Mortgage payable, due in six months
3	Furniture	7	Common stock
1	Accounts receivable, from customer sales	1	Shop supplies
4	Franchise	3	Accumulated depreciation, building
8	Utilities expense	8	Depreciation expense
5	Utilities payable	1	Office supplies

EXERCISE 4–4

- a. 1. Close revenue accounts to income summary account.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec 31	Revenue		35,000	
	Income summary			35,000

2. Close expense accounts to income summary account.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec 31	Income summary		16,600	
	Salaries expense			8,000
	Insurance expense			600
	Supplies and postage expense			3,000
	Rent expense			3,000
	Travel expense			1,500
	Utilities expense			500

3. Close the income summary account to retained earnings.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec 31	Income summary		18,400	
	Retained earnings			18,400

4. Close dividends to retained earnings: No entry required.

b.

Abled Appliance Repair Ltd.
Balance Sheet
At December 31, 2016

<i>Assets</i>		<i>Liabilities</i>	
Cash	\$ 80,000	Accounts payable	\$ 35,000
Accounts receivable	66,000	Unearned consulting fees	10,000
Office supplies	2,000	Total current liabilities	<u>\$ 45,000</u>
Prepaid insurance expense	5,000		
Total current assets	<u>153,000</u>		
Property, plant and equipment		<i>Equity</i>	
Land	\$ 20,000	Common stock	\$ 1,000
Office equipment	10,000	Retained earnings	<u>135,000*</u>
Accumulated depreciation, office equipment	(2,000) 28,000	Total equity	
Total assets	<u><u>\$181,000</u></u>	Total liabilities and equity	136,000
			<u><u>\$181,000</u></u>

*Net income (35,000 – 3,000 – 8,000 – 500 – 1,500 – 600 – 3,000) = \$18,400

Retained earnings (\$116,600 + 18,400) = 135,000

c.

Abled Appliance Repair Ltd.
Post-closing Trial Balance
At December 31, 2016

	Debit	Credit
Cash	\$ 80,000	
Accounts receivable	66,000	
Office supplies	2,000	
Prepaid insurance expense	5,000	
Land	20,000	
Office equipment	10,000	
Accumulated depreciation, office equipment		\$ 2,000
Accounts payable		35,000
Unearned consulting fees		10,000
Common stock		1,000
Retained earnings		135,000
	\$183,000	\$183,000

EXERCISE 4–5

Mystery Company Ltd.
Balance Sheet
At November 30, 2016

<i>Assets</i>		<i>Liabilities</i>	
Cash	\$150,650	Accounts payable	\$ 95,960
Accounts receivable	99,520	Accrued salaries payable	58,580
Office supplies	1,300	Current portion of long-term	
Prepaid insurance expense	10,000	Debt	72,000
Prepaid rent expense	12,000	Income taxes payable	32,500
Total current assets	273,470	Interest payable	12,000
		Unearned revenue	150,000
<i>Property, Plant and Equipment</i>		Total current liabilities	421,040
Building	\$ 270,000		
Accumulated depreciation, building	(43,530)	<i>Long-term Liabilities</i>	
226,470		Note payable, due 2025	145,000
Vehicle	108,000	Total liabilities	566,040
Accumulated depreciation, vehicle	(8,650)		
99,350		<i>Equity</i>	
Total property, plant and	325,820	Common stock	\$10,000*
equipment		Retained earnings	74,850
<i>Intangible Assets</i>		Total liabilities and equity	\$650,890
Copyright	51,600		
Total assets	\$650,890		

* Common stock:

Assets = Liabilities + Equity

Total assets	\$ 650,890
Less total liabilities	(566,040)
Less retained earnings	(74,850)
Common stock	<u>\$ 10,000</u>

EXERCISE 4-6

Hitalle Heights Corp.
Statement of Stockholders' Equity
For the Period Ended May 31, 2016

	Common Stock	Retained Earnings	Total Equity
Opening balance	\$ 640	\$192,355	\$192,995
Shares issuance	200		200
Dividends declared		(2,800)	(2,800)
Net income		47,759	47,759
Ending balance	<u>\$ 840</u>	<u>\$237,314</u>	<u>\$238,154</u>

Net income ($\$94,000 - 1,333 - 2,520 - 2,072 - 84 - 12,600 - 840 - 23,352 - 420 - 3,020$) =
\$47,759

Hitalle Heights Corp.
Balance Sheet
At May 31, 2016

<i>Assets</i>		<i>Liabilities</i>	
Cash	\$ 8,888	Accounts payable	\$ 13,020
Accounts receivable	59,808	Accrued salaries payable	4,872
Shop supplies	1,008	Current portion of long-term note payable*	5,200
Prepaid rent expense	7,162	Income taxes payable	3,320
Total current assets	<u>76,866</u>	Interest payable	224
		Unearned revenue	21,000
<i>Property, Plant and Equipment</i>		Total current liabilities	<u>47,636</u>
Land	58,048		
Furniture	\$ 8,400	<i>Long-term Liabilities</i>	
Accumulated depreciation, furniture	(1,792)	Note payable, due 2025*	11,600
Total property, plant and equipment	<u>64,656</u>	Total liabilities	<u>59,236</u>
		<i>Equity</i>	
<i>Intangible Assets</i>		Common stock	\$ 840
Franchise	155,868	Retained earnings	237,314
Total assets	<u>\$297,390</u>	Total liabilities and equity	<u>\$297,390</u>

Chapter 5 Solutions

EXERCISE 5–1

a. The completed table is as follows:

	2014	2013	2012	2011
Sales	\$10,000	\$9,000	\$8,000	\$7,000
Cost of Goods Sold	7,500	6,840	6,160	5,460
Gross Profit	2,500	2,160	1,840	1,540
Gross Profit Percentage	25%	24%	23%	22%

b. The company's gross profit percentage has increased each year from 2011 to 2014 inclusive. This means it is earning more per sales dollar each year (from 22 cents per dollar in 2011 to 25 cents per dollar in 2014). This is a favorable trend because the company is generating more gross profit to apply against operating and other expenses which hopefully results in greater net income.

EXERCISE 5–2

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jul. 6	Merchandise inventory		600	
	Accounts payable			600
	To record purchase of inventory on account.			
Jul. 9	Accounts payable		200	
	Merchandise inventory			200
	To record returns made on goods purchased.			
Jul. 15	Accounts payable		400	
	Cash			396
	Merchandise inventory			4
	To record payment made within discount period.			

EXERCISE 5–3

a. The Horne Inc. general journal is as follows:

General Journal				
Date	Account/Explanation	R	Debit	Credit
May 5	Accounts receivable		4,000	
	Sales			4,000
	Cost of goods sold		2,500	
	Merchandise inventory			2,500
7	Sales returns and allowances		500	
	Accounts receivable			500
	Merchandise inventory		300	
	Cost of goods sold			300
15	Cash		3,430	
	Sales discounts		70	
	Accounts receivable			3,500
31	Cost of goods sold		100	
	Merchandise inventory			100
	(3,000 beginning MI – 2,500 + 300 = 800 unadjusted MI balance; 800 – 700 = 100 shrinkage)			

b. The Sperling Renovations Ltd. general journal is as follows:

General Journal				
Date	Account/Explanation	R	Debit	Credit
May 5	Merchandise inventory		4,000	
	Accounts payable			4,000
7	Accounts payable		500	
	Merchandise inventory			500
15	Accounts payable		3,500	
	Merchandise inventory			70
	Cash			3,430
	The shrinkage adjustment recorded by Horne Inc. does not impact Sperling in any way therefore no adjusting entry is required in Sperling's records.			

EXERCISE 5-4

General Journal				
Date	Account/Explanation	R	Debit	Credit
Mar 1	Merchandise inventory		25,000	
	Accounts payable			25,000
	(Purchase, terms 2/10, net 30)			
Mar 3	Accounts receivable		5,000	
	Cost of goods sold		2,600	
	Sales			5,000
	Merchandise inventory			2,600
	(Sale, terms 1/10, n/30)			

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General Journal				
Date	Account/Explanation	R	Debit	Credit
Mar 4	Merchandise inventory		100	
	Sales returns and allowances		200	
	Accounts receivable			200
	Cost of goods sold			100
	(Sales return, Mar 3)			
Mar 5	Merchandise inventory		15,000	
	Cash			15,000
	(Cash purchase)			
Mar 6	Merchandise inventory		200	
	Cash			200
	(Freight)			
Mar 7	Cash		500	
	Merchandise inventory			500
	(Allowance for damaged inventory)			
Mar 8	Accounts receivable		25,000	
	Cost of goods sold		13,000	
	Sales			25,000
	Merchandise inventory			13,000
	(Sale, terms 1.5/10, n/30)			
Mar 9	Delivery expense or freight-out		500	
	Cash			500
	(Shipping costs for Mar 8 sale)			
Mar 11	Accounts payable		12,500	
	Merchandise inventory			250
	Cash			12,250
	(50% payment of Mar 1 purchase)			
Mar 13	Cash		4,950	
	Sales discount		50	
	Accounts receivable			5,000
	(Collect Mar 3 sale)			
Mar 15	Office supplies inventory		540	
	Account payable			540
	(Purchase 1/10, n/30)			
Mar 18	No Entry			
Mar 20	Cash		6,010	
	Accounts receivable			6,010
	(Collect account)			
Mar 25	Account payable		540	
	Office supplies inventory			5.40
	Cash			534.60
	(Payment of Mar 15 purchase)			

General Journal				
Date	Account/Explanation	R	Debit	Credit
Mar 27	Cash		12,500	
	Cost of goods sold		5,000	
	Sales			12,500
	Merchandise inventory			5,000
	(Cash sale)			
Mar 31	Account payable		12,500	
	Cash			12,500
	(Payment of Mar 1 balance, discount expired)			

EXERCISE 5-5

General Journal				
Date	Account/Explanation	R	Debit	Credit
Apr 1	Merchandise inventory		15,000	
	Cash			15,000
	(Cash purchase)			
Apr 3	Cash		8,000	
	Cost of goods sold		4,600	
	Sales			8,000
	Merchandise inventory			4,600
	(Cash sale)			
Apr 5	Merchandise inventory		10,000	
	Accounts payable			10,000
	(Purchase, terms 1/10, n/30)			
Apr 7	Accounts payable		2,000	
	Merchandise inventory			2,000
	(Purchase returns)			
Apr 8	Accounts receivable		8,000	
	Cost of goods sold		4,000	
	Merchandise inventory			4,000
	Sales			8,000
	(Sale, terms 2/10, n/30)			
Apr 9	Delivery expense or freight-out		500	
	Cash			500
	(Shipping costs for Apr 8 sale)			
Apr 10	Merchandise inventory		1,000	
	Sales returns and allowances		400	
	Cost of goods sold			400
	Cash			1,000
	(Sale return)			

General Journal				
Date	Account/Explanation	R	Debit	Credit
Apr 10	Sales allowance		200	
	Accounts receivable			200
	(Apr 8 sale, sales allowance)			
Apr 12	Merchandise inventory		22,000	
	Accounts payable			22,000
	(Purchase, terms 1/10, n/30)			
Apr 15	Accounts payable		8,000	
	Merchandise inventory			
	Cash $(\$10,000 - 2,000) \times 0.99$			7,920
	(Paid Apr 5 purchase)			
Apr 16	Merchandise inventory		600	
	Cash			600
	(Freight on Apr 12 purchase)			
Apr 18	Cash		5,000	
	Sales discount		102	
	Accounts receivable $(\$5,000 \div 0.98)$..			5,102
	(Partial payment on account)			
Apr 27	Accounts payable		22,000	
	Cash			22,000
	(Paid account, discount forfeited)			
Apr 27	Cash		20,000	
	Cost of goods sold		10,000	
	Merchandise inventory			10,000
	Sales			20,000
	(Cash sale)			

EXERCISE 5-6

- a. The income statement is as follows:

Smith Corp.
Income Statement
Year Ended June 30, 2015

Sales		\$72,000
Less: Sales returns and allowances		<u>2,000</u>
Net sales		\$70,000
Cost of goods sold		<u>50,000</u>
Gross profit		\$20,000
Operating expenses:		
Selling expenses:		
Advertising expense	\$1,500	
Commissions expense	4,000	
Delivery expense	500	
Rent expense – store	1,500	
Sales salaries expense	<u>2,000</u>	
Total selling expenses		\$9,500
General and administrative expenses:		
Depreciation expense - equipment	500	
Insurance expense	1,000	
Office salaries expense	3,000	
Rent expense – office	<u>1,000</u>	
Total general and administrative expenses		<u>5,500</u>
Total operating expenses		15,000
Income before income tax expense		<u>5,000</u>
Income tax expense		<u>1,000</u>
Net income		<u><u>\$4,000</u></u>

- b. The gross profit percentage, rounded to two decimal places, is 28.57% calculated as $100 \times (20,000/70,000)$.

EXERCISE 5–7

Inventory, opening balance	\$ 10,000	\$ 53,000	\$ 561,800	\$ 168,540	50,562
Plus: purchases	30,000	159,000	1,685,400	1,011,240	606,744
Total goods available for sale	40,000	212,000	2,247,200	1,179,780	657,306
Less: ending inventory	15,000	79,500	842,700	556,180	100,000
Cost of goods sold	25,000	132,500	1,404,500	623,600	557,306
Sales	55,000	240,000	1,600,000	900,000	700,000
Less: cost of goods sold	25,000	132,500	1,404,500	623,600	557,306
Gross profit	30,000	107,500	195,500	276,400	142,694
Less: operating expenses	12,000	63,600	275,000	250,000	145,000
Net income/(loss)	18,000	43,900	(79,500)	26,400	(2,306)
Gross profit/sales (%)	54.55%	44.79%	12.22%	30.71%	0

EXERCISE 5–8

a. Closing entries:

General Journal				
Date	Account/Explanation	R	Debit	Credit
June 30	Sales		72,000	
	Income summary			72,000
	(to close credit balance temporary accounts)			
	Income summary	68,000		
	Sales returns and allowances			2,000
	Cost of goods sold			50,000
	Advertising expense			1,500
	Commissions expense			4,000
	Delivery expense			500
	Rent expense – store			1,500
	Sales salaries expense			2,000
	Depreciation expense – equipment			500
	Insurance expense			1,000
	Office salaries expense			3,000
	Rent expense – office			1,000
	Income tax expense			1,000
	(to close debit balance temporary accounts)			
30	Income summary		4,000	
	Retained earnings			4,000
	(to close balance in Income Summary to Retained earnings)			
30	Retained earnings		2,000	
	Dividends			2,000
	(to close Dividends to Retained earnings)			

b. The June 30, 2015 post-closing balance in Retained Earnings is \$20,000 calculated as:

Retained Earnings	
Beginning Balance	18,000
Net Income	4,000
Less: Dividends	(2,000)
Ending Balance	20,000

EXERCISE 5-9

	A	B	C	D
Opening Inventory	500	184	112	750
Purchases	1,415	344	840	5,860
Transportation-In	25	6	15	10
Cost of Goods Available for Sale	1,940	534	967	6,620
Ending Inventory	340	200	135	880
Cost of Goods Sold	1,600	334	832	5,740

EXERCISE 5-10

Opening Inventory	375
Purchases	2,930
Less: Purchases Discounts	5
Less: Purchases Returns and Allowances	20
Transportation-In	105
Less: Ending Inventory	440
Cost of Goods Sold	2,945

EXERCISE 5-11

a. The completed table is as follows:

	A	B	C	D
Sales	\$300	\$150	\$195	\$90
Opening Inventory	80	40	40	12
Purchases	240	120	150	63
Cost of Goods Available for Sale	320	160	190	75
Ending Inventory	(120)	(60)	(60)	(15)
Cost of Goods Sold	200	100	130	60
Gross Profit	\$100	\$50	\$65	\$30
Gross Profit percentage	33.33%	33.33%	33.33%	33.33%

- b. All four companies have the same gross profit percentage of 33.33% which means each is contributing equally to operating expenses. In terms of real dollars, Company A is doing the best because its gross profit is \$100.

Chapter 6 Solutions

EXERCISE 6-1

FIFO

Date		Purchased (Sold)			Balance		
		Units	Unit Cost	COGS	Units	Unit Cost	Total Cost
Jan. 1	Opening Inventory				100	× \$1	= \$100
7	Purchase #1	10	× \$2		{ 100	× 1	} 120
					{ 10	× 2	
9	Sale #1	(80)	× 1	(\$80)	{ 20	× 1	} 40
					{ 10	× 2	
21	Purchase #2	20	× 3		{ 20	× 1	} 100
					{ 10	× 2	
					{ 20	× 3	
24	Sale #2	{ (20)	× 1	} (70)	10	× 3	= 30
		{ (10)	× 2				
		{ (10)	× 3				
	Total COGS			<u>\$150</u>			

LIFO

Date		Purchased (Sold)			Balance		
		Units	Unit Cost	COGS	Units	Unit Cost	Total Cost
Jan. 1	Opening Inventory				100	× \$1	= \$100
7	Purchase #1	10	× \$2		{ 100	× 1	} 120
					{ 10	× 2	
9	Sale #1	{ (10)	× 2	(\$90)	30	× 1	30
		{ (70)	× 1				
21	Purchase #2	20	× 3		{ 30	× 1	} 90
					{ 20	× 3	
24	Sale #2	{ (20)	× 3	(80)	10	× 1	= 10
		{ (20)	× 1				
	Total COGS			<u>\$170</u>			

EXERCISE 6-2

Date		Purchased (Sold)			Balance			
		Units	Unit Cost	COGS	Units	Unit Cost	Total Cost	
Jan. 1	Opening Inventory				100	× \$1	= \$100	
7	Purchase #1	10	× \$2		{ 100	× 1	} 120	
					{ 10	× 2		
9	Sale #1	(72)	× 1	(\$72)	{ 28	× 1	} 32	
		(8)	× 2	(\$16)	{ 2	× 2		
21	Purchase #2	20	× 3		{ 28	× 1	} 92	
					{ 2	× 2		
					{ 20	× 3		
24	Sale #2	{ (23)	× 1	(74)	{ 5	× 1	} = 18	
		{ (17)	× 3			{ 2		× 2
						{ 3		× 3
	Total COGS			<u>\$162</u>				

EXERCISE 6-3

Weighted Average (per unit costs must be rounded to two decimal places)

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Date		Purchased (Sold)			Balance		
		Units	Unit Cost	COGS	Units	Unit Cost	Total Cost
Jan 1	Opening Inventory				2,000	\$0.50 =	\$1,000
5	Sales #1	(1,200)	× \$0.50	(\$600)	800	0.50	400
6	Purchase #1	1,000	× 2.00		1,800	1.33 ¹	2,400
10	Purchase #2	500	× 1.00		2,300	1.26 ²	2,900
16	Sale #2	(2,000)	× 1.26 =	(2,520)	300	1.26	380
21	Purchase #3	1,000	× 2.50		1,300	2.22 ³	\$2,880

¹[\$400 + (1,000 × \$2)]/(800 + 1,000) = \$1.33/unit (rounded) ²[\$2,400 + (500 × 1)]/(1,800 + 500) = \$1.26/unit (rounded) ³[\$380 + (1,000 × 2.50)]/(300 + 1,000) = \$2.22/unit (rounded)

a. The entry for the January 5 sale:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan. 5	Accounts Receivable		6,000	
	Sales			6,000
	Cost of Goods Sold		600	
	Merchandise Inventory			600
	To record Jan. 5 sales: 1,200 units × \$5.00/unit selling price = \$6,000.			

b. The entry for the January 16 sale:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan. 16	Accounts Receivable		12,000	
	Sales			12,000
	Cost of Goods Sold		2,520	
	Merchandise Inventory			2,520
	To record Jan. 16 sales: 2,000 units × \$6.00/unit selling price = \$12,000.			

c. Per the above table, there are 1,300 units on hand @ \$2.22 (rounded), for a total ending inventory cost of \$2,880. Be careful to note that the total ending inventory cost of \$2,880 is **NOT** calculated as 1,300 units × the average unit cost of \$2.22. The \$2,880 is calculated as the inventory balance of \$380 on January 16 plus the January 21 purchase of \$2,500.

EXERCISE 6-4

N/E = No Effect; O = Overstated; U = Understated

<i>Errors</i>	<i>2016 Statements</i>				<i>2017 Statements</i>			
	<i>Opening Invent.</i>	<i>Ending Invent.</i>	<i>2016 Total Assets</i>	<i>2016 Net Income</i>	<i>Opening Invent.</i>	<i>Ending Invent.</i>	<i>2017 Total Assets</i>	<i>2017 Net Income</i>
1. Goods purchased in 2016 were included in the December 31, 2016 inventory, but the transaction was not recorded until early 2017.	N/E	U	U	U	U	N/E	N/E	O
2. Goods purchased in 2017 were included in December 31, 2016 inventory, and the transaction was recorded in 2016.	N/E	O	O	O	O	N/E	N/E	U

EXERCISE 6-5

- a.
- i. Ending inventory for 2021 was understated by \$2,000. Thus, cost of goods sold should have been \$18,000 and gross profit, \$12,000. Because of this mistake, the 2022 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; gross profit in 2022 should have been \$15,000. There is no impact on 2023 as a result of the error.
 - ii. The 2023 ending inventory was overstated by \$5,000. Thus, cost of goods sold should have been \$30,000 and gross profit, \$20,000. This error does not impact 2021 or 2022.
- b. For 2021, 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 2022, there is no effect on the balance sheet, as the error is in opening inventory. For 2023, the ending inventory in the balance sheet is overstated by \$5,000, which means that total assets were overstated by \$5,000.

EXERCISE 6-6

- a. LCNRV on a unit-by-unit basis: $(2 \times \$50) + (3 \times \$75) + (4 \times \$20) = \405
 Therefore, LCNRV = \$405 on a unit-by-unit basis.

- b. LCNRV on a group inventory basis: Total cost of the group: $(2 \times \$50) + (3 \times \$150) + (4 \times \$25) = \650 Total NRV of the group: $(2 \times \$60) + (3 \times \$75) + (4 \times \$20) = \425

Therefore, LCNRV = \$425 on a group inventory basis.

EXERCISE 6–7

- a. Estimated amount of inventory lost in the fire:

Sales		\$300,000	100%
<i>Cost of Goods Sold:</i>			
Opening Inventory	\$80,000		
Purchases	150,000		
Cost of Goods Available	230,000		
Ending Inventory (estimated)	(iii)		
Cost of Goods Sold		(ii)	65%
Gross Profit		(i)	35%

(i) Gross Profit = 35% of Sales
 = $35\% \times \$300,000$
 = \$105,000

(ii) Cost of Goods Sold = Sales – Gross Profit
 = $\$300,000 - 105,000$
 = \$195,000

(iii) Estimated Ending Inventory = Cost of Goods Available – Total Cost of Goods Sold
 = $\$230,000 - 195,000$
 = \$35,000

- b. Balton lost about \$35,000 of inventory in the fire and is claiming \$45,000. This does not appear reasonable.

EXERCISE 6–8

- a. Merchandise inventory turnover for each of the years 2022 to 2025:

	2025	2024	2023	2022	2021
Cost of Goods Sold	370,000	400,000	420,000	440,000	450,000
Merchandise Inventory	120,000	111,250	88,750	111,250	88,750
Merchandise Inventory Turnover	3.2	4	4.2	4.4	

- b. The change in Able Corp.'s Merchandise Inventory Turnover ratio is unfavorable because inventory is being sold at a slower rate from 2022 to 2025, from 4.4 times per year in 2022 to 3.2 times per year in 2025.

Chapter 7 Solutions

EXERCISE 7-1

General Journal				
Date	Account/Explanation	R	Debit	Credit
Mar. 1	Petty Cash A+		200	
	Cash (A)			200
12	Office Supplies Expense E+ (SE)		60	
	Maintenance Expense E+ (SE)		35	
	Miscellaneous Selling Expense E+ (SE)		25	
	Cash (A)			120
18	Petty Cash A+		200	
	Cash (A)			200
25	Office Supplies Expense E+ (SE)		75	
	Delivery Expense E+ (SE)		30	
	Cash (A)			105
28	Cash A+		50	
	Petty Cash (A)			50

EXERCISE 7-2

Ferguson Corp.			
Bank Reconciliation			
At December 31, 2016			
Cash per general ledger, Dec. 31	\$5,005	Cash per bank statement, Dec. 31	\$7,000
<i>Add:</i> Note collected by bank	1,300	<i>Add:</i> Error Fluet Inc. check	200
Interest on note	25	Outstanding deposit	700
<i>Less:</i> Bank service charges	(30)	<i>Less:</i> Outstanding checks	(1,600)
Adjusted Cash balance, Dec. 31	<u>\$6,300</u>	Adjusted Cash balance, Dec. 31	<u>\$6,300</u>

Adjusting entries resulting from bank reconciliation:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec. 31	Cash A+		1,325	
	Note Receivable (A)			1,300
	Interest Earned R+ SE+			25
	To record the note collected by the bank.			
Dec. 31	Interest and Bank Charges Expense E+ (SE)		30	
	Cash (A)			30
	To record service charges from the bank.			

OR

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec. 31	Cash A+		1,295	
	Interest and Bank Charges Expense E+ (SE)		30	
	Note Receivable (A)			1,300
	Interest Earned R+ SE+			25
	To record bank service charges and note collected by the bank.			

EXERCISE 7-3

Gladstone Ltd.			
Bank Reconciliation			
At March 31, 2018			
Cash per general ledger, Mar. 31	\$2,531	Cash per bank statement, Mar. 31	\$1,500
<i>Add:</i> Error check No. 4302	27	<i>Add:</i> Outstanding deposit	1,000
Note receivable	250	Error re. Global	250
Interest on note	50		
<i>Less:</i> Service charges – March	(20)	<i>Less:</i> Outstanding checks	(622)
Service charges – Note	(10)		
NSF check	(700)		
Adjusted Cash balance, Mar. 31	<u>\$2,128</u>	Adjusted Cash balance, Mar. 31	<u>\$2,128</u>

Adjusting entries:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Mar. 31	Cash A+		27	
	Office Supplies Expense (E) SE+			27
	To correct ck. no. 4302			
	Cash A+		290	
	Interest and Bank Charges Expense E+ (SE)		10	
	Note Receivable (A)			250
	Interest Earned R+ SE+			50
	To record note collected by the bank.			
	Interest and Bank Charges Expense E+ (SE)		20	
	Cash (A)			20
	To record service charges for March.			
	Accounts Receivable A+		700	
	Cash (A)			700
	To record NSF check returned.			

OR

General Journal				
Date	Account/Explanation	R	Debit	Credit
Mar. 31	Interest and Bank Charges Expense E+ (SE)		30	
	Accounts Receivable A+		700	
	Office Supplies Expense (E) SE+			27
	Note Receivable (A)			250
	Interest Earned R+ SE+			50
	Cash (A)			403
	To record adjustments resulting from March 31, 2018 bank rec.			

EXERCISE 7-4

- a. i. Entry to record the estimated uncollectible accounts at December 31, 2015:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Bad Debt Expense E+ (SE)		15,000	
	Allowance for Doubtful Accounts XA+			15,000
	(A)			
	(2% × 750,000 = 15,000)			

- ii. Allowance for Doubtful Accounts = 3,000 + 15,000 = 18,000

- b. i. Entry to record the estimated uncollectible accounts at December 31, 2015:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Bad Debt Expense E+ (SE)		11,700	
	Allowance for Doubtful Accounts XA+ (A)			11,700
	[10% × 147,000] = 14,700 – 3,000 = 11,700			

- ii. Allowance for Doubtful Accounts = 3,000 + 11,700 = 14,700
(or 10% × 147,000)
- c. 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 percentage of accounts receivable, a simplified balance sheet method.
- d. The calculation made in part (a) above better matches revenues and expenses: the revenues (sales) is directly related to the amount that is written off as bad debt expense. The calculation made in part (b) above better matches accounts receivable to allowance for doubtful accounts and thus produces a better balance sheet valuation.

EXERCISE 7-5

- a. Amount of bad debt expense in 2019:

Allowance for doubtful accounts, Dec. 31, 2018	\$8,000
Written off in 2019	(2,400)
	<u>5,600</u>
Allowance for doubtful accounts, Dec. 31, 2019	(9,000)
Bad debt expense for 2019	<u><u>\$3,400</u></u>

OR

Allowance for Doubtful Accounts		
	8,000	Dec. 31/18 Adj. Bal
2019 A/R Write-Offs 2,400	?	Adj. Entry Dec. 31/19
	9,000	Dec. 31/19 Adj. Bal.

- b. Entry recorded at December 31, 2019 to account for bad debts:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec. 31	Bad Debt Expense E+ (SE)		3,400	
	Allowance for Doubtful Accounts XA+ (A)			3,400

c. Amount of bad debt expense in 2020:

Allowance for doubtful accounts, Dec. 31, 2019	\$ 9,000
Written off in 2020	(1,000)
Recovered in 2020	300
	8,300
Allowance for doubtful accounts, Dec. 31, 2020	(10,000)
Bad debt expense for 2020	\$ 1,700

OR

Allowance for Doubtful Accounts			
	9,000		Dec. 31/19 Adj. Bal.
2020 A/R Write-Offs	1,000	300	2020 Recovery
		?	Adj. Entry Dec. 31/20
		10,000	Dec. 31/20 Adj. Bal.

Recall that the ending balance in one period becomes the beginning balance in the next.

d. Entry recorded at December 31, 2020 to account for bad debts:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec. 31	Bad Debt Expense E+ (SE)		1,700	
	Allowance for Doubtful Accounts XA+ (A)			1,700

EXERCISE 7-6

Part a:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Mar. 1	Notes Receivable – West Corp. A+ Accounts Receivable – West Corp. (A) . To record 90-day, 3% note receivable.		40,000.00	40,000.00
Mar. 31	Interest Receivable A+ Interest Revenue (or Interest Earned) R+ SE+ To record accrued interest; $40,000 \times 3\% \times 30/360$.		100	100
May 30	Cash A+ Interest Receivable (A) Interest Revenue (or Interest Earned) R+ SE+ Notes Receivable – West Corp. (A) To record collection; $40,000 \times 3\% \times 60/360 = 200$.		40,300.00	100 200 40,000.00
Jun. 15	Notes Receivable – Jill Monte A+ Accounts Receivable – Jill Monte (A) . . To record 45-day, 3% note receivable.		50,000.00	50,000.00
Jul. 30*	Cash A+ Notes Receivable – Jill Monte (A) Interest Revenue (or Interest Earned) R+ SE+ To record collection; $50,000 \times 3\% \times 45/360$.		50,187.50	50,000.00 187.50

*July 30 is determined by: June 30 – June 15 = 15 days + 30 days in July = 45 days.

Part b:

General Journal				
Date	Account/Explanation	R	Debit	Credit
May 30	Notes Receivable – West Corp.* A+ Interest Receivable (A) Interest Revenue (or Interest Earned) R+ SE+ Notes Receivable – West Corp. (A) To record dishonored note; $40,000 \times 3\% \times 60/360 = 200$.		40,300.00	100 200 40,000.00

*When a note is dishonored, a 'new' note is recorded that includes the interest and principal to be recovered.

EXERCISE 7–7

a. Acid test ratio

$$2017: (30,000 + 20,000)/(12,000 + 8,000 + 9,000) = 1.72$$

$$2018: (42,000 + 25,000)/(14,000 + 9,000 + 11,000 + 17,000) = 1.31$$

Accounts receivable turnover ratio

$$2017: 367,000/[(20,000 + 14,000)/2] = 21.59$$

$$2018: 375,000/[(25,000 + 20,000)/2] = 16.67$$

- b. The change in both the acid-test and accounts receivable turnover ratios was unfavorable. Although Salzl Corp.'s acid-test is greater than one indicating that it has sufficient quick current assets to cover current liabilities as they come due, that amount decreased from 2017 to 2018. The decrease in the accounts receivable turnover indicates that Salzl Corp. is collecting receivables at a much slower rate in 2018 than in 2017 which is unfavorable. Receivables should be collected as quickly as possible so the accounts receivable turnover ratio should be as high as possible.

Chapter 8 Solutions

EXERCISE 8-1

f	Battery purchased for truck.
a	Commission paid to real estate agent to purchase land.
c	Cost of equipment test runs.
b	Cost to remodel building.
b or c	Cost to replace manual elevator with automatic elevator.
a	Cost of sewage system.
c	Equipment assembly expenditure.
c	Expenditures for debugging new equipment and getting it ready for use.
e	Installation of air-conditioner in automobile.
b	Insurance paid during construction of building.
a	Legal fees associated with purchase of land.
f	Oil change for truck.
a	Payment for landscaping.
a	Expenditures for removal of derelict structures.
f	Repair made to building after moving in.
f	Repair of collision damage to truck.
f	Repair of torn seats in automobile.
e	Replacement of engine in automobile.
c	Special floor foundations for installation of new equipment.
f	Tires purchased for truck.
c	Transportation expenditures to bring newly purchased equipment to plant.

EXERCISE 8–2

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Land		75,000	
	Building		225,000	
	Cash			300,000
	Land = $\$100,000/\$400,000 \times \$300,000$ = \$75,000.			
	Building = $\$300,000/\$400,000 \times$ $\$300,000 = \$225,000.$			

EXERCISE 8–3

a. Cost = $\$3,575 + \$100 + \$350 = \$4,025.$

b. Straight-Line Method:

Year	Straight-Line	Double-Declining Balance
1	\$755*	$\$4,025 \times 40\%^{**} = \$1,610$
2	\$755	$2,415 \times 40\% = 966$
3	\$755	$1,449 \times 40\% = 580$
4	\$755	$869 \times 40\% = 348$
5	\$755	$521 \times 40\% = 208$

* $(\$4,025 - 250)/5 \text{ years} = \755

** (Rate = $2/n$ where n = useful life; $2/5\text{yrs.} = .40$ or 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.

EXERCISE 8–4

a. Straight-Line Method:

$$(\$240,000 - 40,000)/5 \text{ years} = \$40,000 \text{ per year}$$

2019 depreciation	=	\$40,000
2020 depreciation	=	40,000
2021 depreciation	=	40,000
2022 depreciation	=	40,000
2023 depreciation	=	40,000
Total depreciation	=	<u>\$200,000*</u>

*Maximum allowable depreciation = Cost – Residual which is $\$240,000 - \$40,000 = \$200,000$.

b. Double-Declining Balance Method:

$$\text{Rate} = 2/n = 2/5 = 0.40 \text{ or } 40\%$$

2019 depreciation	=	$\$240,000 \times 40\% =$	\$ 96,000
2020 depreciation	=	$(\$240,000 - 96,000) \times 40\% =$	57,600
2021 depreciation	=	$(\$240,000 - 96,000 - 57,600) \times 40\% =$	34,560
2022 depreciation	=		11,840*
2023 depreciation	=		0
Total depreciation	=		<u>\$200,000</u>

*Maximum allowable depreciation = \$200,000 which is Cost – Residual. Therefore, although the calculation of depreciation for 2022 is:

$$2022 \text{ depreciation} = (\$240,000 - 96,000 - 57,600 - 34,560) \times 40\% = 20,736$$

taking this amount would exceed the maximum allowable total depreciation of \$200,000. Therefore, only \$11,840 of depreciation can be recorded in 2022. This is calculated as \$200,000 maximum allowable – \$96,000 depreciation in 2019 – \$57,600 depreciation in 2020 – \$34,560 depreciation taken in 2021 = \$11,840.

EXERCISE 8–5**a. Straight-Line Method:**

$$(\$110,000 - 40,000)/4 \text{ years} = \$17,500 \text{ per year}$$

2019 depreciation	=	\$17,500
2020 depreciation	=	17,500
2021 depreciation	=	17,500
2022 depreciation	=	17,500
Total depreciation	=	<u>\$70,000*</u>

*Maximum allowable depreciation = Cost – Residual which is $\$110,000 - \$40,000 = \$70,000$.

b. Double-Declining Balance Method:

Rate = $2/n = 2/4 = 0.50$ or 50%

2019 depreciation = $\$110,000 \times 50\% =$	\$55,000
2020 depreciation =	15,000*
2021 depreciation =	0
2022 depreciation =	0
Total depreciation =	<u>\$70,000</u>

*Maximum allowable depreciation = $\$70,000$ which is Cost – Residual. Therefore, although the calculation of depreciation for 2020 is:

2020 depreciation = $(\$110,000 - 55,000) \times 50\% = \$27,500$

taking this amount would exceed the maximum allowable total depreciation of $\$70,000$. Therefore, only $\$15,000$ of depreciation can be recorded in 2020. This is calculated as $\$70,000$ maximum allowable – $\$55,000$ depreciation in 2019 = $\$15,000$.

EXERCISE 8–6

a. i. Straight-Line Method:

$(\$25,000 - 5,000)/5$ years = $\$4,000$ per year

2019 depreciation = $\$4,000 \times 1/2 =$ **$\$2,000$**

2020 depreciation = **$\$4,000$**

ii. Units-of-Production Method:

$(\$25,000 - 5,000)/500,000$ km. = $\$0.04/\text{km}$.

2019 depreciation = $120,000$ km. \times $\$0.04 =$ **$\$4,800^*$**

2020 depreciation = $150,000$ km. \times $\$0.04 =$ **$\$6,000$**

*The 1/2 year rule does not apply under usage methods of calculating depreciation since depreciation is based on units produced and not time.

iii. Double-Declining-Balance Method:

$2/n = 2/5 = 0.40$ or 40% per year

2019 depreciation = $\$25,000 \times 40\% = \$10,000 \times 1/2$ yr. = **$\$5,000$**

2020 depreciation = $(\$25,000 - 5,000) \times 40\% =$ **$\$8,000$**

b. i. Straight-Line Method:

$(\$25,000 - 5,000)/5$ years = $\$4,000$ per year

2019 depreciation = $\$4,000 \times 10/12 =$ **$\$3,333$**

2020 depreciation = **$\$4,000$**

ii. Units-of-Production Method:

$$(\$25,000 - 5,000)/500,000 \text{ km.} = \$0.04/\text{km.}$$

$$2019 \text{ depreciation} = 120,000 \text{ km.} \times \$0.04 = \mathbf{\$4,800^*}$$

$$2020 \text{ depreciation} = 150,000 \text{ km.} \times \$0.04 = \mathbf{\$6,000}$$

*The 1/2 year rule does not apply under usage methods of calculating depreciation since depreciation is based on units produced and not time.

iii. Double-Declining-Balance Method:

$$2/n = 2/5 = 0.40 \text{ or } 40\% \text{ per year}$$

$$2019 \text{ depreciation} = \$25,000 \times 40\% = \$10,000 \times 10/12 = \mathbf{\$8,333}$$

$$2020 \text{ depreciation} = (\$25,000 - 8,333) \times 40\% = \mathbf{\$6,667}$$

EXERCISE 8-7

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Depreciation Expense – Machinery		3,333	
	Accumulated Depreciation – Machinery			3,333
	To record revised depreciation at Dec. 31, 2021; $(60,000 - 0)/3 \text{ years} = 20,000$ depreciation for each of 2019 and 2020; $(60,000 - 20,000 - 20,000 - 10,000)/(5 - 2) = 3,333$ revised depreciation 2021			

EXERCISE 8-8

a. General journal entry to record depreciation for the year ended December 31, 2019:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Depreciation Expense – Machinery		28,000	
	Accumulated Depreciation – Machinery			28,000
	To record depreciation at Dec. 31, 2019; $(140,000 - 0)/5 \text{ years} = 28,000$ depreciation for December 31, 2019			

b. General journal entry to record revised depreciation for the year ended December 31, 2020:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Depreciation Expense – Machinery		40,500	
	Accumulated Depreciation – Machin- ery			40,500
	To record revised depreciation at Dec. 31, 2020; Original Machinery: $(140,000 - 0)/5$ years = 28,000 depreciation; New Compo- nent: $(50,000 - 0)/4$ years = 12,500 de- preciation; $28,000 + 12,500 = 40,500$ to- tal depreciation at December 31, 2020			

EXERCISE 8–9

- a. General journal entry to record any impairment losses at December 31, 2019:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Impairment Loss		22,917	
	Machinery			22,917
	To record impairment at Dec. 31, 2019; $(\$400,000 \text{ Cost} - \$40,000 \text{ Accum. Dep.}$ $= \$360,000 \text{ Carrying or Book Value}) -$ $\$337,083 \text{ Recoverable Amount} = \$22,917$ Impairment Loss			

The land's future cash flows of \$120,000 is greater than its carrying or book value of \$100,000 therefore there is no impairment.

The building's future cash flows of \$890,000 is greater than its carrying or book value of \$855,333 $(\$890,000 - \$34,667)$ therefore there is no impairment.

- b. General journal entry to record depreciation for the year ended December 31, 2020:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Depreciation Expense – Building		32,000	
	Accumulated Depreciation – Building			32,000
	To record depreciation at Dec. 31, 2020; calculated as $(\$890,000 - \$250,000)/20$ years = \$32,000			
	Depreciation Expense – Machinery		22,430	
	Accumulated Depreciation – Machinery			22,430
	To record depreciation at Dec. 31, 2020; calculated as $(\$400,000 - \$150,000 - \$27,083 - \$22,917)/(10 - 1 \frac{1}{12} = 8 \frac{11}{12} \text{ years}) = \$22,430$. Note that the Accum. Dep. of \$27,083 represents 1 year and 1 month of depreciation (1 month in 2018 + 12 months in 2019). Therefore, the remainder over which the machinery's cost must be depreciated is the original 10 years less the 1 year and 1 month.			

EXERCISE 8–10

a. Journal entries to record the exchange on the books of:

i. Freeman:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Equipment		200,000	
	Land			125,000
	Gain on Disposal			75,000
	The equipment is valued at the fair value of the asset given up.			

ii. The developer:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Land		240,000	
	Equipment			325,000
	Accumulated Depreciation – Equipment		80,000	
	Loss on Disposal		5,000	
	To record loss on disposal calculated as: $[\$325,000 \text{ Cost} - \$80,000 \text{ Accumulated Depreciation} = \$245,000 \text{ Carrying Amount}] - [\$240,000 \text{ Proceeds [fair value of equipment]}] = \$5,000$.			

- b. The developer may be speculating that the land will increase in value in the future beyond the current fair value of the equipment exchanged for the land.

EXERCISE 8–11

- a. Equipment sold for \$20,000:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		20,000	
	Accumulated Depreciation – Equipment ..		40,000	
	Equipment			60,000
	To record sale of equipment for \$20,000.			

- b. Equipment sold for \$30,000:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		30,000	
	Accumulated Depreciation		40,000	
	Equipment			60,000
	Gain on Disposal			10,000
	To record gain on disposal calculated as: [\$60,000 Cost of Equipment – \$40,000 Accumulated Depreciation = \$20,000 Carrying Amount (or net book value)] – \$30,000 Proceeds of Disposal = \$(10,000).			

- c. Equipment sold for \$5,000:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		5,000	
	Accumulated Depreciation		40,000	
	Loss on Disposal		15,000	
	Equipment			60,000
	To record loss on disposal calculated as: [\$60,000 Cost of Equipment – \$40,000 Accumulated Depreciation = \$20,000 Carrying Amount (or net book value)] – \$5,000 Proceeds of Disposal = \$15,000.			

To record loss on disposal calculated as:

Cost of equipment	\$60,000
Accumulated depreciation	(40,000)
Carrying amount (or net book value)	<u>20,000</u>
Proceeds of disposal	(5,000)
Loss on disposal	<u><u>\$15,000</u></u>

EXERCISE 8–12

a. March 1, 2019 to record the purchase of the copyright:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Copyright		50,000	
	Cash			50,000
	To record purchase of copyright.			

b. December 31, 2019, Willis’s year-end, to record amortization of the copyright:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Amortization Expense		8,333	
	Accumulated Amortization – Copyright			8,333
	To record amortization; $50,000/5 = 10,000 \times 10/12 = 8,333$.			

c. October 1, 2021, Willis’s sale of the copyright to a movie producer for \$100,000:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		100,000	
	Accumulated Amortization – Copyright...		25,833	
	Copyright			50,000
	Gain on Disposal			75,833
	To record sale of copyright at a gain; Accumulated amortization = 8,333 for 2019 + 10,000 for 2020 + 7,500 for 2021 = 25,833.			

Chapter 9 Solutions

EXERCISE 9–1

Ajam Inc.
Partial Balance Sheet
March 31, 2019

Current liabilities:			
Accounts payable	\$58,000		
Wages payable	102,000		
Income taxes payable	92,000		
Note payable, due November 30, 2019	64,000		
Current portion of mortgage payable	80,000		
Total current liabilities			\$396,000
Long-term liabilities:			
Note payable, due May 15, 2021	\$108,000		
Long-term portion of mortgage payable	240,000		
Total long-term liabilities			348,000
Total liabilities			\$744,000

EXERCISE 9-2

- a. Entry to record the issuance of the note on July 1, 2019:

General Journal				
Date	Account/Explanation	R	Debit	Credit
July 1	Cash		300,000.00	
	Notes Payable			300,000.00
	To record 45-day, 3.5% note issued July 1.			

- b. Entry to accrue interest on July 31, 2019:

General Journal				
Date	Account/Explanation	R	Debit	Credit
July 31	Interest Expense		875.00	
	Interest Payable			875.00
	To record accrued interest; $300,000 \times$ $3.5\% \times 30/360$.			

- c. August 15, 2019 (July 31 – July 1 = 30 days + August 15 = 45 days)
- d. Entry to record the payment of the note on the due date:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Aug. 15	Notes Payable		300,000.00	
	Interest Payable		875	
	Interest Expense		437.50	
	Cash			301,312.50
	To record payment of note; $300,000 \times 15/360 \times 3.5\% = 437.50$.			

EXERCISE 9–3

- a. Entry to record the estimated warranty liability for January:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan. 23	Warranty Expense		1,640	
	Estimated Warranty Liability			1,640
	To record estimated warranty liability; $2\% \times \$82,000 = \$1,640$.			

- b. Entry to record the warranty expense incurred in January:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan. 29	Estimated Warranty Liability		2,000	
	Merchandise Inventory			2,000
	To record replacement of furniture covered by warranty.			

- c. \$380 (calculated as: $\$740 + 1,640 - 2,000$).

EXERCISE 9–4

- a.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec 31, 2018	Salaries expense		2,000	
	Benefit expense		2,500	
	Employee Income Taxes Payable			500
	Health Insurance Payable			1,000
	Employment Vacation Liability			1,500
	Salaries Payable			1,500
	To record accrual of salary, income taxes, health insurance and vacation benefits			

b.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 5, 2019	Salaries Payable..... Cash..... To record payment of Dec 31 salary payable to J. Smith.		1,500	1,500
Jan 5, 2019	Employee Income Taxes Payable..... Health Insurance Payable..... Cash..... To record payment of amounts owing at Dec 31 to IRS and Health Insurance Company		500 1000	1500

EXERCISE 9-5

a.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Feb 15, 2018	Corporate Income Taxes Payable..... Cash.....		500	500

b.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec 31, 2018	Corporate Income Taxes Expense..... Corporate Income Taxes Payable..... (\$15,000 × 40% = \$6,000)		6,000	6,000

c.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 31, 2019	Corporate Income Taxes Payable..... Cash..... To record payment of 2018 corporate income taxes owing.		500	500

Calculation:

2018 expense	\$ 6,000
Instalments paid (11 × \$500)	(5,500)
Owing	<u>\$ 500</u>

EXERCISE 9-6

	CASE A	CASE B	CASE C
	<i>A. Investors purchase the bonds at par</i>	<i>B. Investors purchase the bonds at a premium</i>	<i>C. Investors purchase the bonds at a discount</i>
a.	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.
b.	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.
c.	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
d.	June 30, 2017 The interest payment is recorded as follows: Interest Expense 6,000 Cash 6,000	June 30, 2017 The interest payment is recorded as follows: Interest Expense 6,000 Cash 6,000 Amortization is recorded as follows: Premium on Bonds 2,000 Interest Expense 2,000	June 30, 2017 The interest payment is recorded as follows: Interest Expense 6,000 Cash 6,000 Amortization is recorded as follows: Interest Expense 2,000 Discount on Bonds 2,000
	December 31, 2017 The interest payment is recorded as follows: Interest Expense 6,000 Cash 6,000	December 31, 2017 The interest payment is recorded as follows: Interest Expense 6,000 Cash 6,000 Amortization is recorded as follows: Premium on Bonds 2,000 Interest Expense 2,000	December 31, 2017 The interest payment is recorded as follows: Interest Expense 6,000 Cash 6,000 Amortization is recorded as follows: Interest Expense 2,000 Discount on Bonds 2,000

EXERCISE 9–7

- a. i. The issuance of bonds:

$$\text{Cash} = \$100,000 \times 94\% = \$94,000$$

$$\text{Discount} = \$100,000 - \$94,000 = \$6,000$$

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 1, 2017	Cash		94,000	
	Discount on Bonds		6,000	
	Bonds Payable			100,000

- ii. The interest payment:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Interest Expense		6,000	
	Cash			6,000

- iii. The amortization of the discount:

$$\text{Discount} = \$6,000 \div 3 \text{ years} \times 6 \div 12 = \$1,000$$

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Interest Expense		1,000	
	Discount on Bonds			1,000

- b. Interest paid in cash =
- $\$100,000 \times 12\% = \$12,000$

$$\text{Interest expense for 2017} = \text{Interest} + \text{amortization for the year} = \$12,000 + \$2,000 = \$14,000$$

- c.

Nevada Inc.
Balance Sheet
At December 31, 2017

<i>Liabilities</i>	
<i>Non-current*</i>	
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. Just the carrying amount is shown on the balance sheet.

* If it was likely that the bonds would be called on January 1, 2018, they would be classified as current liabilities. If so, details of the redemption should be disclosed in a note to the December 31, 2017 financial statements.

d. Retirement of the bonds:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec 31, 2019	Bonds Payable		100,000	
	Cash			100,000

e. Calling of the bonds:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 1, 2019	Bonds Payable		100,000	
	Loss on Bond Retirement		6,000	
	Discount on Bonds			4,000
	Cash			102,000
	To record retirement of bonds.			

Calculation for bonds at 102:

Face value	\$100,000
Unamortised discount	(4,000)
Carrying amount	<u>96,000</u>
Cash paid	102,000
Loss on retirement	<u>\$ (6,000)</u>

EXERCISE 9–8

a. Prepare the journal entries to record the following transactions:

i. The issuance of the bonds:

$$\text{Cash} = \$200,000 \times 112\% = \$224,000$$

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 1, 2019	Cash		224,000	
	Premium on Bonds			24,000
	Bonds Payable			200,000

ii. The interest payment:

$$\text{Interest} = \$200,000 \times 12\% \times 6 \div 12 = \$12,000$$

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Interest Expense		12,000	
	Cash			12,000

iii. The amortization of the premium:

$$\text{Premium} = (\$24,000 \div 3 \text{ years}) \times 6 \div 12 = \$4,000$$

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Premium on Bonds		4,000	
	Interest Expense			4,000

b. Interest paid in cash = $\$200,000 \times 12\% = \$24,000$

$$\begin{aligned} \text{Interest expense for 2019} &= \text{Interest} - \text{amortization for the year} \\ &= \$24,000 - (\$24,000 \div 3 \text{ years}) \\ &= \$24,000 - \$8,000 \\ &= \$16,000 \end{aligned}$$

These amounts are different because the amortization of the premium, which reduces Interest Expense, does not require cash.

c.

Sydney Corp.
Balance Sheet
At December 31, 2019

<i>Liabilities</i>	
<i>Non-current</i>	
Bonds payable	\$200,000
Premium on bonds	16,000
Carrying amount	\$216,000

d. Calling of the bonds:

$$\text{Cash paid} = \$200,000 \times 106\% = \$212,000$$

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 1, 2022	Bonds Payable		200,000	
	Premium on Bonds		8,000	
	Loss on Bond Retirement		4,000	
	Cash			212,000

To record retirement of bonds at 106 as follows:

Face value	\$200,000
Unamortised premium	(8,000)
Carrying amount	<u>208,000</u>
Cash paid	212,000
Loss on retirement	<u>\$ (4,000)</u>

EXERCISE 9-9

a. The issuance of bonds:

Interest paid from last interest payment date ($\$100,000 \times 8\% \times 4 \div 12$ May 1 to Sep 1) = \$2,667 (rounded)

General Journal				
Date	Account/Explanation	R	Debit	Credit
Sep 1, 2017	Cash		102,667	
	Interest payable			2,667
	Bonds payable			100,000

b. The interest payment for 2018:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Nov 1, 2018	Interest expense		1,333	
	Interest payable		2,667	
	Cash*			4,000
	* ($\$100,000 \times 8\% \times 6 \div 12$)			

Accrued interest at December 31, 2018:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec 31	Interest expense		1,333	
	Interest payable			1,333
	($\$100,000 \times 8\% \times 2 \div 12$)			

c. Bond at Maturity:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Sep 1, 2027	Bonds Payable		100,000	
	Cash			100,000

d.

Harvort Inc.
Balance Sheet
At December 31, 2018

Liabilities

Current

Interest payable \$ 1,333

*Non-current**

Bonds payable (Note X) \$100,000

Note X would disclose pertinent information of the bond indenture including details of the face value and unamortised bond premium or discount if any. Just the carrying amount is shown on the balance sheet.

EXERCISE 9–10

a. Prepare the journal entries to record the following transactions:

i.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 1, 2021	Cash		50,000	
	Loan Payable			50,000
	To record loan from Second Capital Bank.			

ii.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 1	Equipment		48,000	
	Cash			48,000
	To record the purchase of equipment.			

b.

Rosedale Corp. Loan Repayment Schedule					
	A	B	C	D	E
			(D – B)		(A – C)
<i>Year ended</i>	<i>Beginning loan balance</i>	<i>(A × 6%) Interest expense</i>	<i>Reduction of loan payable</i>	<i>Total loan payment</i>	<i>Ending loan balance</i>
<i>Dec 31</i>					
2021	\$50,000	\$3,000	\$15,705	\$18,705	\$34,295
2022	34,295	2,058	16,647	18,705	17,648
2023	17,648	1,057	17,648	18,705	-0-

c.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec 31, 2021	Interest Expense		3,000	
	Loan Payable		15,705	
	Cash			18,705
	To record loan payment to Second Capital Bank.			

d.

Rosedale Corp. Balance Sheet At December 31, 2021	
<i>Liabilities</i>	
<i>Current liabilities</i>	
Loan payable, current portion*	\$16,647
<i>Long-term liabilities</i>	
Loan payable, 6%, instalments payable over three years**	17,648

* Current portion is the principal amount of the liability owing for one year after the reporting date. Refer to the loan schedule above.

** (\$34,295 – 16,647 current portion)

EXERCISE 9–11

a. discount

- b. premium
- c. discount
- d. premium
- e. premium
- f. discount

EXERCISE 9–12

$$\text{Cash} = \$100,000 \times 94\% = \$94,000$$

$$\text{Discount} = \$100,000 - \$94,000 = \$6,000$$

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan. 1	Cash		94,000	
	Discount on Bonds		6,000	
	Bonds Payable			100,000

EXERCISE 9–13

$$\text{Cash} = \$200,000 \times 112\% = \$224,000$$

$$\text{Premium} = \$224,000 - \$200,000 = \$24,000$$

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan. 1	Cash		224,000	
	Premium on Bonds			24,000
	Bonds Payable			200,000

EXERCISE 9–14

- a. (a) Entry to record receipt of loan proceeds from the bank:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan. 1	Cash		50,000	
	Loan Payable			50,000
	To record loan from Second Capital Bank.			

(b) Entry to record purchase of equipment:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan. 1	Equipment		48,000	
	Cash			48,000
	To record loan the purchase of the equipment.			

b. The loan repayment schedule is as follows:

Rosedale Corp. Loan Repayment Schedule					
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
			$(D - B)$		$(A - C)$
<i>Year Ended</i>	<i>Beginning Loan Balance</i>	<i>(A × 6%) Interest Expense</i>	<i>Reduction of Loan Payable</i>	<i>Total Loan Payment</i>	<i>Ending Loan Balance</i>
Dec. 31 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-
			<u>\$50,000</u>		

* Adjusted for rounding

c. Entry to record the first loan payment:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec. 31	Interest Expense		3,000	
	Loan Payable		15,705	
	Cash			18,705
	To record loan payment to Second Capital Bank.			

Chapter 10 Solutions

a. The completed schedule is as follows:

	<i>12% Bonds</i>	<i>Common Stock</i>
Income before interest and income taxes	\$12,000,000	\$12,000,000
<i>Less:</i> Interest expense	4,800,000 ¹	-0-
Income before taxes	7,200,000	12,000,000
<i>Less:</i> Income taxes at 50%	3,600,000	6,000,000
Net income	3,600,000	6,000,000
<i>Less:</i> Preferred dividends	-0-	-0-
Net income available to common stockholders (a)	\$3,600,000	\$6,000,000
Number of common stock outstanding (b)	200,000	400,000
Earnings per common share (a/b)	\$18	\$15
	¹ \$40,000,000 × 12% = \$4,800,000	

b. Issuing bonds is the financing option that is most advantageous to the common stockholders, all other factors being considered equal. It results in higher earnings per common stock. A second advantage of issuing bonds is that it does not disrupt current stockholder control. The option to issue more shares would distribute control over a larger number of stockholders causing the control held by the present stockholders to be diluted. A third advantage of issuing bonds is that interest expense is deductible for tax purposes, while dividends are paid out of after-tax dollars. One disadvantage of issuing bonds, which may make one of the other options more advantageous, is that interest expense is fixed. Issuing bonds increases interest expense and the company must earn enough income to cover the interest expense in any given year.

EXERCISE 10-2

a. Entry to record the transaction:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Land		50,000	
	Preferred Shares			50,000
	To record the purchase of a tract of land in exchange for preferred shares.			

b. The credit part of the transaction would be classified on the balance sheet in the equity section as part of preferred stock. The debit part of the transaction would be recorded as an asset in the property, plant, and equipment section.

EXERCISE 10–3

- a. The number of preferred stock issued is 64 (640 / \$10 par-value).
- b. The number of common stock issued is 1,000 (1,000 / \$1 par-value).
- c. Net income would be \$600 (Ending RE \$600 – Beg. RE \$0 = \$600).

EXERCISE 10–4

- a. Entry to record the declaration of the dividend:

General Journal				
Date	Account/Explanation	R	Debit	Credit
May 25	Dividends Declared		100,000	
	Dividends Payable			100,000
	To record the declaration of the dividend.			

- b. Entry to record the payment of the dividend:

General Journal				
Date	Account/Explanation	R	Debit	Credit
June 26	Dividends Payable		100,000	
	Cash			100,000
	To record the payment of the dividend.			

EXERCISE 10–5

- a. Since the preferred stockholders have cumulative shares, they must receive all dividends in arrears **and** the current dividend before the common stockholders receive any dividends. Dividends received by preferred stockholders (1,000 shares × \$5/share = \$5,000/year dividend entitlement):

$$= \text{Dividends in arrears for one year} + \text{Dividends for current year}$$

$$= \$5,000 + 5,000 = \$10,000$$

Common stockholders receive the balance, or \$4,000 (\$14,000 – \$10,000).

- b. Preferred stockholders receive dividends before the common stockholders. Since the preferred stockholders are not cumulative shares, they receive only the current dividend or \$5,000.

Common stockholders receive the balance, or \$9,000 (\$14,000 – \$5,000).

EXERCISE 10–6

- a. The \$15,000 of dividends in arrears at December 31, 2019 does not appear as a liability. Although the dividends pertain to cumulative shares, no liability exists until the board of directors declares a dividend. However, disclosure of dividends in arrears would be made in a note to the financial statements.
- b. 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.
- c. The amount available for dividends to the common stockholders is calculated as follows:

Amount available for all dividends ($1/2 \times \$35,000$)	\$17,500
Priority given to cumulative preferred stockholders	
Arrears to December, 2019	(15,000)
Preferred dividends for 2020	(5,000)
Deficiency	<u><u>\$(2,500)</u></u>

The \$2,500 deficiency in 2020 preferred dividends has to be paid in the future before any dividends are paid to common stockholders. There will be no dividends available for common stockholders at December 31, 2020 based on the projections.

EXERCISE 10–7

General Journal				
Date	Account/Explanation	R	Debit	Credit
Apr. 1	Share Dividend Declared		15,000	
	Common Share Dividend To Be Distributed			15,000
	To record the declaration of the share dividend. (10,000 shares \times 10% = 1,000 shares \times \$15)			

OR

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General Journal				
Date	Account/Explanation	R	Debit	Credit
	Retained Earnings		15,000	
	Common Share Dividend To Be Distributed			15,000
	To record the declaration of the share dividend. (10,000 shares × 10% = 1,000 shares × \$15)			

General Journal				
Date	Account/Explanation	R	Debit	Credit
Apr. 15	Common Share Dividend To Be Distributed		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 shares + 1,000 shares) × \$2]			

OR

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Retained Earnings		22,000	
	Dividends Payable			22,000
	To record the declaration of the cash dividend. [(10,000 shares + 1,000 shares) × \$2]			

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun. 30	Dividends Payable		22,000	
	Cash			22,000
	To record payment of the cash dividend.			
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.			

OR

If Retained Earnings was debited on April 1 (instead of Stock Dividends Declared) and June 1 (instead of Cash Dividends Declared), then no closing entry is required on December 31.

EXERCISE 10–8

- a. i. Par value for preferred stock = $(\$4,500) / 300 \text{ shares} = \15 per share
 ii. Par value for common stock = $(\$2,000) / 2,000 \text{ shares} = \1 per share
- b. Retained Earnings Balance is $\$60,000 (\$4,500 + 2,000 + 5,000 + 22,000 - 750 - 92,750 = 60,000)$

EXERCISE 10–9

- a. No journal entry.

Authorization of stock issue:

Memorandum

The company is authorized under the [name of legislation] to issue an unlimited number of common stock and 10,000, 4% preferred stock.

- b. Issue of 10,000 common stock:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 2, 2018	Intangible Assets		10,000	
	Common Shares			10,000

- c. Issue of 1,000 preferred stock:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 2, 2018	Cash		3,000	
	Preferred Shares			3,000

EXERCISE 10–10

Scenario 1

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 15, 2018	Retained earnings		5,000	
	Common stock to be distributed			250
	Additional paid in capital			4,750
	\$5,000 × 10% = \$500, \$500 × 10 = \$5,000. Common stock listed at par × \$0.50			
Feb 15, 2018	Common stock to be distributed		250	
	Common stock			250

Scenario 2

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 15, 2018	Retained earnings		750	
	Common stock to be distributed			750
	\$5,000 × 30% = \$1,500. Common stock listed at par × \$0.50			
Feb 15, 2018	Common stock to be distributed		750	
	Common stock			750

EXERCISE 10–11

a.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 5, 2018	Cash		150	
	Common stock			20
	Additional paid in capital			130
	To record issue of 10 common shares (par value \$2).			
Jan 12	Land		50	
	Buildings		100	
	Machinery		100	
	Common stock			100
	Additional paid in capital			150
	To record issue of 50 common shares (par value \$2).			
Feb 28	Stock dividend		42	
	Common stock to be distributed			12
	Additional paid in capital			30
	To record the stock dividend: $[(10 + 50) \times 10\% = 6 \text{ shares} \times \$7]$. Common stock recorded at \$2 par.			
Mar 15	Common stock to be distributed		12	
	Common stock			12
	To record issue of dividend on common stock.			
Dec 31	Cash dividend		66	
	Dividend payable			66
	To record the cash dividend declared.			
Dec 31	Income summary		200	
	Retained earnings			200
	To close the income summary account.			
Dec 31	Retained earnings		108	
	Stock dividend			42
	Cash dividend			66
	To close 2018 dividends to Retained earnings.			

b. i.

Blitz Power Tongs Inc.
 Partial Statement of Financial Position
 At January 31, 2018

Stockholders' Equity

Common shares, par value \$2 per share	
Authorized – unlimited shares	
Issued and outstanding – 60 shares	\$120
Additional paid in capital – Excess of par, common	280
Total stockholders' equity	<u>\$400</u>

ii.

Blitz Power Tongs Inc.
 Partial Statement of Financial Position
 At February 28, 2018

Stockholders' Equity

Common shares, par value \$2 per share	
Authorized – unlimited shares	
Issued and outstanding – 60 shares	\$120
Additional paid in capital – Excess of par, common	310
Common stock to be distributed – 6 shares	<u>12</u>
	442
Retained earnings*	18
Total stockholders' equity	<u>\$460</u>

* (\$60 net income – 42 dividends declared)

Blitz Power Tongs Inc.
 Partial Statement of Financial Position
 At December 31, 2018

Stockholders' Equity

Common shares, par value \$2 per share	
Authorized – unlimited shares	
Issued and outstanding – 60 shares	\$132
Additional paid in capital – Excess of par, common	310
Retained earnings*	92
Total stockholders' equity	<u>\$534</u>

iii. * (\$200 net income – 66 dividends declared – 42 dividends declared)

EXERCISE 10–12**a.**

	<i>10% bonds</i>	<i>Common shares</i>
Income before interest and income taxes	\$750,000	\$750,000
Less: Interest expense	150,000 *	-0-
Income before income taxes	<u>600,000</u>	<u>750,000</u>
Less: Income taxes at 30%	180,000	225,000
Net Available to common shareholders	<u>\$420,000</u>	<u>\$525,000</u>
Number of common shares outstanding	<u>20,000</u>	<u>50,000</u>
Earnings per common share	<u>\$ 21</u>	<u>\$ 10.50</u>

* $\$1,500,000 \times 10\% = \$150,000$

b. From a common stockholders perspective, issuing bonds is the best option, since it maximizes net income (net income is available as potential dividends) per stockholder, which is seen through the earnings per share ratio.

EXERCISE 10–13**a.**

General Journal				
Date	Account/Explanation	R	Debit	Credit
Feb. 20	Cash dividend		50,000	
	Dividend payable – preferred			50,000
	(100,000 × \$0.50)			
Mar. 1	Dividend payable – preferred		50,000	
	Cash			50,000
Apr. 15	Cash dividend		750,000	
	Dividend payable – common			750,000
	(1,250,000 × \$0.60)			
Jun. 10	Dividend payable – common		750,000	
	Cash			750,000
Aug. 1	Cash		250,000	
	Common stock			100
	Additional paid in capital			249,900
Dec. 31	Cash dividend – preferred		50,000	
	Cash dividend – common		375,000	
	Cash			425,000
	(\$425,000 – \$50,000 preferred*) = \$375,000 to common stockholders			

* Remaining cumulative dividends on preferred shares not yet declared for the current fiscal year; 100,000 shares × (\$1.00 – \$.50 declared Feb 20) = \$50,000 to be allocated to preferred class before any allocation to common shareholders.

b.

Belfast Steel Ltd.
Statement of Stockholders' Equity
For the Year Ended December 31, 2019
('000s)

	<i>Common</i>	<i>Preferred</i>	<i>Additional paid in</i>	<i>Retained</i>	<i>Total</i>
Balance at Jan 1, 2019	\$ 12	\$ 1,000	\$ 24,987	\$ 4,000	\$ 30,000
Common stock issued	0.1		249.9		250
Net income				500	500
Dividends					
Preferred				(100)*	(100)
Common				(1,125)**	(1,125)
Balance at Dec 31, 2019	\$ 12.1	\$ 1,000	&25,236.9	\$ 3,275	\$ 29,525

* Feb 20 dividends	\$ 50,000
Dec 31 cumulative dividends allocated	<u>50,000</u>
Total	<u>\$ 100,000</u>
** Apr 15 dividends	\$ 750,000
Dec 31 dividends	<u>375,000</u>
Total	<u>\$1,125,000</u>

EXERCISE 10–14**a.**

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General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 15	Organization expenses		15,000	
	Common stock			32,000
	Additional paid in capital		17,000	
	Issued 32,000 shares at \$1 par.			
Feb 20	Cash		90,000	
	Common stock			15,000
	Additional paid in capital			75,000
	Issued 15,000 shares at \$ par.			
Mar 7	Cash		90,000	
	Preferred stock			90,000
Apr 9	Land		300,000	
	Building		120,000	
	Common stock			60,000
	Additional paid in capital			360,000
	Issued 60,000 shares at \$1 par.			
May 1	Cash		63,000	
	Preferred stock			63,000
May 15	Cash dividend – common		16,000	
	Cash dividend – preferred		34,000	
	Cash			50,000
	(4,500 + 3,500) × \$2 preferred, remainder to common			
Jun 5	Cash		112,000	
	Common stock			16,000
	Additional paid in capital			96,000
	Issued 16,000 shares at \$1 par.			
Jul 15	Cash		185,000	
	Common stock			20,000
	Preferred stock			35,000
	Additional paid in capital			130,000
	Issued \$20,000 common shares at \$1 par.			
Dec 31	Retained earnings		25,000	
	Income summary			25,000
	Closed the net loss to Retained earnings.			
Dec 31	Retained earnings		50,000	
	Cash dividends			50,000
	Closed the dividend account to Retained earnings.			

b.

Bray Co.
Equity Section of the Balance Sheet
December 31, 2019

Contributed Capital:	
Preferred Stock, \$2.00; 10,000 shares authorized; 10,000 shares issued and outstanding	\$ 188,000*
Common Stock unlimited shares authorized; 114,000 shares issued and outstanding	143,000**
Additional paid in capital	644,000***
Total contributed capital	\$ 975,000
Deficit****	75,000
Total equity	\$ 900,000

Calculations:

* Preferred Shares:	Shares	Dollars
Mar 7 Issued 4,500 shares	4,500	\$ 90,000
May 1 Issued 3,500 shares	3,500	63,000
Jul 15 Issued 2,000 shares	2,000	35,000
Totals	10,000	\$188,000
** Common Stock:		
Jan 15 Issued 32,000 shares	32,000	\$ 32,000
Feb 20 Issued 15,000 shares	15,000	15,000
Apr 9 Issued 60,000 shares	60,000	60,000
Jun 5 Issued 16,000 shares	16,000	16,000
Jul 15 Issued 20,000 shares	20,000	20,000
Totals	\$143,000	\$143,000

*** Additional paid in Capital: $(17,000) + 75,000 + 360,000 + 96,000 + 130,000 = 644$

**** Retained earnings/(deficit): $\$25,000 \text{ deficit} - \text{dividends declared } \$50,000 = \$75,000 \text{ deficit balance}$

EXERCISE 10–15

a.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 4	Cash		165,000	
	Common stock			15,000
	Additional paid in capital			150,000
	Issued 15,000 shares at \$ par.			
Jan 8	Cash dividends		57,500	
	Preferred dividend payable			45,000
	Common dividend payable			12,500
	Preferred (10,000 × \$1.5 × 3 yrs)			
Jan 31	Preferred dividend payable		45,000	
	Common dividend payable		12,500	
	Cash			57,500
Jul 1	Cash		77,500	
	Preferred stock			77,500
Aug 7	Cash dividends – common		40,000	
	Common dividend payable			40,000
	(\$1 × 40,000)			
Aug 31	Common dividend payable		40,000	
	Cash			40,000

b.

Carman Corp.
Statement of Stockholders' Equity
For Year Ended December 31, 2017

	Preferred Stock	Common Stock	Additional paid in Capital	Retained Earnings	Treasury Stock	Total Equity
Balance, January 1	\$150,000	\$ 25,000	\$ 275,000	\$ 250,000	\$(50,000)	\$ 650,000
Issuance of shares	77,500	15,000	150,000			242,500
Net income (loss)**				(50,000)		(50,000)
Dividends*				(97,500)		(97,500)
Balance, December 31	<u>\$227,500</u>	<u>\$ 40,000</u>	<u>\$ 425,000</u>	<u>\$ 102,500</u>	<u>\$(50,000)</u>	<u>\$ 745,000</u>

* (\$57,500 + 40,000)

** (\$102,500 – 250,000 + 97,500) = (50,000) loss

c.

Carman Corp.
Equity Section of the Balance Sheet
December 31, 2017

Contributed Capital:

Preferred shares, \$1.50 cumulative, unlimited shares authorized, 15,000 shares issued and outstanding	\$ 227,500
Common shares, unlimited shares authorized 40,000 shares issued and outstanding	40,000
Additional paid in capital	425,000
Less: Treasury stock	(50,000)
Total contributed capital	<u>\$ 642,500</u>
Retained earnings	102,500
Total equity	<u><u>\$ 745,000</u></u>

Calculations:

	Shares	Dollars
Preferred Stock:		
Jan 1 Opening balance	10,000	\$150,000
Jul 1 Issued 5,000 shares (\$77,500 ÷ \$15.50)	5,000	77,500
Totals	15,000	\$227,500
Common Stock:		
Jan 1 Opening balance	25,000	\$ 25,000
Jan 4 Issued 15,000 shares	15,000	\$ 15,000
Totals	40,000	\$ 40,000

d.

2016:

$$\begin{aligned}
 \text{Book value per preferred share} &= \frac{\text{Paid-in capital for preferred shares} + \text{dividends in arrears}}{\text{Number of preferred shares outstanding}} \\
 &= \frac{\$150,000 + 30,000^*}{10,000} \\
 &= \$18.00 \text{ per share}
 \end{aligned}$$

* (\$1.50 × 10,000 shares × 2 years)

2017:

$$\text{Book value per preferred share} = \frac{\$227,500 + 0}{15,000} = \$15.17$$

2016:

$$\begin{aligned}
 \text{Book value} & & \text{Total equity minus preferred} & + \text{dividends in arrears} \\
 \text{per common share} & = & \text{shares paid-in capital} & \\
 & = & \frac{\text{Number of common shares outstanding}}{\$650,000 - 180,000} & \\
 & = & \frac{25,000}{25,000} & \\
 & = & \$18,80 \text{ per share} &
 \end{aligned}$$

2017:

$$\text{Book value per common share} = \frac{\$745,000 - 227,500}{40,000} = \$12.94$$

Chapter 11 Solutions

EXERCISE 11-1

F	A payment of \$5,000 was made on a bank loan.
O	Depreciation expense for equipment was \$1,000.
F	\$10,000 of common stock was issued for cash.
F	Cash dividends of \$2,500 were declared and paid to stockholders.
NC	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.
O	\$10,000 of accounts receivable was collected.
NC & I	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 related accumulation 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 amortized for \$500.
F	Bonds were issued for \$50,000 cash.

EXERCISE 11-2

a. The reconstructed entry to record the sale of the machinery:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Accumulated Depreciation		?	
	Cash		?	
	Loss on Sale of Machinery (given)		3	
	Machinery (given)			20

Accumulated Depreciation	
	42 Dec. 31, Year 4 bal.
Debit regarding sale ? = 12	25 Dep. Expense, Year 5
	55 Dec. 31, Year 5 bal.

Therefore, the debit to cash in the journal entry must be 5 (20-12-3).

b. The reconstructed entry to record the purchase of machinery:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Machinery		?	
	Cash			?

Machinery	
Dec. 31, Year 4 bal.	138
Debit regarding purch. ? = 7	20 Credit regarding sale
Dec. 31, Year 5 bal.	125

Therefore, the debit to Machinery and credit to Cash in the entry must be 7 (138-20-125).

c. The reconstructed entry to record the declaration of dividends:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Dividends or Retained Earnings		?	
	Dividends Payable			?

Retained Earnings	
	81 Dec. 31, Year 4 bal.
Year 5 Net loss	2
Year 5 Div. Declared ? = 35	
	44 Dec. 31, Year 5 bal.

Therefore, the debit to Dividends or Retained Earnings is 35 and credit to Dividends Payable 35 (81-2-44).

d. The reconstructed entry to record the payment of dividends:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Dividends Payable.....		?	
	Cash.....			?

Dividends Payable

	5	Dec. 31, Year 4 bal.
Div. Paid Year 5 ? = 39	35	Div. Declared Year 5
	1	Dec. 31, Year 5 bal.

Therefore, the debit to Dividends Payable is 39 and the credit to Cash 39 (5+35-1).

Calculations:

Account	Balance (\$000s)		Change		Explanation of Change
	Year 5	Year 4	Dr.	Cr.	
	Dr. (Cr.)	Dr. (Cr.)			
Cash	40	22	18		
Accounts receivable	34	39		5	Decrease in accounts receivable
Merchandise inventory	150	146	4		Increase in merchandise inventory
Prepaid expenses	3	2	1		Increase in prepaids
Machinery	125	138	7	20	Purchase in machinery for cash of 7; Sold machinery for cash of 5; Loss on sale 3
Accumulated dep.	-55	-42	12	25	Depreciation expense 25
Accounts payable	-29	-31	2		Decrease in accounts payable
Dividends payable	-1	-5	39	35	Paid dividends of 39
Bonds payable	-15	-38	23		Paid bonds 23
Common stock	-208	-150		58	Issued common shares 58
Retained earnings	-44	-81	2	35	Net loss 2
Total			125	143	
Change in cash			18		Net increase in cash of 18

e. The statement of cash flows is as follows:

Larriet Inc.		
Statement of Cash Flows		
Year Ended December 31, Year 5		
<i>Cash flows from operating activities:</i>		
Net loss	\$(2)	
Adjustments to reconcile net loss		
to cash provided by operating activities:		
Decrease in accounts receivable	5	
Increase in merchandise inventory	(4)	
Increase in prepaids	(1)	
Decrease in accounts payable	(2)	
Depreciation expense	25	
Loss on sale of machinery	3	
Net cash inflow from operating activities	\$24	
<i>Cash flows from investing activities:</i>		
Purchase of machinery	\$(7)	
Sale of machinery	5	
Net cash outflow from investing activities	(2)	
<i>Cash flows from financing activities:</i>		
Issued common shares	\$58	
Paid bonds	(23)	
Paid dividends	(39)	
Net cash outflow from financing activities	(4)	
Net increase in cash	\$18	
Cash at beginning of year	22	
Cash at end of year	\$40	

EXERCISE 11-3

a.

Glacier Corporation
Statement of Cash Flows
For the Year Ended December 31, 2019

<i>Operating activities</i>			
Net income			\$ 14
Items not affecting cash flow			
Depreciation expense		6	
Gain on sale of equipment (note 2)		(1)	
Loss on sale of land (note 1)		4	
Net changes in non-cash working capital:			
Accounts receivable, inventory and accounts payable (\$4 – 8 – 4)		(8)	
Cash flow from operating activities			15
<i>Investing activities</i>			
Proceeds from sale of equipment (note 2)	\$ 6		
Proceeds from sale of land	10		
Purchase of property, plant, and equipment	(41)		
Cash flow used by investing activities			(25)
<i>Financing activities</i>			
Proceeds from borrowings	8		
Common shares issued	10		
Payment of dividends	(6)		
Cash flow from financing activities			12
Net increase in cash			2
Cash at beginning of year			8
Cash at end of year			\$ 10

Note 1: The journal entry to record the sale of the land would be:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		10	
	Loss on Disposal		4	
	Land			14

Note 2:

Cost of equipment sold (given)	\$ 7
Accumulated depreciation (derived)	(2)
Carrying amount (given)	5
Cash proceeds (derived)	(6)
Gain on sale (per income statement)	\$ 1

- b. Cash flow from operating activities is almost identical to net income (\$15 vs \$14). The company appears to be embarking on a re-capitalization project, selling equipment and investing

in new property, plant, and equipment. Most of this (\$8 + 10) has been financed by issuing debt and common shares. Opening and ending cash balances are almost identical (\$8 vs \$10).

EXERCISE 11–4**a.**

Lelei Ltd.		
Statement of Cash Flows		
For the Year Ended December 31, 2019		
(\$000s)		
<i>Operating activities</i>		
Income from operations(225 – 44 – 100 – 28 – 10 + 15)		\$ 58
Items not affecting cash flow		
Depreciation expense	44	
Gain on sale of patent	(15)	
Net changes in non-cash working capital:		
Increase in accounts receivable	(100)	
Increase in inventory	(60)	
Increase in prepaid rent	(10)	
Increase in accounts payable	50	
Increase in income taxes payable	8	(83)
Cash flow used by operating activities	<u> </u>	<u>(25)</u>
<i>Investing activities</i>		
Proceeds from sale of patent	\$ 45	
Purchase of equipment	(120)	
Purchase of patent	(30)	
Cash flow used by investing activities	<u> </u>	<u>(105)</u>
<i>Financing activities</i>		
Proceeds from non-current borrowings	100	
Common shares issued (140 – 40 non-cash)	100	
Repayment of non-current borrowings (100 – 80)	(20)	
Dividends (20 – 10 dividend payable)	(10)	
Cash flow from financing activities	<u> </u>	<u>170</u>
Net increase in cash		<u>40</u>
Cash at beginning of year		-0-
Cash at end of year		<u><u>\$ 40</u></u>

b. The statement of cash flows shows that the company used debt and equity to finance its operations, purchase equipment, and pay dividends. The company generated more cash

than it used (\$40), from solely its financing activities. The cash flow used by operating activities (\$25) is a concern, but on the other hand, this may be acceptable in the first year of operations.

EXERCISE 11–5

a.

ZZ Corp.		
Statement of Cash Flows		
For the Year Ended December 31, 2019		
<i>Operating activities</i>		
Income from operations		\$ 40,000
Items not affecting cash flow:		
Depreciation expense	27,000	
Loss on sale of equipment	11,000	
Gain on sale of land	(4,000)	
Net changes in non-cash working capital:		
Income taxes paid	(4,000)	
Increase in accounts receivable	(10,000)	
Decrease in inventory	4,000	
Decrease in prepaid expenses	2,000	
Decrease in accounts payable	(2,000)	24,000
Cash flow used by operating activities		64,000
<i>Investing activities</i>		
Proceeds from sale of land	\$ 26,000	
Proceeds from sale of equipment	15,000	
Building addition	(60,000)	
Purchase of equipment	(15,000)	
Cash flow used by investing activities		(34,000)
<i>Financing activities</i>		
Payment of dividends	(20,000)	
Cash flow from financing activities		(20,000)
Net increase in cash		10,000
Cash at beginning of year		30,000
Cash at end of year		\$ 40,000

b. ZZ Corp. has generated cash inflow of \$64,000 from operating activities, which is good. The company is advised to watch its management of accounts receivable as it has increased from \$30,000 to \$40,000 or 33% in one year. Management needs to ensure that it is collecting

the accounts receivable as efficiently as possible. In terms of investing activities, it has sold land and equipment, but overall there has been a cash outflow of \$34,000 because of the purchase of new equipment and the building addition. The company was able to pay its shareholders dividends of \$20,000. Overall, the company added \$10,000 more cash to its cash balance at the end of the year.

EXERCISE 11–6

a.

Egglestone Vibe Inc.
Statement of Cash Flows
For the Year Ended December 31, 2016

Cash flows from operating activities		
Net income		\$ 24,700
Items not affecting cash flow:		
Depreciation expense	\$ 55,900	
Loss on sale of equipment (Note 1)	10,100	
Gain on sale of land (Note 2)	(38,200)	
Impairment loss – goodwill	63,700	
Net changes in non-cash working capital:		
Increase in accounts receivable	(36,400)	
Increase in inventory	(67,600)	
Decrease in accounts payable	(28,200)	(40,700)
Net cash used by operating activities		<u>(16,000)</u>
Cash flows from investing activities		
Proceeds from sale of equipment	27,300	
Purchase of land	(62,400)	
Proceeds from sale of land	150,000	
Net cash provided by investing activities		114,900
Cash flows used by financing activities		
Payment of cash dividends (Note 3)	(89,900)	
Issuance of notes payable	10,500	
Net cash used by financing activities		<u>(79,400)</u>
Net increase in cash		19,500
Cash at beginning of year		146,900
Cash at end of year		<u><u>\$ 166,400</u></u>

Notes:

1. $\$27,300 - (\$53,000 - \$15,600)$
 2. $\$150,000 - \$111,800$
 3. $\$430,000 + 24,700 \text{ net income} - 386,900 = 67,800 \text{ dividends declared}$
 $\$41,600 + 67,800 - 19,500 = \$89,900$
- b.** Negative cash flows from operating activities may signal trouble ahead with regard to Egglestone's daily operations. Current assets such as accounts receivable, inventory, and accounts payable all increased the cash outflows over the year. The only positive cash flows was from the investing activities. Specifically, proceeds from the sale of equipment and land were used to fund operating and pay dividends. This may be cause for concern if the assets sold were actually still being used to earn revenues and generate net income. Shareholders did receive cash dividends, but was that appropriate, given the net cash outflows from operations? All this increases the pressure on the company to find ways to improve its profitability as well as its management of receivables, payables, and inventory.

EXERCISE 11-7

Neuton Ltd.
Statement of Cash Flows
For Year Ended June 30, 2016

Cash flows from operating activities:		
Net income	\$ 44,380	
Items not affecting cash flow:		
Depreciation expense	58,600	
Net changes in non-cash working capital:		
Increase in accounts receivable	(18,000)	
Decrease in merchandise inventory	30,000	
Increase in prepaid expenses	(200)	
Decrease in accounts payable	(26,000)	
Decrease in wages payable	(9,000)	
Decrease in income taxes payable	(1,200)	
Gain on sale of equipment	(2,000)	
Net cash inflow from operating activities	\$ 76,580	
Cash flows from investing activities:		
Cash received from sale of old equipment (Note 1)	\$ 10,000	
Cash paid for new equipment	(58,600)	
Net cash outflow from investing activities	(48,600)	
Cash flows from financing activities:		
Cash received from issuance of common shares	\$ 50,000	
Cash paid to retire notes payable	(30,000)	
Cash paid for dividends (Note 2)	(27,180)	
Net cash outflow from financing activities	(7,180)	
Net increase in cash	\$ 20,800	
Cash balance at beginning of year	35,000	
Cash balance at end of year	\$ 55,800	

Note 1:

Cash Proceeds from Sale of Equipment:	
Cost of equipment sold	\$ 48,600
Accumulated depreciation of equipment sold (see below)	(40,600)
Book value of equipment sold	8,000
Gain on sale of equipment	2,000
Cash receipt from sale of equipment	\$ 10,000

Equipment				Accum. Depreciation, Equipment			
Bal 30/6/15	120,000					10,000	Bal 30/6/15
Purchase	58,600	48,600	Sale	Sale	40,600	58,600	Deprec. Exp
Bal 30/6/16	130,000					28,000	Bal 30/6/16

Note 2: Opening retained earnings + net income – dividends declared = Closing retained earnings
 $\$7,400 + 44,380 - \text{dividends} = 24,600$
 Dividends = $24,600 - 7,400 - 44,380 = 27,180$

EXERCISE 11–8

Yucotin Corp.
 Statement of Cash Flows
 For Year Ended December 31, 2016

Cash flows from operating activities:		
Net income	\$ 134,000	
Items not affecting cash flow:		
Depreciation	36,000	
Net changes in non-cash working capital:		
Increase in accounts receivable	(8,000)	
Increase in inventory	(145,000)	
Decrease in accounts payable	(18,000)	
Increase in income taxes payable	2,000	
Net cash inflow from operating activities		\$ 1,000
Cash flows from investing activities:		
Equipment purchase		(24,000)
Cash flows from financing activities:		
Common shares issued	\$ 40,000	
Dividends	(37,000)	
Net cash outflow from financing activities		(3,000)
Net increase in cash		\$(20,000)
Cash, beginning balance		268,000
Cash, ending balance		<u>\$248,000</u>

EXERCISE 11–9

- a. Opening retained earnings + net income – dividends declared = closing retained earnings
 Dividends declared = $115,200 - 68,800 - 86,400 = \$40,000$

Cash dividends paid = opening dividends payable + dividends declared – closing dividends payable
 Cash dividends paid = 500 + 40,000 – 1,000 = \$39,500

b.

Tubric Corp.
 Statement of Cash Flows
 For Year Ended December 31, 2016

Cash flows from operating activities:		
Net income	\$ 86,400	
Items not affecting cash flow:		
Depreciation expense	34,400	
Loss on sale of equipment	3,200	
Gain on sale of long-term investment	(9,600)	
Net changes in non-cash working capital:		
Increase in accounts receivable	(42,400)	
Increase in inventory	(25,600)	
Decrease in accounts payable	(14,900)	
Net cash inflow from operating activities	\$ 31,500	
Cash flows from investing activities:		
Proceeds from sale of long-term investment	\$ 24,000	
Proceeds from sale of equipment	5,600	
Purchase of equipment	(16,000)	
Net cash inflow from investing activities	13,600	
Cash flows from financing activities:		
Issuance of bonds payable	\$ 20,000	
Payment of dividend (from part a above)	(39,500)	
Net cash outflow from financing activities	(19,500)	
Net increase in cash and cash equivalents	\$ 25,600	
Cash and cash equivalents, January 1, 2016	28,800	
Cash and cash equivalents, December 31, 2016	\$ 54,400	

Chapter 12 Solutions

EXERCISE 12–1

The calculation of ratios as shown by the financial statements of Stockwell Inc. for each of the three years is as follows:

a. Liquidity ratios

		<u>2015</u>	<u>2014</u>	<u>2013</u>
Current ratio		1.2:1	1.0:1	1.4:1
Acid-test ratio		0.59:1	0.48:1	0.74:1
Sales		<u>210 (a)</u>	<u>120</u>	<u>100</u>
Accounts receivable	–opening	<u>30</u>	<u>20</u>	<u>20</u>
	–closing	<u>38</u>	<u>30</u>	<u>20</u>
	–average	<u>34 (b)</u>	<u>25</u>	<u>20</u>
Accounts receivable	Collection period (b/a × 365)	59 days	76 days	73 days
Cost of goods sold		<u>158 (c)</u>	<u>80</u>	<u>55</u>
Merchandise inventory		<u>60 (d)</u>	<u>40</u>	<u>30</u>
Number of days of sales	in inventory (d/c × 365)	139 days	183 days	199 days
Revenue operating cycle		198 days	259 days	272 days

- The company's working capital position does not appear to be satisfactory, since the liquid assets appear to be insufficient to meet current obligations. The acid-test ratio is quite low, well below 1:1. The company could obtain additional cash by issuing shares or acquiring long-term debt. Alternately, it may need to seek short-term financing like an operating loan from a bank to provide cash to pay liabilities as they become due.
- Control over accounts receivable and inventories has improved. Even though the dollar value of both of these items has increased, average sales and collection periods have declined in 2015. The liquidity ratios for 2014 as compared with 2015 and 2013 suggest that not enough attention was given during that year to investments in inventories and to the collection of accounts receivable. However, the improvements shown in 2015 indicate that better control is now being exercised over these current assets.

b. i. Financial structure

	<u>2015</u>	<u>2014</u>	<u>2013</u>
Debt to equity ratio	\$150/230	\$130/100	\$50/96
	= 0.65:1	= 1.30:1	= 0.52:1

The appropriate financial structure for Stockwell Inc. cannot be adequately determined without knowledge of its industry, for instance. With the exception of 2014, Stockwell Inc.'s debt to equity ratio indicates a reliance on equity rather than debt financing due to the 2015 share issue. In 2014, however, a bond issue temporarily changed the financial structure. Market rates of interest for debt would need to be evaluated to see if there is potential for leverage (that is, if interest rates are lower than current return on total

assets). If not, it is less likely that any potential for positive leverage exists. In this circumstance a weighting toward equity is reasonable.

- ii. The proportion of assets provided by creditors is as follows: 2013 – 34.3% (50/146); 2014 – 56.5% (130/230), and 2015 – 39.5% (150/380).
- iii. A disproportionately high percentage of debt, over 60% in both 2014 and 2015, is in current liabilities.

c. Other observations:

- The gross profit ratio has declined over the past year, even though sales have more than doubled (2015: $\$52/210 = 25\%$; 2014: $\$40/120 = 33\%$). The decrease in this ratio suggests either that selling prices were reduced in order to dispose of the increased production or that the expansion in production facilities resulted in a higher unit cost; possibly there was a combination of both.
- All funds derived from earnings during the last two years have been retained within the business, since no dividends have been paid. However, the investment in property, plant and equipment assets of \$190 ($\$260 - 70$) exceeds the \$170 received on the issue of bonds and shares [$\$50 + (200 - 80)$]. It appears that a substantial part of the funds derived from earnings have been used to finance additions to property, plant and equipment assets rather than to provide working capital. This has weakened the liquidity ratios.

(Other relevant observations are acceptable.)

EXERCISE 12–2

$$\text{Price-earnings ratio} = \frac{\text{Market price per share}}{\text{Earnings per share}}$$

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: $\$4/40 = 0.1$ or 10%

C: $\$6/90 = 0.067$ or 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.

EXERCISE 12-3

a. Current ratio

$$\begin{aligned}
 &= \frac{\text{Current assets}}{\text{Current liabilities}} \\
 &= \frac{\text{Cash} + \text{accounts receivable} + \text{inventory} + \text{prepaid expenses}}{\text{Current liabilities}} \\
 &= \$300/60 \\
 &= 5:1
 \end{aligned}$$

b. Return on total assets

$$\begin{aligned}
 &= \frac{\text{Net income}}{\text{Average total assets}} \\
 &= \$20/620 \\
 &= 3.2\%
 \end{aligned}$$

c. Sales to total assets ratio

$$\begin{aligned}
 &= \frac{\text{Net sales}}{\text{Average total assets}} \\
 &= \$240/620 \\
 &= 38.7\%
 \end{aligned}$$

d. Acid-test ratio

$$\begin{aligned}
 &= \frac{\text{Quick assets}}{\text{Current liabilities}} \\
 &= \frac{\text{Cash} + \text{accounts receivable}}{\text{Current liabilities}} \\
 &= (\$72 + 88)/60 \\
 &= 2.7:1
 \end{aligned}$$

e. Times interest earned ratio

$$= \frac{\text{Income from operations}}{\text{Interest expense}}$$

$$= \$46/8$$

$$= 5.75:1$$

f. Earnings per common share

$$= \frac{\text{Net income} - \text{preferred share dividends}}{\text{Number of common shares outstanding}}$$

$$= [\$20 - (\$60 \times 10\%)]/10 \text{ shares}$$

$$= \$1.40 \text{ per share}$$

g. Accounts receivable collection period

$$= \frac{\text{Average accounts receivable}}{\text{Net credit sales}} \times 365 \text{ days}$$

$$= \$88/(80\% \times \$240) \times 365 \text{ days}$$

$$= 167 \text{ days}$$

h. Return on equity

$$= \frac{\text{Net income}}{\text{Equity}}$$

$$= \frac{\text{Net income}}{\text{Preferred shares} + \text{Common shares} + \text{Retained earnings}}$$

$$= \$20/(60 + 250 + 100)$$

$$= 4.9\%$$

EXERCISE 12-4**a.** Horizontal analysis:

	2012 (a)	2011 (b)	Change	
			Amount (a - b)	Percentage (a - b)/b
Sales	\$2,520	\$1,440	\$+1,080	+75%
Cost of Goods Sold	1,890	960	+930	+96.9%
Gross Profit	<u>630</u>	<u>480</u>	+150	+31.3%
Other Expenses	<u>510</u>	<u>430</u>	+80	+18.6%
Net Income	<u><u>\$120</u></u>	<u><u>\$50</u></u>	+70	+140%

- b.** 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.

EXERCISE 12–5

a. Vertical analysis:

Escalade Corporation			
Vertical Analysis of the Income Statements			
For the Years Ending December 31, 2010–2012			
	<i>Common-Size Percentages</i>		
	<u>2012</u>	<u>2011</u>	<u>2010</u>
Sales	100.0	100.0	100.0
Cost of Goods Sold	<u>76.0</u>	<u>66.7</u>	<u>50.0</u>
Gross Profit	24.0	33.3	50.0
Other Expenses	<u>14.0</u>	<u>22.7</u>	<u>29.2</u>
Net Income	<u>10.0</u>	<u>10.6</u>	<u>20.8</u>

b. Escalade's gross profit ratio has significantly declined over the past three years. This could be owing to the initial inefficiency of a larger plant or because of selling an increased number of units at a greatly reduced price to obtain a larger share of the market. At any rate, the reasons for this decline should be investigated further. Since other expenses have not increased proportionately, perhaps more money could be put into sales promotion to increase the number of units sold.

EXERCISE 12–6

a.

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

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.

$$2018: (\$10 + 35 + 200 + 600) \div 745 = \$1.13 \text{ to } 1$$

$$2017: (\$15 + 35 + 150 + 400) \div 580 = \$1.03 \text{ to } 1$$

b.

$$\text{Acid-test ratio} = \frac{\text{Quick assets}}{\text{Current liabilities}}$$

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.

2018: $(\$10 + 35 + 200) \div 745 = \0.33 to 1

2017: $(\$15 + 35 + 150) \div 580 = \0.34 to 1

- c. 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.

EXERCISE 12-7

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Net sales}}$$

2019: $\$63 \div 252 = 25\%$

2018: $\$48 \div 141 = 34\%$

2017: $\$54 \div 120 = 45\%$

$$\text{Net profit ratio} = \frac{\text{Net income}}{\text{Net sales}}$$

2019: $\$12 \div 252 = 4.7\%$

2018: $\$5 \div 141 = 3.6\%$

2017: $\$15 \div 120 = 12.5\%$

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 2018, but both have rebounded somewhat in 2019. The company may be facing significant competition in recent years; hence the overall decline in the gross profit and net profit ratios.

EXERCISE 12-8

<i>Transaction</i>	<i>Ratio</i>	<i>Effect on ratio</i>
Declared a cash dividend	Current ratio	D
Wrote-off an uncollectible account receivable	Accounts receivable collection period	I
Purchased inventory on account	Acid-test ratio	D
Issued 10-year bonds to acquire property, plant, and equipment	Return on total assets	D
Issued additional shares for cash	Debt to shareholders' equity ratio	D
Declared a share dividend on common shares	Earnings per share	NC
Purchased supplies on account	Current ratio	D
Paid a current creditor in full	Acid-test ratio	I
Paid an account payable	Number of days of sales in inventory	NC

EXERCISE 12-9

- a. i. Return on total assets

$$= \frac{\text{Net income}}{\text{Average total assets}}$$

$$= (\$20/220)$$

$$= 9.1\%$$
- ii. Return on shareholders' equity

$$= \frac{\text{Net income}}{\text{Average shareholders' equity}}$$

$$= \$20/(80 + 60)$$

$$= 14.3\%$$
- iii. Times interest earned ratio

$$= \frac{\text{Income from operations}}{\text{Interest expense}}$$

$$= \$36/6$$

$$= 6 \text{ times}$$
- iv. Earnings per share

$$= \frac{\text{Net income}}{\text{Number of common shares outstanding}}$$

$$= \$20/8 \text{ shares}$$

$$= \$2.50$$
- v. Number of days of sales in inventory

$$= \frac{\text{Ending inventory}}{\text{Cost of goods sold}} \times 365 \text{ days}$$

$$= \$40/50 \times 365 \text{ days}$$

$$= 292 \text{ days}$$
- vi. Accounts receivable collection period

$$= \frac{\text{Accounts receivable}}{\text{Net credit sales}} \times 365 \text{ days}$$

$$= \$20/100 \times 365 \text{ days}$$

$$= 73 \text{ days}$$

vii. Sales to total assets ratio

$$= \frac{\text{Net sales}}{\text{Average total assets}}$$

$$= \$100/220$$

$$= 45\%$$

viii. Current ratio

$$= \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$= (\$20 + 20 + 40)/20$$

$$= 4:1$$

ix. Acid-test ratio

$$= \frac{\text{Quick assets}}{\text{Current liabilities}}$$

$$= (\$20 + 20)/20$$

$$= 2:1$$

x. Debt to shareholders' equity ratio

$$= \frac{\text{Total liabilities}}{\text{Shareholders' equity}}$$

$$= (\$20 + 60)/140$$

$$= 0.57:1$$

b. The following ratios are measures of liquidity:

- v. Number of days of sales in inventory
- vi. Accounts receivable collection period
- viii. Current ratio
- ix. Acid-test ratio

EXERCISE 12-10

a. Current assets + capital assets = Total liabilities + shareholders' equity

$$\text{Current assets} + \$90 = \$40 + 140$$

$$\text{Current assets} = \$90$$

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$2.5 = \$90/\text{Current liabilities}$$

$$\text{Current liabilities} = \$36$$

b. From 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,

$$\text{Inventory} = \frac{\$90 - \text{inventory} + 0}{\$36}$$

$$\text{Inventory} = \$90 - 36$$

$$\text{Inventory} = \$54$$

- c. Accounts receivable = Quick current assets – (cash + short-term investments)
 $\$36 - 6 = 30$

$$\begin{aligned} \text{Accounts rec. collection period} &= \frac{\text{Average accounts receivable}}{\text{Net credit sales}} \times 365 \text{ days} \\ &= \$30/300 \times 365 \text{ days} \\ &= 37 \text{ days} \end{aligned}$$

- d. If gross profit is 30 per cent of sales, the cost of goods sold is 70 per cent of sales ($70\% \times \$420 = \294). From above, inventory = \$54

$$\begin{aligned} \text{Number of days of sales in inventory} &= \frac{\text{Ending inventory}}{\text{Cost of goods sold}} \times 365 \text{ days} \\ &= \$54/294 \times 365 \text{ days} \\ &= 12 \text{ days} \end{aligned}$$

- e. Revenue operating cycle = Accounts receivable collection period + number of days of sales in inventory
 $= 37 + 12 = 49 \text{ days}$

EXERCISE 12–11

a.

	<i>Transaction</i>	<i>Effect on current ratio</i>
i.	Bought \$20,000 of merchandise on account (the company uses a perpetual inventory system)	D
ii.	Sold for \$10,000 cash, merchandise that cost \$5,000	I
iii.	Collected a \$2,500 account receivable	NC
iv.	Paid a \$10,000 account payable	I
v.	Wrote off a \$1,500 bad debt against the allowance for doubtful accounts	NC*
vi.	Declared a \$1 per-share cash dividend on the 10,000 outstanding common shares	D
vii.	Paid the dividend declared above	I
viii.	Borrowed \$10,000 from a bank by assuming a 60-day, 10-per cent loan	D
ix.	Borrowed \$25,000 from a bank by placing a 10-year mortgage on the plant	I
x.	Used the \$25,000 proceeds of the mortgage to buy additional machinery	D

* The journal entry is a debit from Allowance for Doubtful Accounts and a credit to Accounts Receivable.

b. At the end of May,

The current ratio was 2.15 to 1, calculated as follows:

<i>In thousands of dollars</i>		<i>Bal</i>											<i>Bal</i> May 31
		May 1	<i>i</i>	<i>ii</i>	<i>iii</i>	<i>iv</i>	<i>v</i>	<i>vi</i>	<i>vii</i>	<i>viii</i>	<i>ix</i>	<i>x</i>	
Current assets	x	200	+20	+10	+2.5	-10	+1.5	-	-10	+10	+25	-25	215
				-5	-2.5		-1.5						
Current liabilities	y	80	+20	-	-	-10	-	+10	-10	+10	-	-	100
Current ratio	x/y	<u>2.5</u>											<u>2.15</u>

The acid-test ratio was 1 to 1 calculated as follows:

<i>In thousands of dollars</i>		<i>Bal</i>											<i>Bal</i> May 31
		May 1	<i>i</i>	<i>ii</i>	<i>iii</i>	<i>iv</i>	<i>v</i>	<i>vi</i>	<i>vii</i>	<i>viii</i>	<i>ix</i>	<i>x</i>	
Quick assets	x	100	-	+10	+2.5	-10	+1.5	-	-10	+10	+25	-25	100
					-2.5		-1.5						
Current liabilities	y	80	+20	-	-	-10	-	+10	-10	+10	-	-	100
Acid-test ratio	x/y	<u>1.25</u>											<u>1.0</u>

Chapter 13 Solutions

EXERCISE 13-1

a. The income statement is as follows:

B. White and C. Green Partnership Income Statement For the Year Ended December 31, 2015	
Sales	\$322,000
Cost of Goods Sold	160,500
Gross Profit	<u>161,500</u>
<i>Operating Expenses</i>	
Rent	36,000
Advertising	27,200
Delivery	9,600
Office	12,800
Utilities	23,300
Net Income	<u><u>\$ 52,600</u></u>

b. The statement of owners' equity is as follows:

B. White and C. Green Partnership
Statement of Owners' Equity
For the Year Ended December 31, 2015

	<i>White</i>	<i>Green</i>	<i>Total</i>
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
<i>Less: Withdrawals</i>	7,000	5,000	12,000
Ending Balance	\$49,300	\$41,300	\$90,600

c. The balance sheet is as follows:

B. White and C. Green Partnership
Balance Sheet
At December 31, 2015

<i>Assets</i>		
Current		
Cash		\$41,000
Accounts Receivable		68,400
Inventory		27,000
Total Assets		\$136,400
<i>Liabilities</i>		
Current		
Accounts Payable		\$45,800
<i>Equity</i>		
B. White, Capital	\$49,300	
C. Green, Capital	41,300	90,600
Total Liabilities and Equity		\$136,400

d. The closing entries for the year are as follows:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Sales		322,000	
	Income Summary			322,000
	Income Summary	269,400		
	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		
	B. White, Capital			26,300
	C. Green, Capital			26,300
	B. White, Capital		7,000	
	B. White, Withdrawals			7,000
	C. Green, Capital		5,000	
	C. Green, Withdrawals			5,000

EXERCISE 13–2

- a. The statement of owners' equity for White's is as follows:

White's Statement of Owners' Equity For the Year Ended December 31, 2015	
Opening Balance	\$ 30,000
Investments	20,000
Net Income	52,600
	<u>102,600</u>
Less: Withdrawals	12,000
Ending Balance	<u>\$ 90,600</u>

- b. The statement in changes in equity for BW and CG Ltd. is as follows:

BW and CG Ltd. Statement of Stockholders' Equity For the Year Ended December 31, 2015			
	<i>Common Stock</i>	<i>Retained Earnings</i>	<i>Total</i>
Opening Balance	\$200	\$29,800	\$30,000
Common Stock Issued	20,000		20,000
Net Income		52,600	52,600
Dividends Declared		(12,000)	(12,000)
Ending Balance	<u>\$20,200</u>	<u>\$70,400</u>	<u>\$ 90,600</u>

EXERCISE 13–3

a. The journal entry is as follows:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Income Summary		52,600	
	B. White, Capital			32,875
	C. Green, Capital			19,725
	To allocate net income as follows: White $(\$52,600 \times 5/8) + \text{Green } (\$52,600 \times 3/8)$ $= \$32,875 + 19,725 = \$52,600$			

b. The journal entry is as follows:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Income Summary		52,600	
	B. White, Capital			37,760
	C. Green, Capital			14,840

To allocate net income as follows:

	<i>White</i>	<i>Green</i>	<i>Total</i>
Profit to be allocated			\$52,600
<i>Interest allocation:</i>			
White: $\$20,000 \times 10\%$	\$ 2,000		
Green: $\$10,000 \times 10\%$		\$1,000	(3,000)
Balance			49,600
<i>Salary allocation:</i>	30,000	10,000	(40,000)
Balance			9,600
<i>Balance allocated in profit and loss sharing ratio:</i>			
White: $\$9,600 \times 3/5$	5,760		
Green: $\$9,600 \times 2/5$		3,840	(9,600)
Balance			\$ -0-
Total allocated to partners	<u>\$37,760</u>	<u>\$14,840</u>	<u> </u>

EXERCISE 13–4

a. The journal entry is as follows:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Income Summary		210,000	
	Walsh, Capital			85,250
	Abraham, Capital			124,750

Calculations to allocate net income:

	<i>Walsh</i>	<i>Abraham</i>	<i>Total</i>
Net income to be allocated			\$210,000
<i>Interest allocation:</i>			
Walsh: $\$320,000 \times 10\%$	\$32,000		
Abraham: $\$400,000 \times 10\%$		\$40,000	(72,000)
Balance			<u>138,000</u>
<i>Salary allocation:</i>	75,000	150,000	(225,000)
Balance			<u>(87,000)</u>
<i>Balance allocated in profit and loss sharing ratio:</i>			
Walsh: $(\$87,000) \times 1/4$	(21,750)		
Abraham: $(\$87,000) \times 3/4$		(65,250)	87,000
Balance			<u>\$ -0-</u>
Total allocated to partners	<u>\$85,250</u>	+ <u>\$124,750</u>	= <u>\$210,000</u>

The total actually allocated of \$210,000 must equal the net income initially required to be allocated of \$210,000.

b. The journal entry is as follows:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	C. Abraham, Capital		104,000	
	B. Walsh, Capital			9,000
	Income Summary			95,000

Calculations to allocate net loss:

	<i>Walsh</i>	<i>Abraham</i>	<i>Total</i>
Net income to be allocated			\$(95,000)
<i>Interest allocation:</i>			
Walsh: \$320,000 × 10%	\$32,000		
Abraham: \$400,000 × 10%		\$40,000	(72,000)
Balance			(167,000)
<i>Salary allocation:</i>	75,000	150,000	(225,000)
Balance			(392,000)
<i>Balance allocated in profit and loss sharing ratio:</i>			
Walsh: (\$392,000) × 1/4	(98,000)		
Abraham: (\$392,000) × 3/4		(294,000)	392,000
Balance			\$ -0-
Total allocated to partners	<u>\$9,000</u>	<u>+(104,000)</u>	<u>= \$(95,000)</u>

The total actually allocated of \$210,000 must equal the net income initially required to be allocated of \$210,000.

EXERCISE 13-5

a. An adjusting entry is needed to reallocate personal income taxes:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Proprietor's Withdrawals		5,000	
	Income Taxes Expense			5,000

The statement of profit and loss would then appear as follows:

R. Black Proprietorship
Income Statement
For the Year Ended December 31, 2018

Sales	\$ 166,000
Cost of goods sold	100,000
Gross profit	<u>66,000</u>
<i>Operating expenses</i>	
Rent	24,000
Net income	<u>\$ 42,000</u>

b.

R. Black Proprietorship
Statement of Owners' Capital
For the Year Ended December 31, 2018

Balance at Jan 1, 2018 (derived)	\$ -0-
Contributions	5,000
Net income	42,000
Withdrawals	(12,000)
Balance at Dec 31, 2018	\$ 35,000

c.

R. Black Proprietorship
Balance Sheet
At December 31, 2018

<i>Assets</i>	
<i>Current</i>	
Cash	\$10,000
Accounts receivable	20,000
Inventory	30,000
Total assets	\$60,000
<i>Liabilities</i>	
<i>Current</i>	
Accounts payable	\$25,000
<i>Proprietor's Capital</i>	
R. Black, capital	35,000
Total liabilities and proprietor's capital	\$60,000

d.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Sales		166,000	
	Cost of Goods Sold			100,000
	Rent Expense			24,000
	Income Summary			42,000
	Income Summary		42,000	
	R. Black, Capital			42,000
	R. Black, Capital		12,000	
	R. Black, Withdrawals			12,000

EXERCISE 13–6

a.

R. Black Ltd.
Income Statement
For the Year Ended December 31, 2018

Sales	\$166,000
Cost of goods sold	100,000
Gross profit	<u>66,000</u>
<i>Operating expenses</i>	
Rent	24,000
Income before income taxes	<u>42,000</u>
Income taxes	5,000
Net income	<u><u>\$ 37,000</u></u>

b.

R. Black Ltd.
Statement of Stockholders' Equity
For the Year Ended December 31, 2018

	Common Stock	Retained Earnings	Total Equity
Balance at Jan 1, 2018	\$ 5,000	\$ -0-	\$ 5,000
Net income		37,000	37,000
Dividends		(7,000)	(7,000)
Balance at Dec 31, 2018	<u>\$ 5,000</u>	<u>\$ 30,000</u>	<u>\$ 35,000</u>

c.

R. Black Ltd.
 Balance Sheet
 At December 31, 2018

<i>Assets</i>		
<i>Current</i>		
Cash	\$10,000	
Accounts receivable	20,000	
Inventory	30,000	
Total assets	\$60,000	
<i>Liabilities</i>		
<i>Current</i>		
Accounts payable	\$25,000	
<i>Shareholders' Equity</i>		
Common stock	\$ 5,000	
Retained earnings	30,000	35,000
Total liabilities and stockholders' equity	\$60,000	

d.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Sales		166,000	
	Cost of Goods Sold			100,000
	Rent Expense			24,000
	Income Taxes Expense			5,000
	Income Summary			37,000
	Income Summary		37,000	
	Retained Earnings			37,000
	Income Summary		7,000	
	Dividends			7,000

EXERCISE 13-7

a.

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General Journal				
Date	Account/Explanation	R	Debit	Credit
	G, Capital		30,000	
	I, Capital			30,000
	To record transfer of G's partnership interest to new partner I.			

b.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	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.			

Interest calculations:

G, Capital	\$ 30,000
H, Capital	10,000
Bonus payment	(2,000)
Capital of new partnership	<u>\$ 38,000</u>

Allocated as:	
G (45%)	\$ 17,100
H (45%)	17,100
I (10%)	3,800
	<u>\$ 38,000</u>

c.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	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.			

Interest calculations:

G, Capital	\$ 30,000
H, Capital	10,000
I, Investment	100,000)
Capital of new partnership	<u>\$ 140,000</u>

Allocated as:	
G (20%)	\$ 28,000
H (5%)	7,000
I (75%)	105,000
	<u>\$ 140,000</u>

EXERCISE 13–8

a.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	X, Capital		10,000	
	T, Capital			10,000
	To record transfer of X's partnership interest to new partner T.			

b.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	X, Capital		10,000	
	Y, Capital			10,000
	To record transfer of X's partnership interest to existing partner Y.			

c.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	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.			

EXERCISE 13–9**a.**

Smith, capital	\$ 50,000
Jones, capital	40,000
Black, capital	10,000
Existing capital	<u>100,000</u>
Investment by Gray	5,000
Capital of new partnership (a)	<u>\$105,000</u>
 Mood's capital ($\$105,000 \times 25\%$)	 <u>\$ 26,250</u>

The new partner's bonus is recorded as:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		5,000	
	Smith, Capital		7,083	
	Jones, Capital		7,083	
	Black, Capital		7,084	
	Gray, Capital			26,250

b.

Smith, capital	\$ 50,000
Jones, capital	40,000
Black, capital	10,000
Existing capital	<u>100,000</u>
Investment by Gray	60,000
Capital of new partnership (a)	<u>\$160,000</u>
 Mood's capital ($\$160,000 \times 25\%$)	 <u>\$ 40,000</u>

The bonus to existing partners is recorded as:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		60,000	
	Smith, Capital			6,667
	Jones, Capital			6,667
	Black, Capital			6,666
	Gray, Capital			40,000

Chapter 1 Solutions

PROBLEM 1–1

Dumont Inc. Income Statement For the Month Ended January 31, 2015		Dumont Inc. Balance Sheet At January 31, 2015	
		<i>Assets</i>	
<i>Revenue</i>		Cash	\$1,300
Service revenue	\$7,500	Accounts receivable	2,400
<i>Expenses</i>		Prepaid expenses	550
Advertising expense	\$500	Unused supplies	750
Commissions expense	720	Truck	9,000
Insurance expense	50	Total assets	<u>\$14,000</u>
Interest expense	80		
Rent expense	400	<i>Liabilities</i>	
Supplies expense	100	Bank loan	\$8,000
Telephone expense	150	Accounts payable	1,000
Wages expense	<u>2,500</u>	Total liabilities	9,000
Total expenses	4,500	<i>Equity</i>	
Net income	<u>\$3,000</u>	Common stock	\$2,000
		Retained earnings	3,000
		Total equity	<u>5,000</u>
		Total liabilities and equity	<u>\$14,000</u>

Dumont Inc.
Statement of Stockholders' Equity
For the Month Ended January 31, 2015

	<i>Common Stock</i>	<i>Retained Earnings</i>	<i>Total Equity</i>
Opening balance	\$ -0-	\$ -0-	\$ -0-
Shares issued	2,000	-0-	2,000
Net income	-0-	3,000	3,000
Ending balance	\$2,000	\$3,000	\$5,000

PROBLEM 1–2

1. The income statement and statement of stockholders' equity are as follows:

Laberge Sheathing Inc. Income Statement For the Month Ended August 31, 2015		Laberge Sheathing Inc. Balance Sheet August 31, 2015	
		<i>Assets</i>	
		Cash	\$400
		Accounts receivable	3,800
		Unused supplies	100
<i>Revenue</i>		Equipment	8,700
Service revenue	\$2,000	Total assets	\$13,000
<i>Expenses</i>		<i>Liabilities</i>	
Advertising expense	\$300	Accounts payable	\$7,800
Interest expense	500	<i>Equity</i>	
Maintenance expense	475	Common stock	3,200
Supplies expense	125	Retained earnings	2,000
Wages expense	2,600	Total liabilities and equity	\$13,000
Total expenses	4,000		
Net loss	\$2,000		

Laberge Sheathing Inc.
Statement of Stockholders' Equity
Month Ended August 31, 2015

	<i>Common Stock</i>	<i>Retained Earnings</i>	<i>Total Equity</i>
Opening balance	\$3,200	\$4,000	\$7,200
Net loss	-0-	(2,000)	(2,000)
Ending balance	\$3,200	\$2,000	\$5,200

2. The percentage of assets financed by equity is 40% calculated as $(5,200/13,000) \times 100$. Although part 2 of this question did not require that the percentage of assets financed by debt be calculated, it is 60% calculated as $100\% - 40\%$.

PROBLEM 1–3

Larson Services Inc.
Transactions Worksheet
At August 31, 2015

	ASSETS					=	LIABILITIES			+	EQUITY								
	Cash	+	Acct. Rec.	+	Ppd. Exp.	+	Unused Supplies	+	Truck	=	Bank Loan	+	Acct. Pay	+	Unearned Revenue	+	Common Stock	+	Retained Earnings
Aug. 1	+3,000																+3,000		
1	+10,000										+10,000								
1	-8,000								+8,000										
3	No effect																		
4	-600				+600														
5	+2,000														+2,000				
7			+5,000															+5,000	Fees earned
9	-250																	-250	Supplies expense
12						+500							+500						
15	+1,000		-1,000																
16	-200																	-200	Advertising
20	-250												-250						
25	-2,800																	-350	Rent expense
																		-2,150	Salaries
																		-50	Telephone
																		-250	Truck operation
28	No Effect																		
29			+6,000															+6,000	Fees earned
31															-500			+500	Fees earned
	<u>\$3,900</u>	+	<u>\$10,000</u>	+	<u>\$600</u>	+	<u>\$500</u>	+	<u>\$8,000</u>	=	<u>\$10,000</u>	+	<u>\$250</u>	+	<u>\$1,500</u>	+	<u>\$3,000</u>	+	<u>\$8,250</u>

Assets = \$23,000

Liabilities + Equity = \$23,000

PROBLEM 1-4

Larson Services Inc. Income Statement For the Month Ended August 31, 2015		Larson Services Inc. Balance Sheet At August 31, 2015	
		<i>Assets</i>	
		Cash	\$3,900
		Accounts receivable	10,000
		Prepaid expenses	600
		Unused supplies	500
		Truck	8,000
		Total assets	\$23,000
		<i>Liabilities</i>	
		Bank loan	\$10,000
		Accounts payable	250
		Unearned revenue	1,500
		Total liabilities	11,750
		<i>Equity</i>	
		Common stock	3,000
		Retained earnings	8,250
		Total equity	11,250
		Total liabilities and equity	\$23,000
<i>Revenues</i>			
Fees earned	\$11,500		
<i>Expenses</i>			
Advertising expense	\$200		
Rent expense	350		
Salaries expense	2,150		
Supplies expense	250		
Telephone expense	50		
Truck operation expense	250		
Total expenses	3,250		
Net income	\$8,250		

Larson Services Inc.
Statement of Stockholders' Equity
For the Month Ended August 31, 2015

	<i>Share Capital</i>	<i>Retained Earnings</i>	<i>Total Equity</i>
Opening balance	\$ -0-	\$ -0-	\$ -0-
Shares issued	3,000	-0-	3,000
Net income	-0-	8,250	8,250
Ending balance	\$3,000	\$8,250	\$11,250

PROBLEM 1-5

	Cash	Accounts receivable	Office supplies	Prepaid expenses	Office furniture	Equipment	Accounts payable	Unearned revenue	Note payable	Common stock	Retained earnings
Open Bal	+10,000	+25,000	+2,000	0	+15,000	+25,000	+35,000	0	0	+8,000	+34,000
1	+5,000							+5,000			
2	-5,000										-5,000
3			+3,000				+3,000				
4		+27,000									+27,000
5						+3,000			+3,000		
6											
7							+300				-300
8	+20,000								+20,000		
9	-8,000						-8,000				
10	-3,000										-3,000
11		+25,000									+25,000
12	+25,000	-25,000									
13											
14											
15	-3,500										-3,500
16	-5,000			+5,000							
17	-50										-50
18					+3,000		+3,000				
Bal	+35,450	+52,000	+5,000	+5,000	+18,000	+28,000	+33,300	+5,000	+23,000	+8,000	+74,150

PROBLEM 1–6

Olivier Bondar Ltd.
Balance Sheet
At May 31, 2016

<i>Assets</i>		<i>Liabilities</i>		
Cash	\$ 35,450	Accounts payable	\$33,300	
Accounts receivable	52,000	Note/Loan payable	23,000	
		Unearned revenue	5,000	
Office supplies	5,000	Total liabilities	\$ 61,300	
Prepaid expenses	5,000			
Equipment	28,000	<i>Equity</i>		
Office furniture	18,000	Common stock	\$ 8,000	
		Retained earnings	74,150	
		Total equity	82,150	
Total assets	\$143,450	Total liabilities and equity	\$143,450	

Chapter 2 Solutions**PROBLEM 2–1**

1. The trial balance is as follows:

Fox Creek Service Limited
Trial Balance
At October 31, 2015

	<i>Account Balances</i>	
	<i>Debit</i>	<i>Credit</i>
Cash	\$1,000	
Accounts Receivable	6,000	
Equipment	7,000	
Truck	9,000	
Bank Loan		\$5,000
Accounts Payable		9,000
Wages Payable		1,500
Common Stock		2,000
Repair Revenue		19,000
Advertising Expense	2,200	
Commissions Expense	4,500	
Insurance Expense	500	
Supplies Expense	800	
Telephone Expense	250	
Truck Operation Expense	1,250	
Wages Expense	4,000	
	\$36,500	\$36,500

2. The income statement and statement of stockholders' equity are as follows:

Fox Creek Service Limited
Income Statement
For the Year Ended October 31, 2015

<i>Revenue</i>		
Repair revenue		\$19,000
<i>Expenses</i>		
Advertising expense	\$2,200	
Commissions expense	4,500	
Insurance expense	500	
Supplies expense	800	
Telephone expense	250	
Truck operation expense	1,250	
Wages expense	4,000	
Total expenses	13,500	
Net income		\$ 5,500

Fox Creek Service Limited
Statement of Stockholders' Equity
For the Year Ended October 31, 2015

	<i>Common Stock</i>	<i>Retained Earnings</i>	<i>Total Equity</i>
Opening Balance	\$ -0-	\$ -0-	\$ -0-
Shares Issued	2,000	-0-	2,000
Net Income	-0-	5,500	5,500
Ending Balance	\$2,000	\$5,500	\$7,500

3. The balance sheet is as follows:

Fox Creek Service Limited
Balance Sheet
At October 31, 2015

<i>Assets</i>		
Cash		\$ 1,000
Accounts receivable		6,000
Equipment		7,000
Truck		9,000
Total assets		\$23,000
<i>Liabilities</i>		
Bank loan	\$5,000	
Accounts payable	9,000	
Wages payable	1,500	15,500
		15,500
<i>Equity</i>		
Common stock	2,000	
Retained earnings	5,500	7,500
Total liabilities and equity		\$23,000

PROBLEM 2-2

1. The general journal is as follows:

General Journal				
Date	Account/Explanation	R	Debit	Credit
May 1	Cash		5,000	
	Common stock			5,000
	Stock sold for cash			
May 5	Accounts receivable		3,000	
	Service revenue			3,000
	Billed customer for services provided			
May 6	Cash		2,000	
	Service revenue			2,000
	Provided services for cash			
May 10	Cash		1,500	
	Accounts receivable			1,500
	Collected cash owed by customer			
May 11	Equipment		2,000	
	Cash			1,000
	Accounts payable			1,000
	Purchased new machinery, half with cash, half with credit			
May 15	Cash		1,200	
	Accounts receivable			1,200
	Collected cash owed by customer			
May 16	Prepaid advertising		500	
	Cash			500
	Paid upfront for May and June advertising			
May 18	Accounts receivable		2,500	
	Service revenue			2,500
	Porvided services for cash			
May 20	Unused supplies		300	
	Cash			300
	Purchased supplies, paid cash			
May 21	Cash		800	
	Equipment			800
	Sold old equipment for cash			
May 22	Accounts payable		600	
	Cash			600
	Paid partial bill owed from equipment purchased			

General Journal				
Date	Account/Explanation	R	Debit	Credit
May 23	Telephone expense		150	
	Accounts payable			150
	Received telephone bill for month of May			
May 24	Commissions expense		250	
	Accounts payable			250
	Received invoice for commissions owed			
May 28	Rent expense		400	
	Cash			400
	Paid May rent			
May 29	Salaries expense		3,500	
	Cash			3,500
	Paid employee salaries			
May 30	Supplies expense		100	
	Unused supplies			100
	Physical count of supplies showed \$200 remaining			
May 31	Advertising expense		250	
	Prepaid advertising			250
	To record May Advertising expense			

2. The Trial Balance is as follows:

Davidson Tools Rentals Corporation
Trial Balance
May 31, 2015

	<i>Account Balances</i>	
	<i>Debit</i>	<i>Credit</i>
Cash	\$4,200	
Accounts receivable	2,800	
Prepaid advertising	250	
Unused supplies	200	
Equipment	1,200	
Accounts payable		\$1,650
Common stock		5,000
Service revenue		7,500
Advertising expense	250	
Commissions expense	1,100	
Rent expense	400	
Supplies expense	100	
Salaries expense	3,500	
Telephone expense	150	-
	<u>\$14,150</u>	<u>\$14,150</u>

Cash	101
5,000	1,000
2,000	500
1,500	300
1,200	600
800	400
–	3,500
Bal. 4,200	

Accounts Receivable	110
3,000	1,500
2,500	1,200
Bal. 2,800	

Prepaid Advertising	160
500	250
Bal. 250	

Unused Supplies	173
300	100
Bal. 200	

Equipment	183
2,000	800
Bal. 1,200	

Accounts Payable	210
600	1,000
	150
	1,100
Bal.	1,650

Common Stock	320
	5,000

Service Revenue	460
	3,000
	2,000
	2,500
Bal.	7,500

Advertising Expense	610
250	

Commissions Expense	615
1,100	

Rent Expense	654
400	

Salaries Expense	656
3,500	

Supplies Expense	668
100	

Telephone Expense	669
150	

PROBLEM 2–3

General Journal				
Date	Account/Explanation	R	Debit	Credit
Apr. 2015	Cash		2,000	
	Accounts receivable			2,000
	(a) To record a collection on account.			
	Accounts receivable		3,000	
	Service revenue			3,000
	(b) To record billings to customers.			
	Advertising expense		300	
	Salaries expense		2,000	
	Telephone expense		100	
	Cash			2,400
	(c) To record payment of expenses incurred.			
	Accounts payable		1,000	
	Cash			1,000
	(d) To record payment made on account.			
	Truck operation expense		500	
	Accounts payable			500
	(e) To record bill received for truck repair expense.			
	Cash		2,500	
	Accounts receivable			2,500
	(f) To record payment received on account.			
Accounts receivable		1,500		
Service revenue			1,500	
(g) To record billings to customers.				
Rent expense		500		
Prepaid rent			500	
(h) To record expiry of a portion of prepaid rent.				
Supplies expense		150		
Unused supplies			150	
(i) To record supplies used, based on count of unused supplies at end of month.				

PROBLEM 2–4

General Journal				
Date	Account/Explanation	R	Debit	Credit
Aug. 1	Cash		3,000	
	Common stock			3,000
	Issued common stock for \$3,000 cash			
	Cash		10,000	
	Bank loan			10,000
	Borrowed \$10,000 cash from the bank			
	Truck		8,000	
	Cash			8,000
	Paid \$8,000 cash for a used truck			
Aug. 4	Prepaid insurance		600	
	Cash			600
	Paid \$600 for one-year truck insurance policy effective August 1			
Aug. 5	Cash		2,000	
	Fees earned			2,000
	Collected \$2,000 fees in cash from a client for work performed			
Aug. 7	Accounts receivable		5,000	
	Fees earned			5,000
	Billed \$5,000 fees to clients for services performed to date			
Aug. 9	Supplies expense		250	
	Cash			250
	Paid \$250 for supplies used to date			
Aug. 12	Unused supplies		500	
	Accounts payable			500
	Purchased \$500 of supplies on credit			
Aug. 15	Cash		1,000	
	Accounts receivable			1,000
	Collected \$1,000 of the amount billed on August 7			
Aug. 16	Advertising expense		200	
	Cash			200
	Paid \$200 for advertising in first two weeks of August			
Aug. 20	Accounts payable		250	
	Cash			250
	Paid half of the amount owed from August 12 purchase			

General Journal				
Date	Account/Explanation	R	Debit	Credit
Aug. 25	Rent expense		350	
	Salaries expense		2,150	
	Telephone expense		50	
	Truck operation expense		250	
	Cash			2,800
Aug. 28	No entry			
Aug. 29	Accounts receivable		6,000	
	Fees earned			6,000
	Billed \$6,000 to clients for services performed to date			
Aug. 31	Insurance expense		50	
	Prepaid insurance			50
	Adjusted for unused insurance portion			
	Supplies expense		400	
	Unused supplies			400
	Adjust Supplies from amount used			

NOTE: No entry is recorded for August 28 because a transaction did not occur.

PROBLEM 2–5

Cushio Corp.
Trial Balance
At August 31, 2016

	Incorrect		Adjustments				Correct Balance	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	102,000						102,000	
Accounts receivable	59,730		3	270	1	5,000	55,000	
Prepaid expenses	2,000		6	6,000			8,000	
Office supplies inventory	5,500						5,500	
Equipment	115,000		5	10,000			125,000	
Accounts payable		74,500			4	500		85,000
					5	10,000		
Unearned revenue		50,000	2	5,000				45,000
Common stock		25,000						25,000
Retained earnings		50,500						50,500
Revenue		245,000			2	5,000		250,000
Repairs expense	1,000		4	500			1,500	
Rent expense	25,000						25,000	
Advertising expense	24,500				6	6,000	18,500	
Salaries expense	115,000						115,000	
	449,730	445,000	21,770		26,500		455,500	455,500

PROBLEM 2–6

1.

a. No entry

b.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Prepaid expense		12,000	
	Cash			12,000

c.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Accounts payable		57,500	
	Cash			57,500
	(\$115,000 × 50%)			

d. No entry

e.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		200,000	
	Unearned service revenue			200,000

f. No entry

g. No entry

h.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Accounts receivable		12,000	
	Service revenue			12,000

i.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		6,000	
	Accounts receivable			6,00

j.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		20,000	
	Unearned service revenue			20,000

k.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		150,000	
	Note payable			150,000

l.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		30,000	
	Equipment		10,000	
	Common stock			40,000

m.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Prepaid rent		18,000	
	Cash			18,000

n.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Land		250,000	
	Building/Warehouse		60,000	
	Note payable			260,000
	Cash			50,000

o. No entry

p.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Accounts receivable		30,000	
	Service revenue			30,000

q.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Equipment		8,000	
	Equipment			3,000
	Cash			5,000

r.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Retained earnings		1,000	
	Cash			1,000

s.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Service revenue		2,000	
	Accounts receivable			2,000

t.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Salaries expense		35,000	
	Cash			35,000

u.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Utilities expense		1,800	
	Accounts payable			1,800

v.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Office equipment		5,000	
	Office supplies		2,000	
	Accounts payable			7,000

w. No entry

2.

Stellar Services Ltd.
Income Statement
For the Two Months Ended January 31, 2016

Revenues		
Service revenue		\$ 65,000
Expenses		
Repairs expense	\$ 500	
Salaries expense	67,000	
Utilities expense	6,300	73,800
Net loss		<u>\$ (8,800)</u>

Stellar Services Ltd.
Statement of Stockholders' Equity
For the Two Months Ended January 31, 2016

	Common Stock	Retained Earnings	Total Equity
Opening balance, December 31, 2015	\$108,000	\$ 90,000	\$198,000
Shares issued	40,000		40,000
Net loss		(8,800)	(8,800)
Dividends***		(1,000)	(1,000)
Ending balance	<u>\$148,000</u>	<u>\$ 80,200</u>	<u>\$228,200</u>

Stellar Services Ltd.
Balance Sheet
At January 31, 2016

<i>Assets</i>		<i>Liabilities</i>		
Cash	\$377,500	Accounts payable	\$ 66,300	
Accounts receivable	119,000	Note payable	430,000	
Office supplies	9,000	Unearned consulting fees	<u>220,000</u>	
Prepaid expenses	30,000	Total liabilities		\$716,300
Land	250,000			
Building/Warehouse	60,000	<i>Equity</i>		
Equipment	60,000	Common stock	\$148,000	
Office equipment	5,000	Retained earnings	<u>80,200</u>	
Furniture	15,000	Total equity		
Vehicle	19,000	Total liabilities and equity		228,200
Total assets	<u>\$944,500</u>			<u>\$944,500</u>

Chapter 3 Solutions

PROBLEM 3-1

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Rent expense		300	
	Prepaid rent			300
	(a) To record rent expense at year end.			
	Wages expense		200	
	Wages payable			200
	(b) To record accrued wages at year-end.			
	Income taxes expense		1,000	
	Income taxes payable			1,000
	(c) To record income taxes.			
	Unearned commissions revenue		1,000	
	Commissions earned			1,000
	(d) To record commissions earned at year-end.			
	Other unearned revenue		5,000	
	Revenue			5,000
	(e) To adjust unearned revenue to actual at year end.			
	Prepaid advertising		1,500	
	Advertising expense			1,500
	(f) To correct advertising expense and record prepaid advertising at year-end.			
	Depreciation expense – equipment		500	
	Accumulated depreciation – equipment			500
	(g) To record depreciation expense.			
	Unused supplies		225	
	Supplies expense			225
	(h) To correct supplies expense and adjust for unused supplies.			
	Truck expense		500	
	Accounts payable			500
	(i) To record accounts payable at year-end.			

PROBLEM 3–2

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Unused supplies		100	
	Supplies expense			100
	(a)			
	Telephone expense		75	
	Accounts payable			75
	(b)			
	Wages expense		125	
	Wages payable			125
	(c)			
	Depreciation expense – equipment		100	
	Accumulated depreciation – equip- ment			100
	(d)			
	Rent expense		500	
	Prepaid rent			500
	(e)			
	Unearned advertising revenue		500	
	Other revenue			500
	(f)			
	Prepaid insurance*		525	
	Insurance expense			525
	(g)			

**\$900/12 months = \$75/month; 5 months have been used (August 1 to December 31 = 5 months); therefore 7 months × \$75/month = \$525 remains unused.*

PROBLEM 3–3

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Interest receivable		250	
	Interest earned			250
	(a)			
	Insurance expense		200	
	Prepaid insurance			200
	(b)			
	Supplies expense		200	
	Unused supplies			200
	(c)			
	Interest expense		25	
	Interest payable			25
	(d)			
	Subscription revenue		7,500	
	Unearned subscription revenue			7,500
	(e) ($\$9,000 \times 5/6 \text{ mos.} = \$7,500$)			
	Salaries expense		300	
	Salaries payable			300
	(f)			
	Prepaid rent		300	
	Rent expense			300
	(g)			
	Truck operation expense		400	
	Accounts payable			400
	(h)			

PROBLEM 3-4

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Depreciation expense – truck		150	
	Accumulated depreciation – truck			150
	(a) ($\$6,000 \times 6/48 \text{ mos.} = \$750 - 600 = \$150$)			
	(b) No entry required			
	Unused supplies		300	
	Supplies expense			300
	(c)			
	Rent expense		400	
	Prepaid rent			400
	(d)			
	Wages expense		250	
	Wages payable			250
	(e)			
	Interest expense		200	
	Interest payable			200
	(f) ($\$8,000 \times 10\% = \$800 - 600 = \$200$)			
	Utilities expense		150	
	Utilities payable			150
	(g)			
	Insurance expense		500	
	Prepaid insurance			500
	(h) ($\$1,200 \times 1/12 \text{ mos.} = \100 prepaid; $\$600 - 100 = \500)			
	Unearned rent revenue		600	
	Rent earned			600
	(i)			
	Commissions earned		2,000	
	Other unearned revenue			2,000
	(j)			

PROBLEM 3–5

1., 3., 4., and 6.

Roth Contractors Corporation

Cash	101	Accounts Payable	210	Common Stock	320	Repair Revenue	450	Rent Expense	654
(a) 5,000	(b) 1,200	(c) 10,000	(a) 5,000	(r) 2,000	(f) 4,500	(p) 400			
(g) 800	(e) 1,800	(d) 1,000			(g) 800				
(i) 2,000	(h) 3,450	(n) 100			(j) 6,500			Supplies Expense	668
(m) 2,000	(l) 3,225	Bal. 11,100			(m) 2,000			(d) 1,000	(q) 350
Bal. 125					Bal. 11,800			Bal. 650	
Accounts Receivable	110	Wages Payable	237	Advertising Expense	610	Telephone Expense	669		
(f) 4,500	(i) 2,000	(s) 1,500		(h) 350		(h) 75			
(j) 6,500		Unearned Revenue	249	(l) 200					
Bal. 9,000		(r) 2,000		Bal. 550				Truck Operation Expense	670
Prepaid Insurance	161			Depreciation Expense – Truck	624	(h) 425			
(e) 1,800	(o) 150			(t) 208		(l) 375			
Bal. 1,650						Bal. 800			
Prepaid Rent	162			Insurance Expense	631	Utilities Expense	676		
(b) 1,200	(p) 400			(o) 150		(n) 100			
Bal. 800									
Supplies	173			Interest Expense	632	Wages Expense	677		
(q) 350				(h) 100		(h) 2,500			
				(l) 150		(l) 2,500			
				Bal. 250		(s) 1,500			
						Bal. 6,500			
Truck	184	Accum. Dep'n Truck	194						
(c) 10,000		(t) 208							

2.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		5,000	
	Common stock			5,000
	(a)			
	Prepaid rent		1,200	
	Cash			1,200
	(b)			
	Truck		10,000	
	Accounts payable			10,000
	(c)			
	Supplies expense		1,000	
	Accounts payable			1,000
	(d)			
	Prepaid insurance		1,800	
	Cash			1,800
	(e)			
	Accounts receivable		4,500	
	Repair revenue			4,500
	(f)			
	Cash		800	
	Repair revenue			800
	(g)			
	Advertising expense		350	
	Interest expense		100	
	Telephone expense		75	
	Truck operation expense		425	
	Wages expense		2,500	
	Cash			3,450
	(h)			
	Cash		2,000	
	Accounts receivable			2,000
	(i)			
	Accounts receivable		6,500	
	Repair revenue			6,500
	(j)			
	Advertising expense		200	
	Interest expense		150	
	Truck operation expense		375	
	Wages expense		2,500	
	Cash			3,225
	(l)			
	Cash		2,000	
	Repair revenue			2,000
	(m)			
	Utilities expense		100	
	Accounts payable			100
	(n)			

5.

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Insurance expense		150	
	Prepaid insurance			150
	(o)			
	Rent expense		400	
	Prepaid rent			400
	(p)			
	Supplies		350	
	Supplies expense			350
	(q)			
	Repair revenue		2,000	
	Unearned revenue			2,000
	(r)			
	Wages expense		1,500	
	Wages payable			1,500
	(s)			
	Depreciation expense – truck		208	
	Accumulated depreciation – truck			208
	(t) \$10,000/48 mos. = \$208 per month*			

**Recall that depreciation is always rounded to the nearest whole dollar because it is not 'exact'; depreciation is based on estimated useful life and estimated residual value.*

7.

Roth Contractors Corporation
Adjusted Trial Balance
December 31, 2015

	<i>Account Balances</i>	
	<i>Debit</i>	<i>Credit</i>
Cash	\$ 125	
Accounts receivable	9,000	
Prepaid insurance	1,650	
Prepaid rent	800	
Supplies	350	
Truck	10,000	
Accumulated depreciation – truck		\$ 208
Accounts payable		11,100
Wages payable		1,500
Unearned revenue		2,000
Common stock		5,000
Repair revenue		11,800
Advertising expense	550	
Depreciation expense – truck	208	
Insurance expense	150	
Interest expense	250	
Rent expense	400	
Supplies expense	650	
Telephone expense	75	
Truck expense	800	
Utilities expense	100	
Wages expense	6,500	
Totals	\$31,608	\$31,608

PROBLEM 3–6

1. The general journal is as follows:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec. 31	Repair Revenue		11,800	
	Income Summary			11,800
	To close revenue account to income summary.			
31	Income Summary		9,683	
	Advertising Expense			550
	Depreciation Expense – Truck			208
	Insurance Expense			150
	Interest Expense			250
	Rent Expense			400
	Supplies Expense			650
	Telephone Expense			75
	Truck Expense			800
	Utilities Expense			100
	Wages Expense			6,500
	To close expense accounts to income summary.			
31	Income Summary		2,117	
	Retained Earnings			2,117
	To close net income in income summary to retained earnings.			

2. The post-closing trial balance is as follows:

Roth Contractors Corporation		
Post-Closing Trial Balance		
December 31, 2015		
	<i>Debits</i>	<i>Credits</i>
Cash	\$ 125	
Accounts receivable	9,000	
Prepaid insurance	1,650	
Prepaid rent	800	
Supplies	350	
Truck	10,000	
Accumulated depreciation – truck		\$ 208
Accounts payable		11,100
Wages payable		1,500
Unearned revenue		2,000
Common stock		5,000
Retained earnings		2,117
Totals	<u>\$21,925</u>	<u>\$21,925</u>

1., 3., 6., and 8.

Packer Corporation

Cash	101	Furniture	182	Accounts Payable	210	Common Stock	320	Commissions Earned	410	Insurance Expense	631
12,000		3,000		4,400		52,100		37,900		1,800	(a) 900
Accounts Receivable	110	Equipment	183	Interest Payable	222	Retained Earnings	340	(j) 38,650	Bal. 38,650	Bal. 900	(k) 900
3,600		20,000		(f) 208		(l) 6,967		Bal. 0		Bal. 0	
Prepaid Insurance	161	Accumulated Depreciation – Building	191	Salaries Payable	226	Income Summary	360	Subscription Revenue	480	Interest Expense	632
(a) 900		(c) 1,200		(i) 325		(k) 62,383	(j) 69,350	(h) 2,000	32,700	2,365	
						(l) 6,967		Bal. 30,700		(f) 208	
Supplies	173	Accumulated Depreciation – Furniture	192	Unearned Commissions Revenue	242			(j) 30,700		Bal. 2,573	(k) 2,573
2,500		(d) 300		(g) 750	1,200			Bal. 0		Bal. 0	
(b) 350					Bal. 450						
Bal. 2,850								Advertising Expense	610	Salaries Expense	656
								4,300	(k) 4,300	33,475	
Land	180	Accumulated Depreciation – Equipment	193	Unearned Subscriptions Revenue	250			Bal. 0		(i) 325	
15,000		(e) 1,000			800					Bal. 33,800	(k) 33,800
Building	181				(h) 2,000			Depreciation Expense – Building	621	Bal. 0	
60,000					Bal. 2,800			(c) 1,200	(k) 1,200		
								Bal. 0			
				Bank Loan Long Term	271					Supplies Expense	668
					47,600					15,800	(b) 350
								Depreciation Expense – Furniture	622	Bal. 15,450	(k) 15,450
								(d) 300	(k) 300		
								Bal. 0		Bal. 0	
								Depreciation Expense Equipment	623	Utilities Expense	676
								(e) 1,000	(k) 1,000	2,860	(k) 2,860
								Bal. 0		Bal. 0	

2. Adjusting entries:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Aug. 31	Prepaid insurance		900	
	Insurance expense			900
	(a) $(\$1,800 \times 6/12 \text{ mos.} = \$900)$			
	Supplies		350	
	Supplies expense			350
	(b)			
	Depreciation expense – building		1,200	
	Accumulated depreciation – Building			1,200
	(c) $(\$60,000 \times 12/600 \text{ mos.} = \$1,200)$			
	Depreciation expense – furniture		300	
	Accumulated depreciation – furniture			300
	(d) $(\$3,000 \times 12/120 \text{ mos.} = \$300)$			
	Depreciation expense – equipment		1,000	
	Accumulated depreciation – equip- ment			1,000
	(e) $(\$20,000 \times 12/240 \text{ mos.} = \$1,000)$			
	Interest expense		208	
	Interest payable			208
	(f)			
	Unearned commissions revenue		750	
	Commissions earned			750
	(g)			
	Subscription revenue		2,000	
	Unearned Subscriptions revenue			2,000
	(h)			
	Salaries expense		325	
	Salaries payable			325
	(i)			

4. The adjusted trial balance is as follows:

Packer Corporation
Adjusted Trial Balance
August 31, 2015

	<i>Account Balances</i>	
	<i>Debit</i>	<i>Credit</i>
Cash	\$ 12,000	
Accounts receivable	3,600	
Prepaid insurance	900	
Supplies	2,850	
Land	15,000	
Building	60,000	
Furniture	3,000	
Equipment	20,000	
Accumulated depreciation – building		\$ 1,200
Accumulated depreciation – furniture		300
Accumulated depreciation – equipment		1,000
Accounts payable		4,400
Interest payable		208
Salaries payable		325
Unearned commissions revenue		450
Unearned subscriptions revenue		2,800
Bank loan – long term		47,600
Common stock		52,100
Commissions earned		38,650
Subscription revenue		30,700
Advertising expense	4,300	
Depreciation expense – building	1,200	
Depreciation expense – furniture	300	
Depreciation expense – equipment	1,000	
Insurance expense	900	
Interest expense	2,573	
Salaries expense	33,800	
Supplies expense	15,450	
Utilities expense	2,860	
	\$179,733	\$179,733

5. The income statement, statement of stockholders' equity, and balance sheet are as follows:

Packer Corporation
Income Statement
For the Year Ended August 31, 2015

<i>Revenue</i>		
Commissions	\$38,650	
Subscriptions	30,700	
Total revenue		\$69,350
<i>Expenses</i>		
Advertising	4,300	
Depreciation – building	1,200	
Depreciation – furniture	300	
Depreciation – equipment	1,000	
Insurance	900	
Interest	2,573	
Salaries	33,800	
Supplies	15,450	
Utilities	2,860	
Total expenses		62,383
Net Income		\$ 6,967

Packer Corporation
Statement of Stockholders' Equity
For the Year Ended August 31, 2015

	<i>Common Stock</i>	<i>Retained Earnings</i>	<i>Total Equity</i>
Opening balance	\$ -0-	\$ -0-	\$ -0-
Shares issued	52,100	-0-	52,100
Net income	-0-	6,967	6,967
Ending balance	\$52,100	\$6,967	\$59,067

Packer Corporation
Balance Sheet
At August 31, 2015

<i>Assets</i>		
Cash		\$12,000
Accounts receivable		3,600
Prepaid insurance		900
Supplies		2,850
Land		15,000
Buildings	\$60,000	
Less: Accum. Depreciation	1,200	58,800
Furniture	\$3,000	
Less: Accum. Depreciation	300	2,700
Equipment	\$20,000	
Less: Accum. Depreciation	1,000	19,000
Total Assets		<u>\$114,850</u>
<i>Liabilities</i>		
Accounts payable		\$4,400
Interest payable		208
Salaries payable		325
Unearned advertising		450
Unearned subscriptions		2,800
Bank loan – long-term		47,600
Total liabilities		<u>55,783</u>
<i>Equity</i>		
Common stock	\$52,100	
Retained earnings	6,967	
Total equity		<u>59,067</u>
Total liabilities and equity		<u><u>\$114,850</u></u>

6. Closing entries:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Aug. 31	Commissions earned		38,650	
	Subscription revenue		30,700	
	Income summary			69,350
	(j)			
	Income summary		62,383	
	Advertising expense			4,300
	Depreciation expense – building			1,200
	Depreciation expense – furniture			300
	Depreciation expense – equipment			1,000
	Insurance expense			900
	Interest expense			2,573
	Salaries expense			33,800
	Supplies expense			15,450
	Utilities expense			2,860
	(k)			
	Income summary		6,967	
	Retained earnings			6,967
	(l)			

Note: The closing entries were posted into the T-accounts as (j), (k), and (l).

7. The post-closing trial balance:

Packer Corporation
Post-Closing Trial Balance
August 31, 2015

	<i>Account Balances</i>	
	<i>Debit</i>	<i>Credit</i>
Cash	\$ 12,000	
Accounts receivable	3,600	
Prepaid insurance	900	
Unused supplies	2,850	
Land	15,000	
Building	60,000	
Furniture	3,000	
Equipment	20,000	
Accumulated depreciation – building		\$ 1,200
Accumulated depreciation – furniture		300
Accumulated depreciation – equipment		1,000
Accounts payable		4,400
Interest payable		208
Salaries payable		325
Unearned advertising revenue		450
Unearned subscriptions revenue		2,800
Bank loan – long-term		47,600
Common stock		52,100
Retained earnings		6,967
	\$117,350	\$117,350

PROBLEM 3–8

1. a.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Accounts receivable		45,000	
	Service revenue			45,000

b.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Advertising expense		500	
	Prepaid advertising expense			500

c.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Shop supplies expense		300	
	Shop supplies			300
	(\$1,500 – \$1,200)			

d.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Depreciation expense		79	
	Accumulated depreciation, equipment			79
	(\$10,000 – \$500) ÷ 120 months			

e.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Unearned service revenue		5,000	
	Service revenue			5,000

f.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Salaries expense		5,800	
	Accrued salaries payable			5,800

g.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Utilities expense		3,500	
	Accounts payable			3,500

h.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Cash		7,800	
	Accounts receivable			7,800

i.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Depreciation expense		107	
	Accumulated depreciation, building ..			107
	(\$74,000 – \$10,000) ÷ 600 months			

j.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Prepaid rent expense		5,000	
	Rent expense			5,000

k.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Interest expense		100	
	Interest payable			100
	(\$20,000 × 6% × 1 ÷ 12)			

l.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Income tax expense		3,000	
	Income taxes payable			3,000

m.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Accounts receivable		9,000	
	Service revenue			9,000

n.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Insurance expense		75	
	Prepaid insurance			75
	(\$1,800 × 1 ÷ 24)			

o.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Insurance expense		2,400	
	Prepaid insurance			2,400
	(\$4,500 – \$1,800) = \$2,700 – \$300			

2.

PROBLEM 3–9

Smith and Smith Co.
Income Statement
For the Month Ended June 30, 2016

Revenues		
Service revenue		\$184,000
Expenses		
Salaries expense	\$27,800	
Insurance expense	2,475	
Interest expense	100	
Shop supplies expense	500	
Advertising expense	2,700	
Depreciation expense	1,586	
Maintenance service expense	5,200	
Rent expense	15,000	
Income tax expense	3,000	
Utilities expense	15,500	73,861
Net loss		<u><u>\$110,139</u></u>

Smith and Smith Co.
Statement of Stockholders' Equity
For the Month Ended June 30, 2016

	Common Stock	Retained Earnings	Total Equity
Opening balance, June 1, 2016	\$ 1,000	\$ 40,400	\$ 41,400
Net income		110,139	110,139
Ending balance	<u><u>\$ 1,000</u></u>	<u><u>\$150,539</u></u>	<u><u>\$151,539</u></u>

Smith and Smith Co.
Balance Sheet
At June 30, 2016

<i>Assets</i>				<i>Liabilities</i>	
Cash	\$ 58,200			Accounts payable	\$ 15,500
Accounts receivable	71,200			Accrued salaries	5,800
Shop supplies	1,200			Interest payable	100
Prepaid insurance expense	2,025			Income taxes payable	3,000
Prepaid advertising expense	1,500			Note payable	20,000
Repaid rent expense	5,000			Unearned consulting fees	<u>25,000</u>
Building	74,000			Total liabilities	<u>\$ 69,400</u>
Accumulated depreciation, building	<u>(107)</u>	73,893			
Equipment	10,000			<i>Equity</i>	
Accumulated depreciation, equipment	<u>(2,079)</u>	7,921		Common stock	\$ 1,000
				Retained earnings	<u>150,539</u>
				Total equity	
				Total liabilities and equity	<u>151,539</u>
Total assets		<u>\$220,939</u>			<u>\$220,939</u>

PROBLEM 3–10

- a. 1. Close revenue accounts to income summary account.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Services revenue		184,000	
	Income summary			184,000

2. Close expense accounts to income summary account.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Income summary		73,861	
	Salaries expense			27,800
	Insurance expense			2,475
	Interest expense			100
	Shop supplies expense			500
	Advertising expense			2,700
	Depreciation expense			1,586
	Maintenance service expenses			5,200
	Rent expense			15,000
	Income tax expense			3,000
	Utilities expense			15,500

3. Close the income summary account to retained earnings.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Income summary		110,139	
	Retained earnings			110,139

4. Close dividends to retained earnings: No entry required.

b.

Smith and Smith Co.
 Trial Balance
 At June 30, 2016
 Post-Closing Trial Balance

	Debit	Credit
Cash	\$ 58,200	
Accounts receivable	71,200	
Shop supplies	1,200	
Prepaid insurance expense	2,025	
Prepaid advertising expense	1,500	
Prepaid rent expense	5,000	
Building	74,000	
Accumulated depreciation, building		\$ 107
Equipment	10,000	
Accumulated depreciation, equipment		2,079
Accounts payable		15,500
Accrued salaries payable		5,800
Interest payable		100
Income taxes payable		3,000
Notes payable		20,000
Unearned service revenue		25,000
Common stock		1,000
Retained earnings		150,539
	\$223,125	\$223,125

Chapter 4 Solutions

PROBLEM 4-1

Norman Company Ltd.
Balance Sheet
At December 31, 2015

<i>Assets</i>		
<i>Current</i>		
Cash	\$250	
Accounts receivable	138	
Notes receivable	18	
Prepaid insurance	12	
Unused office supplies	70	
Total current assets	\$488	
<i>Property, plant, and equipment</i>		
Land	115	
Building	400	
Equipment	140	
Net property, plant, and equipment	655	
Total assets	\$1,143	
 <i>Liabilities</i>		
<i>Current</i>		
Accounts payable	\$125	
Current portion note payable	110	
Salaries payable	14	
Total current liabilities	\$249	
<i>Non-current</i>		
Mortgage payable	280	
Total liabilities	529	
 <i>Equity</i>		
Common stock	400	
Retained earnings	214	
Total equity	614	
Total liabilities and equity	\$1,143	

PROBLEM 4-2

1. Calculation of net income:

Revenue	\$80,000
Salaries expense	(39,000)
Depreciation	(1,100)
Interest	(1,300)
Income taxes	(2,300)
Advertising	(7,200)
Insurance	(1,200)
Utilities	(3,600)
Telephone	(1,100)
Rent	(17,950)
Net income	<u>\$5,250</u>

2. The statement of stockholders' equity is as follows:

Dark Edge Sports Inc.			
Statement of Stockholders' Equity			
For the Year Ended December 31, 2015			
	<i>Share Capital</i>	<i>Retained Earnings</i>	<i>Total Equity</i>
Opening balance	<u>\$3,000</u>	<u>\$2,000</u>	<u>\$5,000</u>
Net income		5,250	5,250
Dividends		(600)	(600)
Ending balance	<u>\$3,000</u>	<u>\$6,650</u>	<u>\$9,650</u>

3. The balance sheet is as follows:

Dark Edge Sports Inc.
Balance Sheet
At December 31, 2015

<i>Assets</i>		
<i>Current</i>		
Cash		\$1,500
Accounts receivable		18,700
Prepaid expenses (1,300 + 600)		1,900
Total current assets		22,100
<i>Property, plant, and equipment</i>		
Equipment	\$12,500	
Less: Accumulated depreciation	2,000	
Net property, plant, and equipment		10,500
Total Assets		\$32,600
 <i>Liabilities</i>		
<i>Current</i>		
Notes payable	\$10,000	
Accounts payable	8,350	
Income taxes payable	4,600	
Total current liabilities		\$22,950
 <i>Equity</i>		
Common stock	3,000	
Retained earnings	6,650	
Total equity		9,650
Total liabilities and equity		\$32,600

4. Amount by which total current liabilities exceed total current assets:

Current Assets	\$22,100
Current Liabilities	22,950
Difference	\$ 850

5. 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 \$850.
6. The company appears to have negative working capital (current assets less current liabilities) with or 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 in which case the loan would be classified as a long-term liability causing working capital to be positive instead of negative as a result of the loan.

PROBLEM 4-3

1. 1. Close revenue accounts to income summary account.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Revenue		135,000	
	Income summary			135,000

2. Close expense accounts to income summary account.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Income summary		155,092	
	Advertising expense			5,670
	Depreciation expense			3,332
	Income tax expense			6,300
	Insurance expense			5,180
	Interest expense			210
	Rent expense			31,500
	Salaries expense			58,380
	Shop supplies expense			1,050
	Utilities expense			32,550
	Repairs expense			10,920

3. Close the income summary account to retained earnings.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Retained earnings		20,092	
	Income summary			20,092

4. Close dividends to retained earnings.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jun 30	Retained earnings		7,000	
	Cash dividends			7,000

2.

MayBee Services Ltd.
Balance Sheet
At June 30, 2016

<i>Assets</i>				<i>Liabilities</i>			
Cash			\$122,220	Accounts payable			\$ 32,550
Accounts receivable			149,520	Accrued salaries payable			12,180
Office supplies			2,520	Income taxes payable			6,300
Prepaid insurance expense			17,906	Interest payable			210
Total current assets			<u>292,166</u>	Current portion of notes payable			14,000
				Unearned revenue			<u>52,500</u>
				Total current liabilities			117,740
<i>Property, Plant and Equipment</i>				<i>Long-term Liabilities</i>			
Building	\$145,400			Notes payable			<u>28,000</u>
Accumulated depreciation, building	<u>(280)</u>	\$145,120		Total liabilities			<u>145,740</u>
Equipment	21,000						
Accumulated depreciation, equipment	<u>(4,480)</u>	16,520	161,640				
<i>Intangible assets</i>				<i>Equity</i>			
Trademark			10,000	Common stock	\$ 2,100		
				Retained earnings	<u>315,966*</u>		
				Total equity			<u>318,066</u>
Total assets			<u><u>\$463,806</u></u>	Total liabilities and equity			<u><u>\$463,806</u></u>

* Retained earnings ($\$343,058 - 7,000 - 20,092$) = $\$315,966$

3.

MayBee Services Ltd.
Post-closing Trial Balance
At June 30, 2016

	Debit	Credit
Cash	\$122,220	
Accounts receivable	149,520	
Office supplies	2,520	
Prepaid insurance expense	17,906	
Building	145,400	
Accumulated depreciation, building		\$ 280
Equipment	21,000	
Accumulated depreciation, equipment		4,480
Trademark	10,000	
Accounts payable		32,550
Accrued salaries payable		12,180
Income taxes payable		6,300
Interest payable		210
Unearned revenue		52,500
Notes payable*		42,000
Common stock		2,100
Retained earnings		315,966
	\$468,566	\$468,566

* The notes payable account is not separated into two accounts for current and long-term portions. The disclosure of the current and long-term portions is for reporting purposes only.

PROBLEM 4-4

1.

2.

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Jennette Ltd. Adjusted Trial Balance At September 30, 2016						
	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance	
	Debit	Credit	Debit	Credit	Debit	Credit
Accounts payable		\$ 39,983				\$ 39,983
Accounts receivable	\$ 321,468		\$20,000		\$ 341,468	
Accrued salaries payable		21,909		\$ 2,500		24,409
Accumulated depreciation, building		9,632		8,504		18,136
Accumulated depreciation, vehicle		602		3,000		3,602
Advertising expense	12,191				12,191	
Building	312,610				312,610	
Cash	262,773				262,773	
Cash dividends	15,050				15,050	
Copyright	21,500				21,500	
Depreciation expense	7,164		8,504		18,668	
			3,000			
Income tax expense	13,545				13,545	
Income taxes payable		13,545				13,545
Insurance expense	11,137		4,249		15,386	
Interest expense	452				452	
Interest payable		4,730				4,730
Mortgage payable, due 2019		90,300				90,300
Office supplies	5,418				5,418	
Prepaid insurance expense	8,498			4,249	4,249	
Prepaid rent expense			5,150		5,150	
Rent expense	67,725			5,150	62,575	
Repairs expense	23,478				23,478	
Retained earnings		737,575				737,575
Revenue		290,250		20,000		360,250
				50,000		
Salaries expense	155,517		2,500		158,017	
Common stock		4,515				4,515
Shop supplies expense	2,259				2,259	
Unearned revenue		112,875	50,000			62,875
Utilities expense	39,981				39,981	
Vehicle	45,150				45,150	
	<u>\$1,325,916</u>	<u>\$1,325,916</u>	<u>\$93,403</u>	<u>\$93,403</u>	<u>\$1,359,920</u>	<u>\$1,359,920</u>

3.

Jennette Ltd.
Balance Sheet
At September 30, 2016

<i>Assets</i>		<i>Liabilities</i>	
Cash	\$262,773	Accounts payable	\$ 39,983
Accounts receivable	341,468	Accrued salaries payable	24,409
Office supplies	5,418	Income taxes payable	13,545
Prepaid insurance expense	4,249	Interest payable	4,730
Prepaid rent expense	5,150	Current portion of mortgage payable	30,000
Total current assets	619,058	Unearned revenue	62,875
		Total current liabilities	175,542
<i>Property, Plant and Equipment</i>			
Building	\$312,610	<i>Long-term Liabilities</i>	
Accumulated depreciation, building	(18,136)	Mortgage payable	60,300
Vehicle	45,150	Total liabilities	235,842
Accumulated depreciation, vehicle	(3,602)		
	41,548		
	336,022	<i>Equity</i>	
		Common stock	\$ 4,515
<i>Intangible assets</i>		Retained earnings	736,223*
Copyright	21,500	Total equity	740,738
		Total liabilities and equity	\$976,580
Total assets	\$976,580		

Net income $(360,250 - 12,191 - 18,668 - 13,545 - 15,386 - 452 - 62,575 - 23,478 - 158,017 - 2,259 - 39,981) = 13,698$

* Retained earnings $(\$737,575 + 13,698 - 15,050) = 736,223$

Chapter 5 Solutions

PROBLEM 5–1

1. The Salem Corp. general journal is as follows:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jul. 2	Cash		5,000	
	Common stock			5,000
	To record the issue of common shares.			
	Merchandise inventory		3,500	
	Accounts payable			3,500
	To record Purchases on credit 2/10, n/30, from Blic Pens, Ltd.			
	Accounts receivable		2,000	
	Sales			2,000
	To record sale to Spellman Chair Rentals, Inc.; terms 2/10, n/30.			
	Cost of goods sold		1,200	
Merchandise inventory			1,200	
To record the cost of sales.				
Jul. 3	Rent expense		500	
	Cash			500
	To record July rent payment.			
Jul. 5	Equipment		1,000	
	Cash			1,000
	To record purchase of equipment.			
Jul. 8	Cash		200	
	Sales			200
	To record cash sale to Ethan Matthews Furniture Ltd.			
	Cost of goods sold		120	
	Merchandise inventory			120
	To record the cost of sales.			
Jul. 9	Merchandise inventory		2,000	
	Accounts payable			2,000
	To record purchase of merchandise inven- tory; terms 2/15, n/30, from Shaw Distrib- utors, Inc.			
	Cash		1,960	
	Sales discount		40	
	Accounts Receivable			2,000
	To record receipt of amount due from Spellman Chair Rentals, Inc. less the dis- count.			

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jul. 10	Accounts payable		3,500	
	Cash			3,430
	Merchandise inventory			70
	To record payment to Blic Pens Ltd. less the discount.			
	Merchandise inventory		200	
	Accounts payable			200
	To record purchase of merchandise inventory from Peel Products, Inc.; terms n/30.			
Jul. 15	Accounts receivable		2,000	
	Sales			2,000
	To record sale to Eagle Products Corp. 2/10, n/30.			
	Cost of goods sold		1,300	
	Merchandise inventory			1,300
	To record the cost of sales.			
	Merchandise inventory		1,500	
	Accounts payable			1,500
	To record purchase of merchandise inventory from Bevan Door, Inc.; terms 2/10, n/30.			
	Accounts payable		100	
	Merchandise inventory			100
	To record credit memo from Shaw Distributors, Inc.			
Jul. 16	Sales returns and allowances		200	
	Accounts receivable			200
	To record return of defective items sold to Eagle Products Corp.; inventory scrapped.			
Jul. 20	Accounts receivable		3,500	
	Sales			3,500
	To record sale to Aspen Promotions, Ltd. 2/10, n/30.			
	Cost of goods sold		2,700	
	Merchandise inventory			2,700
	To record the cost of sales.			
	Accounts payable		950	
	Cash			931
	Merchandise inventory			19
	To record payment of half of the amount due to Shaw Distributors, Inc. less memo and less discount.			

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jul. 24	Cash		882	
	Sales discounts		18	
	Accounts receivable			900
	To record receipt of half of the amount due from Eagle Products Corp.; 2,000 – 200 return = 1,800/2 = 900.			
	Accounts payable	1,500		
Jul. 26	Cash			1,470
	Merchandise inventory			30
	To record payment made to Bevan Door, Inc. less discount.			
	Accounts receivable	600		
	Sales			600
Jul. 31	To record sale to Longbeach Sales, Ltd. for terms 2/10, n/30.			
	Cost of goods sold	400		
	Merchandise inventory			400
	To record the cost of sales.			
	Merchandise inventory	800		
Jul. 31	Accounts payable			800
	To record purchase from Silverman Co. for terms 2/10, n/30.			
	Merchandise inventory	350		
Jul. 31	Cash			350
	To record payment to Speedy Transport Co. for July transport of inventory to warehouse.			

2. The unadjusted ending balance in merchandise inventory is as follows:

Merchandise Inventory			
2-Jul	3,500	1,200	2-Jul
8-Jul	2,000	120	8-Jul
10-Jul	200	70	10-Jul
15-Jul	1,500	1,300	15-Jul
26-Jul	800	100	15-Jul
31-Jul	350	2,700	20-Jul
		19	20-Jul
		30	24-Jul
		400	26-Jul
Unadj. Bal.	2,411		

3. The general journal entry is as follows:

General Journal				
Date	Account/Explanation	R	Debit	Credit
July 31	Cost of goods sold		11	
	Merchandise inventory			11
	To record adjustment to merchandise inventory calculated as $\$2,411 - \$2,400 = \$11$.			

PROBLEM 5-2

Sales	\$37,800
Less: Sales returns and allowances	690
Sales discounts	310
Net sales	<u>\$36,800</u>
Cost of goods sold	26,800
Gross profit	<u><u>\$10,000</u></u>

PROBLEM 5-3

1. The income statement and statement of stockholders' equity are as follows:

Acme Automotive Inc.
Income Statement
Year Ended December 31, 2015

Sales		\$310,000
<i>Less:</i> Sales returns and allowances	\$2,900	
Sales discounts	1,300	4,200
Net sales		<u>\$305,800</u>
Cost of goods sold		126,000
Gross profit		<u>\$179,800</u>
Operating expenses:		
Selling expenses:		
Advertising expense	\$14,000	
Commissions expense	29,000	
Delivery expense	14,800	
Rent expense	19,440	
Sales salaries expense	26,400	
Total selling expenses		<u>\$103,640</u>
General and administrative expenses:		
Depreciation expense	\$12,000	
Insurance expense	10,400	
Office supplies expense	3,100	
Rent expense	12,960	
Telephone expense	1,800	
Utilities expense	4,200	
Wages expense – office	14,300	
Total general and administrative expenses		<u>58,760</u>
Total operating expenses		<u>162,400</u>
Income from operations		<u>\$17,400</u>
Other revenues and expenses:		
Rent revenue	\$19,200	
Interest expense	(840)	18,360
Income before tax		<u>\$35,760</u>
Income tax expense		4,200
Net income		<u><u>\$31,560</u></u>

Acme Automotive Inc.
Statement of Stockholders' Equity
Year Ended December 31, 2015

	<i>Common Stock</i>	<i>Retained Earnings</i>	<i>Total Equity</i>
Opening balance	\$50,000	\$12,440	\$62,440
Shares issued	20,000		20,000
Net income		31,560	31,560
Dividends		(11,000)	(11,000)
Ending balance	\$70,000	\$33,000	\$103,000

2. Closing entries:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec. 31	Sales		310,000	
	Rent sales		19,200	
	Income summary			329,200
	(to close credit balance temporary ac- counts)			
	Income summary	297,640		
	Sales returns and allowances			2,900
	Sales discounts			1,300
	Cost of goods sold			126,000
	Advertising expense			14,000
	Commissions expense			29,000
	Delivery expense			14,800
	Rent expense			32,400
	Sales salaries expense			26,400
	Depreciation expense			12,000
	Insurance expense			10,400
	Office supplies expense			3,100
	Telephone expense			1,800
	Utilities expense			4,200
	Wages Expense – office			14,300
	Interest expense			840
	Income tax expense			4,200
	(to close debit balance temporary ac- counts)			
	Income summary	31,560		
	Retained earnings			31,560
	(to close Income Summary to Retained earnings)			
	Retained earnings	11,000		
	Dividends			11,000
	(to close Dividends to Retained earnings)			

Answers for the missing boxes are in the colored cells.

Inventory, opening balance			55,000
Plus: purchases		250,000	
Plus: sales returns to inventory	100		
Plus: purchase shipping costs	500		
Less: Purchase returns and allowances	200		
Less: Purchase discounts	3,500	3,100	
Net purchases			246,900
Total goods available for sale			301,900
Ending inventory, per GL	90,000		
Less shrinkage adjustment (90,000 – 88,500)	1,500		88,500
Cost of goods sold			213,400
Sales		580,000	
Less: sales discounts	200		
Less: sales returns	200		
Less: sales allowances	600	1,000	
Net sales			579,000
Gross profit			365,600
Less: operating expenses			250,000
Net income/(loss)			115,600
Gross profit/sales (%) (365,600 ÷ 579,000)			63.14%

PROBLEM 5–5

1.

Turret Retail Ltd.
Income Statement
For the Year Ended December 31, 2016

Sales		\$360,000
Less: Sales discounts	\$ 3,600	
Sales returns and allowances	9,600	13,200
Net sales		<u>346,800</u>
Cost of goods sold		240,000
Gross profit from sales		<u>106,800</u>
Operating expenses		
Salaries expense	57,000	
Insurance expense	5,000	
Shop supplies expense	1,000	
Depreciation expense	3,200	
Rent expense	30,240	
Travel expense	2,100	
Utilities expense	7,300	
Total operating expenses		<u>105,840</u>
Income from operations		960
Other revenue and expenses		
Rental income	6000	
Interest expense	200	5,800
Income before tax		<u>6,760</u>
Income tax expense		2,028
Net income		<u><u>\$ 4,732</u></u>

2.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec 31	Rental income		6,000	
	Sales		360,000	
	Income summary			366,000
	To close temporary revenue accounts.			
Dec 31	Income summary	108,068		
	Salaries expense			57,000
	Insurance expense			5,000
	Shop supplies expense			1,000
	Depreciation expense			3,200
	Rent expense			30,240
	Travel expense			2,100
	Utilities expense			7,300
	Interest expense			200
	Income tax expense			2,028
	To close temporary expense accounts.			
Dec 31	Income Summary		4,732	
	Retained earnings			4,732
	To close income summary to retained earnings.			
Dec 31	Retained earnings		10,000	
	Cash dividends			10,000
	To close temporary cash dividend account.			

3. Gross profit ratio = gross profit/Net sales = \$106,800 ÷ 346,800 = 30.8%

This ratio means that for every \$100 of sales, the company has \$30.8 left to cover operating expenses after deducting cost of goods sold. This ratio can be compared to other companies in the same industry or to historical trends within the same company. A small fluctuation in the ratio can often cause a large increase/decrease in gross profit, if inventory and sales dollar amounts are often the largest amounts reported on the income statement.

PROBLEM 5-6

1.

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Yuba Yabi Enterprises Ltd.
Trial Balance
March 31, 2017

	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance	
	Debit	Credit	Debit	Credit	Debit	Credit
Accounts payable		\$ 68,750				\$ 68,750
Accounts receivable	\$ 308,000				\$ 308,000	
Accrued salaries and benefits payable		26,400		\$ 12,000		38,400
Accumulated depreciation, furniture		9,460				9,460
Cash	46,200				46,200	
Cash dividends	22,000				22,000	
Cost of goods sold	528,000		\$ 7,800		535,800	
Advertising expense	9,900				9,900	
Bank loan payable (long-term)		88,704				88,704
Depreciation expense	7,040				7,040	
Copyright	44,000				44,000	
Franchise	66,000				66,000	
Furniture	44,000				44,000	
Income tax expense	—		149,872*		229,481	
Income taxes payable		17,600		149,872*		247,081
Insurance expense	11,000		5,000		16,000	
Interest expense	440		5,600		6,040	
Interest payable		1,210		5,600		6,810
Land	308,000				308,000	
Merchandise inventory	264,000			7,800	256,200	
Prepaid insurance expense	13,200			5,000	8,200	
Prepaid advertising expense	8,800				8,800	
Rent expense	66,528				66,528	
Rental income		13,200				13,200
Retained earnings		265,364				265,364
Salaries expense	125,400		12,000		137,400	
Sales		792,000				792,000
Sales discounts	7,920				7,920	
Sales returns and allowances	21,120				21,120	
Service revenue		495,000		30,000		525,000
Common stock		44,000				44,000
Shop supplies	8,360				8,360	
Shop supplies expense	2,200				2,200	
Travel expense	4,620				4,620	
Unearned service revenue		111,100	30,000			81,100
Utilities expense	16,060				16,060	
	<u>\$1,932,788</u>	<u>\$1,932,788</u>	<u>\$ 210,272</u>	<u>\$ 210,272</u>	<u>\$2,179,869</u>	<u>\$2,179,869</u>

* Income tax expense calculation:

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Cost of goods sold	\$535,800	
Advertising expense	9,900	
Depreciation expense	7,040	
Insurance expense	16,000	
Interest expense	6,040	
Rent expense	66,528	
Rental income		\$ 13,200
Salaries expense	137,400	
Sales		792,000
Sales discounts	7,920	
Sales returns and allowances	21,120	
Service revenue		525,000
Shop supplies expense	2,200	
Travel expense	4,620	
Utilities expense	16,060	
	<u>\$830,628</u>	<u>\$1,330,200</u>
Net income before taxes		<u>499,572</u>
Income taxes @ 30%		<u>\$ 149,872</u> adjusting entry

2.

Turret Retail Ltd.
Income Statement
For the Year Ended December 31, 2016

Sales		\$792,000
Less: Sales discounts	\$ 7,920	
Sales returns and allowances	21,120	29,040
Net sales		762,960
Cost of goods sold		535,800
Gross profit from sales		227,160
Service revenue		525,000
		752,160
Operating expenses		
Salaries expense	137,400	
Insurance expense	16,000	
Advertising expense	9,900	
Shop supplies expense	2,200	
Depreciation expense	7,040	
Rent expense	66,528	
Travel expense	4,620	
Utilities expense	16,060	
Total operating expenses		259,748
Income from operations		492,412
Other revenue and expenses		
Rental income	13,200	
Interest expense	6,040	7,160
Income before tax		499,572
Income tax expense		149,872
Net income		\$349,700

Chapter 6 Solutions

PROBLEM 6–1

1. Weighted Average Cost Flow Assumption:

<i>Product A</i>						
<i>Date</i>		<i>Purchased (Sold)</i>			<i>Balance</i>	
		<i>Units</i>	<i>Unit Cost</i>	<i>COGS</i>	<i>Units</i>	<i>Unit Cost</i>
Jan 1	Opening Inventory				4,000 × \$11.90	= \$47,600
Jan 7	Purchase #1	8,000	× \$12.00		12,000 × 11.97 ¹	= 143,600
Mar 30	Sale #1	(9,000)	× 11.97 = (\$107,730)	3,000	×	= 35,870
May 10	Purchase #2	12,000	× 12.10		15,000 × 12.07 ²	= 181,070
Jul 4	Sale #2	(14,000)	× 12.07 = (168,980)	1,000	×	= \$12,090

$$^1[\$47,600 + (8,000 \times \$12)] / (4,000 + 8,000) = \$11.97/\text{unit (rounded)}$$

$$^2[\$35,870 + (12,000 \times \$12.10)] / (3,000 + 12,000) = \$12.07/\text{unit (rounded)}$$

<i>Product B</i>						
<i>Date</i>		<i>Purchased (Sold)</i>			<i>Balance</i>	
		<i>Units</i>	<i>Unit Cost</i>	<i>COGS</i>	<i>Units</i>	<i>Unit Cost</i>
Jan 1	Opening Inventory				2,000 × \$13.26	= \$26,520
Jan 13	Purchase #1	5,000	× \$13.81		7,000 × 13.65 ³	= 95,570
Jul 15	Sale #1	(1,000)	× 13.65 = (\$13,650)	6,000	×	= 81,920
May 10	Purchase #2	7,000	× 14.21		13,000 × 13.95 ⁴	= 181,390
Dec 14	Sale #2	(8,000)	× 13.95 = (111,600)	5,000	×	= \$69,790

$$^3[\$26,520 + (5,000 \times \$13.81)] / (2,000 + 5,000) = \$13.65/\text{unit (rounded)}$$

$$^4[\$81,920 + (7,000 \times \$14.21)] / (6,000 + 7,000) = \$13.95/\text{unit (rounded)}$$

2. Total ending inventory at December 31, 2020:

Product A	\$12,090
Product B	69,790
Total	<u>\$81,880</u>

3. Gross profit percentage earned:

	<i>Product A</i>		<i>Product B</i>
Mar 30 Sale	144,000	Jul 15 Sale	20,000
Jul 04 Sale	238,000	Dec 14 Sale	168,000
Total Sales	<u>382,000</u>	Total Sales	<u>188,000</u>
COGS	276,710	COGS	125,250
Gross Profit	<u>105,290</u>	Gross Profit	<u>62,750</u>
Gross Profit %	<u>27.56</u>	Gross Profit %	<u>33.38</u>

PROBLEM 6-2

1. Inventory Record – FIFO

Date	Description	Purchases/Shipping costs/ Purchase returns, discounts and allowances			Cost of Goods Sold/ Returns to Inventory			Balance in Inventory		
		Units	Cost/Unit	Total	Units	Cost/Unit	Total	Units	Cost/Unit	Total
Jan 1	Inventory, opening							500	\$ 10	5,000
4	Sale of 100 units @ \$20				100	\$ 10	1,000	400	\$ 10	4,000
6	Purchase	200	\$ 11	2,200				400	\$ 10	4,000
8	Purchase return (from Jan 6 purchase)	(10)	\$ 11	(110)				200	\$ 11	2,200
9	Sale of 200 unit @ \$22				200	\$ 10	2,000	400	\$ 10	4,000
10	Sales return from customer from Jan 4 sale (returned to inventory)				(15)	\$10	(150)	200	\$ 10	2,000
15	Sale of 150 units @ \$23				150	\$ 10	1,500	190	\$ 11	2,090
17	Purchase	300	\$ 9	2,700				200	\$ 10	2,000
19	Sales return from customer from Jan 15 sale (beyond repair, disposed)						no entry disposed	190	\$ 11	2,090
20	Sale of 400 units @ \$21				65	\$ 10	650	300	\$ 9	2,700
					190	\$ 11	2,090	0	\$ 10	–
					145	\$ 9	1,305	0	\$ 11	–
	Total				835		8,395	155	\$ 9	1,395

2. Inventory Record – LIFO

Date	Description	Purchases/Shipping costs/ Purchase returns, discounts and allowances			Cost of Goods Sold/ Returns to Inventory			Balance in Inventory		
		Units	Cost/Unit	Total	Units	Cost/Unit	Total	Units	Cost/Unit	Total
Jan 1	Inventory, opening							500	\$ 10	5,000
4	Sale of 100 units @ \$20				100	\$ 10	1,000	400	\$ 10	4,000
6	Purchase	200	\$ 11	2,200				400	\$ 10	4,000
								200	\$ 11	2,200
8	Purchase return (from Jan 6 purchase)	(10)	\$ 11	(110)				400	\$ 10	4,000
								190	\$ 11	2,090
9	Sale of 200 unit @ \$22				190	\$ 11	2,090	0	\$ 11	0
					10	10	100	390	\$ 10	3,900
10	Sales return from customer from Jan 4 sale (returned to inventory)				(15)	\$10	(150)	405	\$ 10	4,050
								190	\$ 11	2,090
15	Sale of 150 units @ \$23				150	\$ 10	1,500	255	\$ 10	2,550
17	Purchase	300	\$ 9	2,700				300	\$ 9	2,700
19	Sales return from customer from Jan 15 sale (beyond repair, disposed)						no entry disposed	255	\$ 10	2,550
								300	\$ 9	2,700
20	Sale of 400 units @ \$21				300	\$ 9	2700	0	\$ 9	–
					100	\$ 10	1,000	155	\$ 10	1,550
	Total				835		8,240	155	\$ 10	1,550

3. Sales:

Sale of 100 units @ \$20	\$	2,000.00
Sale of 200 unit @ \$22	\$	4,400.00
Sales return of 15 units @ \$20	\$	(300.00)
Sale of 150 units @ \$23	\$	3,450.00
Sales return of 2 units @ \$20	\$	(40.00)
Sale of 400 units @ \$21	\$	8,400.00
Total sales	\$	17,910.00
Cost of goods sold FIFO	\$	8,395.00
Gross profit FIFO	\$	9,515.00
Gross profit % FIFO		53.13%
Cost of goods sold LIFO	\$	8,240.00
Gross profit LIFO	\$	9,670.00
Gross profit % LIFO		53.99%

4. FIFO Ending inventory balance, Jan 20, 2016: \$1,395.00
 LIFO Ending inventory balance, Jan 20, 2016: \$1,550.00

PROBLEM 6-3

1. Weighted Average Cost

Date	Description	Purchases/Shipping costs/ Purchase returns, discounts and allowances			Cost of Goods Sold/ Returns to Inventory			Balance in Inventory		
		Units	Cost/Unit	Total	Units	Cost/Unit	Total	Units	Cost/Unit	Total
Feb 1	Opening inventory							75	\$ 12.00	900
5	Sale				70	\$12.00	840	5	\$ 12.00	60
7	Purchase	300	\$ 11.00	3,300				305	\$ 11.02	3,360
12	Sale				180	\$11.02	1,984	125	\$ 11.01	1,376
14	Purchase return from Feb 7	(10)	\$ 11.00	(110)				115	\$ 11.01	1,266
17	Sale				100	\$11.01	1,101	15	\$ 11.00	165
19	Purchase	400	\$ 9.00	3,600				415	\$ 9.07	3,765
23	Sale				80	\$ 9.07	726	335	\$ 9.07	3,039
	Total				430		4,651	335	\$ 9.07	3,039

2. Sales:

430 units × \$24	\$	10,320
Cost of goods sold	\$	4,651
Gross profit	\$	5,669
Gross profit %		54.93%

3. Ending inventory balance, Jan 20, 2016: \$1,395

PROBLEM 6–4**2015**

If ending inventory was overstated by \$45,000, then COGS is understated causing net income to be overstated. This will cause equity to also be overstated.

	COGS	Net Income	Total Assets	Equity
Unadjusted balance	\$ 500,000	\$ 250,000	\$ 1,500,000	\$ 1,400,000
Correction	45,000	(45,000)	(45,000)	(45,000)
Corrected balance	<u>\$ 545,000</u>	<u>\$ 205,000</u>	<u>\$ 1,455,000</u>	<u>\$ 1,355,000</u>

2016

If ending inventory was overstated by \$45,000 in 2015, then opening inventory will also be overstated in 2016. This will cause COGS to be overstated in 2016 causing net income to be understated. Since equity was overstated in 2015, this overstatement for 2016 will cancel out the previous year's error and equity will no longer contain any errors.

	COGS	Net Income	Total Assets	Equity
Unadjusted balance	\$ 660,000	\$ 350,000	\$ 1,400,000	\$ 1,300,000
Correction	(45,000)	45,000	0	0
Corrected balance	<u>\$ 615,000</u>	<u>\$ 395,000</u>	<u>\$ 1,400,000</u>	<u>\$ 1,300,000</u>

PROBLEM 6–5**2015**

If ending inventory was understated by \$30,000, then COGS is overstated causing net income to be understated. This will cause equity and total assets to also be understated.

	COGS	Net Income	Total Assets	Equity
Unadjusted balance	\$ 500,000	\$ 250,000	\$ 1,500,000	\$ 1,400,000
Correction	(30,000)	30,000	30,000	30,000
Corrected balance	<u>\$ 470,000</u>	<u>\$ 280,000</u>	<u>\$ 1,530,000</u>	<u>\$ 1,430,000</u>

2016

If ending inventory was understated by \$30,000 in 2015, then opening inventory will also be understated in 2016. This will cause COGS to be understated in 2016 causing net income to be overstated. Since equity was overstated in 2015, this understatement for 2016 will cancel out the previous year’s error and equity will no longer contain any errors. There are no errors in the ending inventory for 2016, so there are no mis-statements for assets.

	COGS	Net Income	Total Assets	Equity
Unadjusted balance	\$ 660,000	\$ 350,000	\$ 1,400,000	\$ 1,300,000
Correction	30,000	(30,000)	0	0
Corrected balance	<u>\$ 690,000</u>	<u>\$ 320,000</u>	<u>\$ 1,400,000</u>	<u>\$ 1,300,000</u>

PROBLEM 6–6

- 1.
- 2.

	# of Units	Cost/Unit	NRV/Unit	Total Cost	Total NRV	LCNRV by Group	LCNRV by Product
Ceramic Wall Tiles:							
White	1,025	\$ 5.00	\$ 6.00	\$ 5,125.00	\$ 6,150.00		5,125
Black	875	4.50	4.25	3,937.50	3,718.75		3,719
Slate	645	7.00	7.11	4,515.00	4,585.95		4,515
Beige	325	2.00	2.25	650.00	731.25		650
				<u>14,227.50</u>	<u>15,185.95</u>	\$ 14,228	
Marble Flooring:							
Cordoba	10,000	9.25	9.35	92,500.00	93,500.00		92,500
Carrerra	12,000	10.50	10.50	126,000.00	126,000.00		126,000
Maricha	8,000	11.50	11.45	92,000.00	91,600.00		91,600
				<u>310,500.00</u>	<u>311,100.00</u>	310,500	
Shower Waterproofing:							
Novo	10,035	9.85	9.50	98,844.75	95,332.50		95,333
Deetra	15,000	6.75	7.15	101,250.00	107,250.00		101,250
				<u>200,094.75</u>	<u>202,582.50</u>	200,095	
Totals				<u>\$ 524,822.25</u>		<u>\$ 524,822</u>	<u>\$ 520,692</u>

3. No entry required by group.
By individual product:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cost of goods sold		4,130	
	Merchandise inventory			4,130
	(\$524,822 – 520,692)			

PROBLEM 6–7

1.

Goods available for sale:		
Inventory, opening balance		\$ 420,364
Purchases	1,323,280	
Purchase returns	(18,270)	
Transportation-in	9,660	1,314,670
Goods available for sale:		<u>\$1,735,034</u>
Sales	1,667,610	
Sales returns	(13,230)	
Net sales	<u>1,654,380</u>	
Estimated COGS		
(\$1,654,380 × (1 – 34%))		<u>(1,091,891)</u>
Estimated March 31, 2017 inventory		<u><u>\$ 643,143</u></u>

2.

Varane Ltd.
Income Statement
for the First Quarter ending March 31, 2017

Sales	\$ 1,667,610	
Less: Sales returns and allowances	13,230	
Net sales	<u>1,654,380</u>	
Cost of goods sold	<u>1,091,891</u>	
Gross profit from sales	562,489	34%
Operating expenses		
Total operating expenses	<u>130,500</u>	
Income before tax	<u>431,989</u>	
Income tax expense	<u>129,597</u>	
Net income	<u><u>\$ 302,392</u></u>	

PROBLEM 6–8

1.

	At Cost	At Retail
Goods available for sale:		
Inventory, opening balance	\$ 659,890	\$ 1,298,010
Purchases	4,660,362	8,958,180
Purchase returns	(73,920)	(167,090)
Goods available for sale:	\$ 5,246,332	\$ 10,089,100
Sales	\$ 7,693,980	
Sales returns	(62,440)	\$ 7,631,540
Ending inventory at retail		\$ 2,457,560
Ratio of Cost to retail ($\$5,246,332 \div \$10,089,100$) $\times 100$		52.00%
Ending inventory at cost		\$ 1,277,931

2.

Ceabane Ltd.
Income Statement
for the Six Months ending June 30, 2017

Sales	\$ 7,693,980
Less: Sales returns and allowances	62,440
Net sales	7,631,540
Cost of goods sold*	3,968,401
Gross profit from sales	3,663,139
Operating expenses	
Total operating expenses	1,500,000
Income before tax	2,163,139
Income tax expense	648,942
Net income	\$ 1,514,197

* $\$5,246,332 - 1,277,931 = 3,968,401$

PROBLEM 6–9

- Ending inventory for 2016 was overstated by \$2,000. Thus, cost of goods sold should have been \$2,000 higher, or \$22,000 and gross profit \$2,000 lower, or \$28,000. Because of this mistake, the 2017 opening inventory was also overstated by \$2,000, causing cost of goods sold to be overstated by \$2,000 and gross profit to be understated by \$2,000. Gross profit should have been \$29,000.
- 2016 total and net assets were overstated by \$2,000. 2017 total assets and net assets were correct.

PROBLEM 6–10

	2017			2018		
	Cost	NRV	Unit Basis (LCNRV)	Cost	NRV	Unit Basis (LCNRV)
Product X	\$14,000	\$15,000	\$14,000	\$15,000	\$16,000	\$15,000
Product Y	12,500	12,000	12,000	12,000	11,500	11,500
Product Z	11,000	11,500	11,000	10,500	10,000	10,000
Total	<u>\$37,500</u>	<u>\$38,500</u>	<u>\$37,000</u>	<u>\$37,500</u>	<u>\$37,500</u>	<u>\$36,500</u>

PROBLEM 6–11

	Cost	Replacement cost (RC)	NRV-Ceiling (NRV)	Floor (F)	Market (middle of RC, NRV, F)	LCM
Surgical Equipment	\$170	240	260 – 30 = 230	230 – (260 × 30%) = 152	230	\$170
Surgical Supplies	90	80	120 – 5 = 115	115 – (120 × 30%) = 79	80	80
Lab Equipment	250	235	340 – 25 = 315	315 – (340 × 30%) = 213	235	235
Lab Supplies	162	158	165 – 10 = 155	155 – (165 × 30%) = 105.50	155	155
Total	672	713	815	549.50	700	640

Chapter 7 Solutions**PROBLEM 7–1**

- a The company has received a \$3,000 loan from the bank, that was deposited into its bank account but was not recorded in the books of the company.
- e A \$250 check was not returned with the bank statement though it was paid by the bank.
- d Checks amounting to \$4,290 shown as outstanding on the

November reconciliation still have not been returned by the bank.

- a 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.
- c The bank has erroneously charged Goertzen with an \$1,100 check which should have been charged to Gagetown Ltd.
- b A \$350 check 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 A check for \$840 was erroneously recorded as \$730 in the company records.
- c A \$600 bank deposit of December 31 does not appear on the bank statement.
- b Bank service charges amounting to \$75 were deducted from the bank statement but not yet from the company records.

PROBLEM 7-2

General Journal				
Date	Account/Explanation	R	Debit	Credit
Aug 2	Petty cash A+		500	
	Cash (A)			500
	To establish a petty cash fund for \$200.			
Aug 15	Merchandise inventory A+		20.00	
	Office supplies expense E+ (SE)		35.00	
	Delivery expenses E+ (SE)		32.00	
	Travel expenses E+ (SE)		139.60	
	Employee recognition expense E+ (SE) ..		80.00	
	Postage E+ (SE)		145.00	
	Petty cash A+		300.00	
	Cash over/short (E) SE+			1.60
	Cash (A)			750.00
	To replenish petty cash and increase it to \$800.			
Aug 31	Travel expenses E+ (SE)		75.80	
	Shop supplies A+		300.00	
	Delivery expense E+ (SE)		56.00	
	Maintenance expense E+ (SE)		345.00	
	Cash over/short E+ (SE)		1.80	
	Cash (A)			778.60
	To replenish petty cash.			

PROBLEM 7–3

1.

Bank balance, November 30	\$30,000	Book balance	\$35,598
Bank error on check 20	5	Add: Collection of note	200
		Less: NSF check from customer	1,475
Plus: Outstanding deposits	4,500	Less: Service charges	20
		Service charges	25
Less: Outstanding checks		Service charges	18
Chq 236	\$230		
Chq 240	15		
	245		
	<u>\$34,260</u>		<u>\$34,260</u>

2.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Nov 30	Bank service charges expense E+ (SE)		63	
	Accounts receivable A+		1,475	
	Note receivable (A)			200
	Cash (A)			1,338
	To record entries from November 2016 bank reconciliation.			

PROBLEM 7–4

1. (a) Entry to record the write-off of \$25,000:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Allowance for Doubtful Accounts (XA) A+		25,000	
	Accounts Receivable (A)			25,000

(b) Entry to record the recovery of \$15,000:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Accounts Receivable A+		15,000	
	Allowance for Doubtful Accounts XA+ (A)			15,000
	Cash A+		15,000	
	Accounts Receivable (A)			15,000

2. Allowance for doubtful accounts = (\$15,000 Cr. – \$25,000 Dr.) (1a) + \$15,000 Cr. (1b) = \$5,000 Cr. balance

3. (a) The entries required for bad debts based on three per cent of credit sales:

$$\begin{aligned}
 \text{Balance required} &= 3\% \text{ of credit sales} \\
 &= 3\% \times 70\% \times \$1,000,000 \\
 &= \$21,000
 \end{aligned}$$

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Bad Debt Expense E+ (SE)		21,000	
	Allowance for Doubtful Accounts XA+ (A)			21,000
	To record bad debts using % of sales, the income statement method.			

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Bad Debt Expense E+ (SE)		7,500	
	Allowance for Doubtful Accounts XA+ (A)			7,500
	To record bad debts using simplified balance sheet approach: 5% of receivables (250,000 × 5% = 12,500 required balance – 5,000 unadjusted balance = 7,500 required adjustment).			

(b)

(c) Calculation of uncollectible amount at December 31, 2012:

<i>Age (days)</i>	<i>Accounts Receivable</i>	<i>Estimated Loss Percentage</i>	<i>Estimated Uncollectible Amount</i>
1-30	\$100,000	2%	\$2,000
31-60	50,000	4%	2,000
61-90	25,000	5%	1,250
91-120	60,000	10%	6,000
Over 120	15,000	50%	7,500
	<u>\$250,000</u>		<u>\$18,750</u>

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Bad Debt Expense E+ (SE)		13,750	
	Allowance for Doubtful Accounts XA+ (A)			13,750
	To record bad debts using aging analysis, a balance sheet approach (18,750 required balance – 5,000 unadjusted balance = 13,750 required adjustment).			

4. (a) December 31, 2018 adjusted AFDA balance = \$26,000 (calculated as 5,000 unadjusted balance + 21,000 adjustment)
- (b) December 31, 2018 adjusted AFDA balance = \$12,500 (calculated as 5,000 unadjusted balance + 7,500 adjustment)
- (c) December 31, 2018 adjusted AFDA balance = \$18,750 (calculated as 5,000 unadjusted balance + 13,750 adjustment)

PROBLEM 7–5

1.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec 31, 2017	Bad Debt Expense E+ (SE)		5,000	
	Allowance for Doubtful Accounts XA+ (A)			5,000
Apr 15, 2018	Allowance for Doubtful Accounts (XA) A+ . Accounts Receivable (A)		700	700
Aug 8, 2018	Allowance for Doubtful Accounts (XA) A+ . Accounts Receivable (A)		3,000	3,000
Dec 31, 2018	Bad Debt Expense E+ (SE)		4,000	
	Allowance for Doubtful Accounts XA+ (A)			4,000
Mar 6, 2019	Accounts Receivable A+		200	
	Allowance for Doubtful Accounts XA+ (A)			200
Sep 4, 2019	Allowance for Doubtful Accounts (XA) A+ . Accounts Receivable (A)		4,000	4,000
Dec 31, 2019	Bad Debt Expense E+ (SE)		4,500	
	Allowance for Doubtful Accounts XA+ (A)			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.

PROBLEM 7–6

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec 31	Allowance for doubtful accounts (XA) A+ . Accounts receivable (A) 1. To record uncollectible account.		1,000	1,000
Dec 31	Bad debt expense E+ (SE) Allowance for doubtful accounts XA+ (A) 2. To record year-end adjusting entry for estimated uncollectible accounts. (\$750,000 – 22,000) × 2%		14,560	14,560
Dec 31	Bad debt expense E+ (SE) Allowance for doubtful accounts XA+ (A) 3. To record year-end adjusting entry for estimated uncollectible accounts. (\$100,000 – 1,000) × 4% = \$3,960 credit (AFDA \$1,800 debit – \$1,000) + 3,960 = \$5,760		6,760	6,760

4. For entry from part (2):

Accounts receivable	\$ 99,000	
Allowance for doubtful accounts	(11,760)	\$87,240
(\$1,800 + 1,000 – 14,560)		

Note that no attempt is made to reconcile the AFDA balance to the estimated bad debt amount when using the income statement method.

- For entry from part (3):

Accounts receivable	\$99,000	
Allowance for doubtful accounts	(3,960)	\$95,040
(\$1,800 + 1,000 – 6,760)		

Note that the AFDA balance is adjusted so that its ending balance is equal to the estimated bad debt amount when using the balance sheet method.

PROBLEM 7-7

1.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec 12, 2016	Note receivable A+		20,500	
	Accounts receivable (A)			20,500
	To accept a note receivable in exchange for an overdue accounts receivable.			
Dec 31, 2016	Interest receivable A+		54	
	Interest revenue R+ SE+			54
	To record accrued interest on the Dec 12 note receivable. ($\$20,500 \times 5\% \times 19 \div 360$)			
Dec 31, 2016	Interest revenue R+ SE+		54	
	Income summary			54
	To record the closing entry for interest revenue to Income Summary.			
Jan 12, 2017	Cash A+		20,585	
	Note receivable (A)			20,500
	Interest receivable (A)			54
	Interest income R+ SE+			31
	To record payment of note receivable. ($\$20,500 \times 5\% \times 30 \div 360$) + \$20,500			

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 14, 2017	Note receivable A+		12,000	
	Cost of goods sold E+ (SE)		7,500	
	Sales R+ SE+			12,000
	Merchandise inventory (A)			7,500
	To record receipt of note receivable for a merchandise inventory sale according to company credit policy.			
Jan 31, 2017	Interest receivable A+		34	
	Interest income R+ SE+			34
	To record accrued interest on the Jan 14 note receivable. ($\$12,000 \times 6\% \times 17 \div 360$)			
Feb 10, 2017	Note receivable A+		6,600	
	Accounts receivable (A)			6,600
	To accept a note receivable in exchange for an overdue accounts receivable.			
Feb 28, 2017	Interest receivable A+		56	
	Interest income R+ SE+			56
	To record accrued interest on the Jan 14 notes receivable. ($\$12,000 \times 6\% \times 28 \div 360$)			
Mar 15, 2017	Cash A+		12,120	
	Note receivable (A)			12,000
	Interest receivable (A)			90
	Interest income R+ SE+			30
	To record payment of note receivable. ($\$12,000 \times 6\% \times 60 \div 360$) + \$12,000			

To compute the March 15 date:

Jan	31 days
Note date	(14)
Feb	28 days
Mar 15	15 days = 60 days on this date

2. Maturity date of the Feb 10 note receivable:

Feb	28 days
Note date	(10)
Subtotal	18 days in Feb.
Mar	31 days
Apr	30 days
May 11	11 days = 90 days on this date

May 11, 2017 will be the maturity date for the February 10 note receivable.

PROBLEM 7–8

1.

	Note (a)	Note (b)	Note (c)	Note (d)
Total number of days in the month when the note was signed	Jan 1 31 days		Jun 30 days	
Less: Note date	(15)		(21)	
Subtotal	16 days		9 days	
Next month total days	Dec 31 days		Jul 31 days	
Next month total days	Jan 31 days		Aug 5 days	
Next month total days	Feb 28 days			
Next month total days	Mar 31 days			
Next month total days	Apr 30 days			
Date in month to equal term in days	May 13 days			
Total number of days of the note term	180 days		45 days	
Total number of months		3 months		4 months
Maturity date	May 13, 2017	Apr 6, 2017	Aug 5, 2017	April 11, 2018

2. Note (a) accrued interest from Jan 1 to Dec 31, 2017:

$$\$260,000 \times 4\% \times 180 \div 360 = \$5,200$$

Note (b) accrued interest from Jan 15 to Dec 31, 2017:

$$\$180,000 \times 5\% \times 3 \div 12 = \$2,250$$

Note (c) accrued interest from Jun 21 to Dec 31, 2017:

$$\$40,000 \times 5.5\% \times 45 \div 360 = \$275$$

Note (d) accrued interest from Dec 1 to Dec 31, 2017:

$$\$60,000 \times 6.5\% \times 1 \div 12 = \$325$$

3. Note (a) cash payment amount collected at maturity:

$$\$260,000 \times 4\% \times 180 \div 360 = \$5,200 + \$260,000 = \$265,200 \text{ principal and interest}$$

Note (b) cash payment amount collected at maturity:

$$\$180,000 \times 5\% \times 3 \div 12 = \$2,250 + 180,000 = \$182,250 \text{ principal and interest}$$

Note (c) cash payment amount collected at maturity:

$$\$40,000 \times 5.5\% \times 45 \div 360 = \$275 + 40,000 = \$40,275 \text{ principal and interest}$$

Note (d) cash payment amount collected at maturity:

$$\$60,000 \times 6.5\% \times 4 \div 12 = \$1,300 + 60,000 = \$61,300 \text{ principal and interest}$$

PROBLEM 7–9

- Net sales: $\$250,000 - 52,000 - 5,000 = 193,000$
 Average accounts receivable: $(\$53,000 + 22,000) \div 2 = \$37,500$
 Accounts receivable turnover $(193,000 \div 37,500) = 5.15$ times per year
- If the turnover ratio from the previous year was 5.25 times per year, the company is not as efficient at collecting its accounts receivable in 2017 compared to the previous year.

Chapter 8 Solutions

PROBLEM 8-1

Cost of Lots:

Check to Jones		\$140,000
Bank loan assumed by Arrow		100,000
Razing of barns		6,000
Legal, accounting, and brokerage Fees		20,000
Clearing and levelling costs		10,000
Total outlays		<u>\$276,000</u>
Less: Contra items:		
Proceeds from crops	\$6,000	
Proceeds from house	1,600	
Proceeds from lumber	4,400	12,000
Net cost of 500 lots		<u>\$264,000</u>
Net cost per lot (\$264,000/500 lots)		<u><u>\$528</u></u>

PROBLEM 8-2

- Units of Production: $\frac{(\$30,000 - 8,000)}{80,000 \text{ units}} \times 15,000 \text{ units} = \$4,125$
 Note: The half-year rule does not apply to this method.
 - Straight-line: $\frac{(\$30,000 - 8,000)}{6 \text{ years}} \times 50\% = \$1,833$
 - Double-declining balance: $\$30,000 \times 33\% * \times 50\% = \$4,950$
 * $2/6 = 33\%$ DDB rate
- Carrying amounts at the end of 2017:

Carrying amount = Cost – accumulated depreciation

Units of production:		
Cost		\$30,000
Accumulated depreciation	(4,125)	<u>\$25,075</u>
Straight-line:		
Cost		\$30,000
Accumulated depreciation	(1,833)	<u>\$28,167</u>
Double declining balance:		
Cost		\$30,000
Accumulated depreciation	(4,950)	<u>\$25,050</u>

3. The double-decline balance method resulted in the highest depreciation expense and lowest net income for 2017.
4. Depreciation for 2018:

$$(a) \text{ Units of Production: } \frac{(\$30,000 - 8,000)}{80,000 \text{ units}} \times 25,000 \text{ units} = \$6,875$$

$$(b) \text{ Straight-line: } \frac{(\$30,000 - 8,000)}{6 \text{ years}} = \$3,667$$

$$(c) \text{ Double-declining balance: } (\$30,000 - \$4,950) \times 33\% = \$8,267$$

Double-declining balance method resulted in the highest depreciation expense and lowest net income for 2018.

PROBLEM 8-3

1. Depreciation expense for each of 2019 through to 2022 inclusive:

$$\text{Depreciation/unit} = \frac{\text{Cost} - \text{Residual}}{\text{Expected Total Production}} = \frac{\$95,000 - \$5,000}{9,000 \text{ units}} = \$10/\text{unit}$$

<i>Year</i>	<i>Actual Units Produced</i>	<i>Depreciation Expense</i>	<i>Calculations</i>
2019	2,000	\$20,000	2,000 units × \$10/unit = 20,000
2020	3,000	30,000	3,000 units × \$10/unit = 30,000
2021	2,800	28,000	2,800 units × \$10/unit = 28,000
2022	2,900	12,000	1,200 units × \$10/unit = 12,000*
		<u>\$90,000</u>	<u>Total depreciation</u>

* Maximum allowable total depreciation is Cost-Residual or \$90,000. This is based on a total of 9,000 units. Therefore, the maximum amount of depreciation that can be recorded in 2022 is \$12,000 which is based on 1,200 units.

2. Accumulated depreciation at the end of 2022 is \$90,000.
3. Carrying amount of the machine at the end of 2022 is \$5,000 (\$95,000 – 90,000).
4. Entry on January 15, 2023 to record the sale of the machinery for \$12,000:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		12,000	
	Accumulated Depreciation		90,000	
	Machinery			95,000
	Gain on Disposal			7,000
	To record gain on disposal calculated as: [\$95,000 Cost of Machinery – \$90,000 Accumulated Depreciation = \$5,000 Carrying Amount (or net book value)] – \$12,000 Proceeds of Disposal = \$(7,000)			

PROBLEM 8–4

1. Asset cost:

Purchase of machinery	\$35,000
Transportation charges	1,200
Installation charge	5,700
	31,900
	31,900

Note: Minor repairs are expensed.

2. Straight-line depreciation for each year for 4 years:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Depreciation Expense		5,975	
	Accumulated Depreciation – Machine (\$31,900 – 8,000) ÷ 4 years			5,975

Declining balance method:

General Journal				
Date	Account/Explanation	R	Debit	Credit
2017	Depreciation Expense		7,975	
	Accumulated Depreciation			7,975
	2/4 = 25% rate, (\$31,900 × 25%)			
2018	Depreciation Expense		5,981	
	Accumulated Depreciation			5,981
	(\$31,900 – 7,975) × 25%			
2019	Depreciation Expense		4,486	
	Accumulated Depreciation			4,486
	(\$31,900 – 7,975 – 5,981) × 25%			
2020	Depreciation Expense		3,365	
	Accumulated Depreciation			3,365
	(\$31,900 – 7,975 – 5,981 – 4,486) × 25%			
2021	Depreciation Expense		2,093	
	Accumulated Depreciation			2,093
	(\$31,900 – 7,975 – 5,981 – 4,486 – 3,365) × 25% = \$2,523			

Note: Only \$2,093 of depreciation can be expensed to ensure that the carrying amount remains equal to the residual value of \$8,000.

3.

Asset cost, 2017	\$ 31,900
Depreciation expense for 3 years (2017, 2018, 2019)	(17,925)
Depreciable amount for remaining four years	<u>\$ 13,975</u>

Revised depreciation = $(13,975 - 2,000) \div (5 - 3) = \$5,988$

Annual depreciation for the remaining two years = \$5,988 per year

PROBLEM 8-5

1.

2011 depreciation $(\$115,000 - 17,250 \div 30 \times 50\%)$	\$ 288
2012-2017 depreciation $(\$115,000 - 17,250) \div 30 \times 6$ years	19,550
Total depreciation to Dec 31, 2017	<u>\$19,838</u>

Cost	\$ 115,000
Less: Accumulated depreciation	(19,838)
Carrying amount (Dec 31, 2017)	\$ 95,162

2. Revised depreciation for 2018: $(\$95,162 - 18,000) \div 15$ years remaining = \$5,144

Entry:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec 31, 2018	Depreciation Expense		5,144	
	Accumulated Depreciation			5,144
	To record depreciation for 2018.			

3.

General Journal				
Date	Account/Explanation	R	Debit	Credit
July 31, 2019	Depreciation Expense		2,572	
	Accumulated Depreciation			2,572
	To record depreciation to date of disposal: (\$5,144 × 50%).			
July 31, 2019	Cash		80,000	
	Accumulated Depreciation – Machine (\$19,838 + 5,144 + 2,572)		27,554	
	Loss on Disposal		7,446	
	Machine			115,000
	To record sale of asset.			

PROBLEM 8–6

1.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Aug 1, 2018	Equipment		250,000	
	Cash			250,000
	To record the purchase of equipment.			

2.

General Journal				
Date	Account/Explanation	R	Debit	Credit
2014	Depreciation Expense		11,550	
	Accumulated Depreciation			11,550
	(\$250,000 – 40,000) ÷ 200,000 × 11,000)			
2015	Depreciation Expense		26,250	
	Accumulated Depreciation			26,250
	(\$250,000 – 40,000) ÷ 200,000 × 25,000)			
2016	Depreciation Expense		36,750	
	Accumulated Depreciation			36,750
	(\$250,000 – 40,000) ÷ 200,000 × 35,000)			

3.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 1, 2017	New asset*		170,000	
	Accum depreciation – Old asset		74,550	
	Loss on disposal		35,450	
	Old asset			250,000
	Cash			30,000
	To record the trade-in of the old asset for a new asset.			

* Trade-in of asset:

Value of new asset = cash paid + fair value of asset traded (given up) = \$30,000 + \$140,000 = \$170,000

PROBLEM 8–7

1.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 1, 2018	Land		150,000	
	Buildings		400,000	
	Patents		200,000	
	Machinery		150,000	
	Goodwill		100,000	
	Cash			1,000,000
	To record purchase of Zak Company assets.			

2. For the impairment loss:

Carrying amount January 1, 2020:

$$(\$200,000 - 0) \div 20 \text{ years} = 10,000 \text{ per year} \div 2 \text{ years} = \$20,000$$

$$\$200,000 - 20,000 = \$180,000$$

Fair Market Value amount is 165,000, therefore there is an impairment.

Impairment amount: \$15,000

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 1, 2020	Loss on impairment of patents		15,000	
	Patents			15,000

3. Amortization:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Amortization expense		9,167	
	Accumulated amortization, patents . . .			9,167
	((\\$165,000* - 0) ÷ (20 - 2))			

* Note: When an impairment occurs, the new carrying amount will be the Fair Market Value amount.

4.

Teldor Ltd.
Balance Sheet
At December 31, 2020

Intangible assets:		
Patents	\$ 165,000	
Accumulated amortization	<u>(29,167)</u>	\$135,833
Total intangible assets		235,833

Disclosure:

Patents were purchased on January 1, 2018 for \$200,000. Their useful life is estimated to be 20 years and amortized on a straight-line basis. In 2020, patents were written down to \$165,000 based on their Fair Market Value amount at that date.

Note: Goodwill is not reported as an intangible asset.

1.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan 31, 2018	Computer		3,000	
	Cash			3,000
Mar 1, 2018	Computer		1,000	
	Cash			1,000
Apr 1, 2019	Computer		2,000	
	Cash			2,000

Alternate interpretations are acceptable, with adequate explanation.

2.

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec 31, 2018	Depreciation Expense		667	
	Accumulated Depreciation – Equip- ment			667
	To record 2018 depreciation: $(\$3,000 + 1,000) \times 1/3 \text{ years} \times 50\%$.			
Dec 31, 2019	Depreciation Expense		2,667	
	Accumulated Depreciation – Equip- ment			2,667
	To record 2019 depreciation: $(\$3,000 + 1,000 + 2,000 - 667) \times 50\%$			

Chapter 9 Solutions

PROBLEM 9–1

1. (a) Entry to record receipt of loan proceeds from the bank:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec. 31	Cash		100,000	
	Loan Payable			100,000
	To record loan from First National Bank.			

(b) Entry to record purchase of the equipment:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Jan. 2	Equipment		95,000	
	Cash			95,000
	To record purchase of equipment.			

2. The loan repayment schedule is as follows:

Zinc Corp. Loan Repayment Schedule					
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
			<i>(D – B)</i>		<i>(A – C)</i>
<i>Year</i>	<i>Beginning</i>	<i>(A × 8%)</i>	<i>Reduction</i>	<i>Total</i>	<i>Ending</i>
<i>Ended</i>	<i>Loan</i>	<i>Interest</i>	<i>of Loan</i>	<i>Loan</i>	<i>Loan</i>
<i>Dec. 31</i>	<i>Balance</i>	<i>Expense</i>	<i>Payable</i>	<i>Payment</i>	<i>Balance</i>
2016	\$100,000	\$8,000	\$22,192	\$30,192	\$77,808
2017	77,808	6,225	23,967	30,192	53,841
2018	53,841	4,307	25,885	30,192	27,956
2019	27,956	2,236	27,956	30,192	-0-

3. Entry to record the last loan payment:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Dec. 31	Interest Expense		2,236	
	Loan Payable		27,956	
	Cash			30,192
	To record final loan payment to First National Bank.			

4. The partial balance sheet is as follows:

Zinc Corp.
Partial Balance Sheet
At December 31, 2017

Liabilities

Current	
Current Portion of First National Bank Loan (Note X)	\$25,885
Non-current	
First National Bank Loan (Note X)	27,956

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.

Chapter 10 Solutions

PROBLEM 10–1

- The equity section of the balance sheet after the split is as follows:

	Before split		After split
	<i>Equity</i>		<i>Equity</i>
Common Stock		Common Stock	
Authorized – 5,000 Shares		Authorized – 5,000 Shares	
Issued and Outstanding – 1,000 Shares	\$100,000	Issued and Outstanding – 5,000 Shares	\$100,000

- Memorandum indicating the new number of shares:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Memorandum			
	The outstanding shares were increased from 1,000 to 5,000 by a 5-for-1 share split.			

- It can be estimated that the market price per share would approximate \$8 (\$40/5). However, the share split should not have any effect on the overall value of the firm to investors. Therefore, if five times as many shares are now outstanding, each share should be worth 1/5 as much but each stockholder's paid-in capital would be the same before and after the share split.

PROBLEM 10–2

1. General journal to record 2019 transactions:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Feb. 15	Cash dividends*		112	
	Preferred dividend payable			12
	Common dividend payable			100
Apr. 1	Preferred dividend payable		12	
	Common dividend payable		100	
	Cash			112
May 1	Stock dividend*		400	
	Common stock to be distributed			100
	Additional paid in capital			300
	(2,000 shares × 10% = 200. 200 × 2 = 400. Common stock listed at par 200 × \$0.5)			
Jun. 15	Common stock to be distributed		400	
	Common stock			400
Aug. 15	Cash dividends*		122	
	Preferred dividend payable			12
	Common dividend payable (2,200 shares × \$0.05)			110
Oct. 1	Preferred dividend payable		12	
	Common dividend payable		110	
	Cash			122
Dec. 15	Stock dividend*		660	
	Common stock to be distributed			110
	Additional paid in capital			550
	(2,200 × 10% = 220. 220 × \$3 = \$660. Common stock listed at par 220 × \$0.5)			
Dec. 27	Common stock to be distributed		660	
	Common stock			660
Dec. 31	Income summary		1,400	
	Retained earnings**			1,400
Dec. 31	Retained earnings**		1,294	
	Stock dividend*			1,060
	Cash dividends*			234

* Alternatively, Retained Earnings could have been debited.

**If Retained Earnings was debited on the dividend declaration dates, then a closing entry is not required.

2. The statement of changes is as follows:

TWR Contracting Inc.					
Statement of Stockholders' Equity					
For the Year Ended December 31, 2019					
	<i>Common</i>	<i>Preferred</i>	<i>Additional</i>	<i>Retained</i>	<i>Total</i>
	<i>Stock</i>	<i>Stock</i>	<i>Paid-in</i>	<i>Earnings</i>	<i>Equity</i>
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Opening Balance	\$1,000	\$400	\$1,000	\$ 900	\$ 3,300
Net Income				1,400	1,400
Dividends Declared					
Cash				(234)	(234)
Stock	210		850	(1,060)	
Ending Balance	<u>\$1,210</u>	<u>\$400</u>	<u>\$1,850</u>	<u>\$ 1,006</u>	<u>\$ 4,466</u>

PROBLEM 10–3

1. General journal to record 2019 transactions:

General Journal				
Date	Account/Explanation	R	Debit	Credit
Feb. 10	Cash dividends*		32,000	
	Preferred dividend payable			30,000
	Common dividend payable			2,000
	\$15,000 in arrears to preferred + \$15,000 for 2019, \$2,000 left for common			
Mar. 1	Preferred dividend payable		30,000	
	Common dividend payable		2,000	
	Cash			32,000
5	Cash		36,000	
	Preferred stock			36,000
	2,000 × \$18			
	Memorandum Entry: 2:1 split on preferred and common.			
	Preferred: (30,000 + 2,000) × 2 = 64,000			
	Common: 70,000 × 2 = 140,000			
Jun. 22	Cash		80,000	
	Common stock			20,000
	Additional paid in capital			60,000
	Cash 20,000 × \$4, Common stock 20,000 × \$1 par.			
Nov. 10	Stock dividend*		112,000	
	Common stock to be distributed			32,000
	Additional paid in capital			80,000
	(140,000 + 20,000) × 20% = 32,000 × \$3.50 = 112,000. Common stock listed at par 32,000 × \$0.1			
Dec. 15	Common stock to be distributed		32,000	
	Common stock			32,000
31	Income summary		290,000	
	Retained earnings			290,000
31	Retained earnings**		144,000	
	Stock dividend*			32,000
	Cash dividends*			112,000

* Alternatively, Retained earnings could have been debited.

** If Retained earnings was debited on the dividend declaration dates, then a closing entry is not required.

2. The equity section of the balance sheet is as follows:

Wondra Inc. Partial Balance Sheet December 31, 2019		
Contributed Capital		
Preferred Shares; \$0.50 cumulative; 400,000 shares authorized; 32,000 shares issued and outstanding		\$516,000
Common Shares; 700,000 shares authorized; 192,000 shares issued and 172,000 outstanding		<u>542,000</u>
Additional Paid in Capital		<u>220,000</u>
Treasury Stock		(10,000)
Total contributed capital		\$1,268,000
Retained Earnings		<u>241,000</u>
Total Equity		<u><u>\$1,509,000</u></u>

3. There are 20,000 Treasury stock shares (Issued: 192,000 – Outstanding: 172,000)

PROBLEM 10-4

1. The paid-in capital per common share, and book value per common share are:

$$\begin{aligned} \text{Paid-in capital per common share} &= \frac{\text{Total Paid-in Capital}}{\text{Number of shares outstanding}} \\ &= \$3,070/300 = \$10.23 \text{ (rounded)} \end{aligned}$$

$$\begin{aligned} \text{Book value per common share} &= \frac{\text{Total equity}}{\text{Number of shares outstanding}} \\ &= \$3,570/300 = \$11.90 \end{aligned}$$

2. There is little relationship between market price and the book value of a share. Book value provides only a basis on which to compare two or more companies, or to compare a company's market price per share. Market value is affected by investors' perceptions of future earnings expectations of the company. Also some assets recorded at historical cost, such as land, may have appreciated in value. This appreciation would be reflected in the market value of the common shares, but not in the book value.

Chapter 11 Solutions

PROBLEM 11–1

1. Entry to record the disposal:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Accumulated Depreciation		16 ¹	
	Cash		12	
	Equipment			20
	Gain on Sale of Equipment			8

Cost (given)	20
¹ Acc. Depreciation (derived)	(16)
Book Value or Carrying Amount (given)	<u>4</u>
Cash Proceeds (given)	(12)
Gain on Sale (given)	<u><u>8</u></u>

Cash is increased by \$12, the amount of the sale proceeds, but this does not represent cash flow from an operating activity. The sale of property, plant and equipment assets is an investing activity, and so will not be shown in the calculation of cash flow from operating activities. The \$12 inflow of cash from the sale of the equipment will be shown as a cash inflow in the Investing Activities section of the SCF.

The \$8 gain on sale is included in the calculation of net income. Since it (a) does not represent actual cash inflow (the \$12 is the actual cash inflow) and (b) is not an operating activity, the gain is deducted from net income on the SCF to derive cash flow from operating activities.

2. Cash flow from operating activities calculated as follows:

Net Income	\$33
Items Not Affecting Cash Flow	
Depreciation Expense	10
Gain on Sale of Equipment	(8)
Cash Flow from Operating Activities	<u><u>\$35</u></u>

PROBLEM 11–2

1. Beginning retained earnings + net income – dividends declared = Ending retained earnings; $156 + 50 - 0 = 206$. No dividends were declared so the net change in retained earnings of 50 is entirely an operating activity – net income.
2. The cash flow from operating activities is calculating as follows:

	<i>Balance</i>		<i>Change</i>		<i>Cash Effect</i>		<i>Activity</i>
	<i>2019</i>	<i>2018</i>					
	<i>Dr. (Cr.)</i>	<i>Dr. (Cr.)</i>	<i>Dr.</i>	<i>Cr.</i>	<i>Inflow</i>	<i>Outflow</i>	
Cash	100	86	14		To be explained		C&CE
Accounts Receivable	60	40	20			20	Operating
Inventory	36	30	6			6	Operating
Prepaid Rent	10	-0-	10			10	Operating
Retained Earnings	(206)	(156)		50	50		Operating
	<u>-0-</u>	<u>-0-</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>36</u>	

\$14 net cash inflow

Cash flow from operating activities would be calculated as:

Net Income		\$ 50
Adjustments to reconcile net income to cash provided by operating activities:		
Increase in Accounts Receivable	(20)	
Increase in Inventory	(6)	
Increase in Prepaid Rent	(10)	(36)
Cash Flow from operating activities		<u>\$ 14</u>

PROBLEM 11–3

1. Entry to record the depreciation expense for the year:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Depreciation Expense		100	
	Accumulated Depreciation – Machinery			100

There is no cash effect. However, the depreciation expense should be added back to the net loss figure when deriving cash flow from operating activities because it is a non-cash expense.

2. Entry to account for the change in the Machinery balance sheet account:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Machinery		300	
	Cash			300

Since (a) the Machinery account increased \$300 (500 – 200) during the year, (b) no disposals occurred, and (c) all purchases of machinery were paid in cash, \$300 of cash must have been spent on machinery purchases. This cash outflow is an investing activity.

3. Cash flow table:

	<i>Balance</i>		<i>Change</i>		<i>Cash Effect</i>		<i>Activity</i>
	<i>2019</i>	<i>2018</i>					
	<i>Dr. (Cr.)</i>	<i>Dr. (Cr.)</i>	<i>Dr.</i>	<i>Cr.</i>	<i>Inflow</i>	<i>Outflow</i>	
Cash	350	650		300	To be explained		C&CE
Machinery	500	200	300			300	Investing
Accumulated Depreciation	(250)	(150)		100	100		Operating
Retained Earnings	(600)	(700)	100			100	Operating
	<u>-0-</u>	<u>-0-</u>	<u>400</u>	<u>400</u>	<u>100</u>	<u>400</u>	

\$300 net cash outflow

Statement of Cash Flows
For the Year Ended December 31, 2019

<i>Cash flows from operating activities:</i>	
Net Loss	\$(100)
Adjustments to reconcile net loss to cash provided by operating activities	
Depreciation Expense	100
Net cash flow from operating activities	<u>-0-</u>
<i>Cash flows from investing activities:</i>	
Purchase of Machinery	(300)
Net decrease in cash	<u>(300)</u>
Cash at beginning of year	650
Cash at end of year	<u>\$350</u>

1. Cash flow table:

	<i>Balance</i>		<i>Change</i>		<i>Cash Effect</i>		<i>Activity</i>
	<i>2019</i>	<i>2018</i>	<i>Dr.</i>	<i>Cr.</i>	<i>Inflow</i>	<i>Outflow</i>	
	<i>Dr. (Cr.)</i>	<i>Dr. (Cr.)</i>					
Cash	1,350	1,800		*450	To be explained		C&CE
Borrowings	(800)	(1,300)	500			500	Financing
Retained Earnings	(550)	(500)		50	90		Operating
						40	Financing
	<u>-0-</u>	<u>-0-</u>	<u>500</u>	<u>500</u>	<u>90</u>	<u>540</u>	

*\$450 net cash outflow

Cash flow from operating activities equals net income of \$90. All revenue was received in cash and all expenses were paid in cash, and there were no changes to any other balance sheet accounts that affect cash flow from operating activities.

2. Dividends declared must have been \$40, calculated as follows:

Opening Retained Earnings (given)	\$500
Add: Net Income (given)	90
Less: Dividends Paid (derived)	(40)
Ending Retained Earnings (given)	<u>\$550</u>

3. Cash Used by Financing Activities:

Repayment of Borrowings	\$(500)
Payment of Dividends	(40)
	<u>\$(540)</u>

PROBLEM 11-5

Calculations:

	<i>Change</i>		<i>Cash Effect</i>		<i>Activity</i>
	<i>Dr.</i>	<i>Cr.</i>	<i>Inflow</i>	<i>Outflow</i>	
Cash	*1,175		To be explained		C&CE
Accum. Dep'n.		120(b)	120		Operating
Accounts Receivable	(d)40			40	Operating
Merchandise Inventory		50(e)	50		Operating
Accum. Amort – Patents		5(f)	5		Operating
Wages Payable		20(c)	20		Operating
Borrowings	(g)250			250	Financing
Common Stock		500(h)	500		Financing
Retained Earnings		800(a)	800		Operating
	(i)30			30	Financing
	<u>1,495</u>	<u>1,495</u>	<u>1,495</u>	<u>320</u>	

*\$1,175 net cash inflow

Dunn Corporation
Statement of Cash Flows
For the Year Ended December 31, 2019

Cash flows from operating activities:

Net Income	\$800
Adjustments to reconcile net income to cash provided by operating activities	
Increase in accounts receivable	(40)
Decrease in merchandise inventory	50
Increase in wages payable	20
Depreciation and Amortization Expense (\$120 + 5)	125
Net cash inflow from operating activities	<u>955</u>
<i>Cash flows from financing activities:</i>	
Repayment of borrowings	\$(250)
Common stock issued	500
Payment of dividends	<u>(30)</u>
Net cash inflow from financing activities	<u>220</u>
Net increase in cash	<u>1,175</u>
Cash at beginning of year**	25
Cash at End of Year	<u><u>\$1,200</u></u>

**If the company had \$1,200 cash on hand at the end of the year and cash increased by \$1,175 during the year, cash on hand at the beginning of the year must be \$25.

PROBLEM 11–6

Calculations:

	<i>Change</i>		<i>Cash Effect</i>		<i>Activity</i>
	<i>Dr.</i>	<i>Cr.</i>	<i>Inflow</i>	<i>Outflow</i>	
Cash	37,900 ²		To be explained		C&CE
Accounts Receivable	(c) 900			900	Operating
Merchandise Inventory		(d) 1,200	1,200		Operating
Equipment	(h) 10,000 ⁵				Investing
		(j) 15,000	(i) 6,000 ³		Investing
			(j) 1,500		Operating
Accum. Dep'n. – Equip.	(j) 7,500	(a) 3,000	3,000		Operating
Accum. Amort – Patents		(e) 100	100		Operating
Accounts Payable	(k) 1,000			1,000	Operating
Wages Payable		(b) 500	500		Operating
Dividends Payable		(i) 5,000 ⁴			
Borrowings	(f) 5,000			5,000	Financing
Common stock		(g) 12,500	12,500		Financing
		(h) 10,000 ⁵			
Retained Earnings		20,000 ¹	20,000		Operating
	(i) 5,000 ⁴				
	<u>67,300</u>	<u>67,300</u>	<u>44,800</u>	<u>6,900</u>	

\$37,900² net cash inflow¹ Net income = \$95,000 – 70,000 – 5,000 = \$20,000² Given

³ Cost of machinery	\$15,000
Accumulated depreciation (1/2)	(7,500)
Carrying amount	<u>7,500</u>
Cash proceeds	(6,000)
Loss on disposal	<u>\$1,500</u>

The journal entry to record the sale would be:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Cash		6,000 (i)	
	Accumulated Dep'n.....		7,500	
	Loss on Sale		1,500(j)	
	Machinery			15,000

Items (a) and (b) affect the SCF. The first (i) is a cash inflow from investing activities. The second (j) is added back to net income to arrive at cash flow from operating activities.

⁴ Dividends were declared but not paid therefore there is no impact on cash.

⁵ \$10,000 of equipment was acquired by issuing common stock which is a non-cash transaction reported in a note but not included on the statement of cash flows.

1. The statement of cash flows is as follows:

Wheaton Co. Ltd.
Statement of Cash Flows
For the Year Ended December 31, 2019

<i>Cash flows from operating activities:</i>		
Net income (\$95,000 – 70,000 – 5,000)		\$ 20,000
Adjustments to reconcile net income to cash provided by operating activities:		
Depreciation and amortization (\$3,000 + 100)		3,100
Loss on Disposal of Machinery		1,500
Increase in wages payable		500
Increase in accounts receivable		(900)
Decrease in merchandise inventory		1,200
Decrease in accounts payable		(1,000)
Net cash inflow from operating activities		<u>24,400</u>
<i>Cash flows from investing activities:</i>		
Proceeds from sale of machinery	\$ 6,000	
Net cash inflow from investing activities		<u>6,000</u>
<i>Cash flows from financing activities:</i>		
Repayment of borrowings	(5,000)	
Common stock issued for cash	12,500	
Net cash inflow from financing activities		<u>7,500</u>
Net Increase in cash (given)		<u>37,900</u>
Cash at beginning of year (given)		1,000
Cash at end of year (derived)		<u><u>\$ 38,900</u></u>

2. The statement of cash flows shows that the company has financed its activities internally

from operations and by issuing common stock. The sale of machinery also generated cash. It has repaid some borrowings and acquired some property, plant and equipment assets. Wheaton Co. Ltd. has generated substantially more cash than it has used in 2019.

Chapter 12 Solutions

PROBLEM 12–1

Belafonte Corporation					
Balance Sheet					
At April 30, 2011					
<i>Assets</i>			<i>Liabilities and Equity</i>		
Cash	\$ 2,000	(c)	Accounts Payable	\$ 8,000	(f)
Accounts Receivable	8,000	(a)	Bonds Payable	20,000	(b)
Merchandise Inventories	20,000	(b)	Common Shares	15,000	(g)
Total Current Assets	30,000	(d)	Retained Earnings	7,000	(i)
Property, plant and equipment assets (net)	20,000	(b)			
Total Assets	\$50,000	(e)	Total Liabilities and Equity	\$50,000	(h)

Information:

- (1) Current assets = $3.75 \times$ Current liabilities (accounts payable)
- (2) Sales for year = \$73,000
- (3) Merchandise inventories = \$20,000 = Property, plant and equipment assets = bonds payable
- (4) Accounts receivable collection period = 40 days

$$\frac{\text{Average accounts receivable}}{\text{Net credit sales}} \times 365 \text{ days}$$

- (5) Bonds payable = $10 \times$ cash
- (6) Total current assets = $2 \times$ common shares.

Calculations:

$$(a) \frac{\text{Average accounts receivable}}{\$73,000} \times 365 \text{ days} = 40 \text{ days}$$

$$\text{Average accounts receivable} = \$8,000$$

(b) Merchandise inventory, property, plant and equipment assets (net), and bonds payable each equal \$20,000

$$(c) \text{Cash} = \text{bonds payable}/10 = \$20,000/10 = \$2,000$$

$$(d) \text{Total current assets} = \$2,000 + 8,000 + 20,000 = \$30,000$$

$$(e) \text{Total assets} = \$20,000 + 30,000 = \$50,000$$

$$(f) \text{Accounts payable} = \text{Current assets}/3.75 = \$30,000/3.75 = \$8,000$$

$$(g) \text{Common shares} = \text{Current assets}/2 = \$30,000/2 = \$15,000$$

(h) Total liabilities and equity must equal total assets

$$(i) \text{Retained earnings} = \text{Total liabilities and equity} - \text{accounts payable} - \text{bonds payable} - \text{common shares} = \$50,000 - 8,000 - 20,000 - \$15,000 = \$7,000$$

PROBLEM 12-2

Hook Limited
Balance Sheet
At December 31, 2011

<i>Assets</i>			
Current			
Cash		\$ 30,000	
Accounts Receivable		150,000	(3)
Merchandise Inventories		90,000	(4)
Total Current Assets		270,000	(2)
Property, Plant, and Equipment	442,500		(10)
Less: Accumulated Depreciation	100,000	342,500	(9)
Total Assets		\$612,500	(8)
 <i>Liabilities</i>			
Current			
Accounts Payable	\$ 50,000		
Accrued Liabilities	70,000		(1)
Total Current Liabilities		120,000	
Non-current			
8% Bonds Payable		125,000	(6)
		245,000	
 <i>Equity</i>			
Common Shares	80,000		(5)
Retained Earnings	287,500		(12)
Total Liabilities and Equity		\$612,500	(11)

Calculations:

- (1) $\text{Accrued liabilities} = \$120,000 - 50,000 = \$70,000$
(Total current liabilities – accounts payable)
- (2) $\text{Total current assets} = \$120,000 + 150,000 = \$270,000$
(Total current liabilities + working capital)
- (3) $\text{Accounts receivable} = (\$120,000 \times 1.5) - 30,000 = \$150,000$
[(Total current liabilities \times acid-test ratio) – cash]
- (4) $\text{Inventories} = \$270,000 - 150,000 - 30,000 = \$90,000$
(Total current assets – accounts receivable – cash)
- (5) $\text{Net income} = [\$80,000 - (80,000/8)] - \$30,000 = \$40,000$

[Income before interest and income taxes – (income before interest and income taxes/times interest earned) – income taxes

Therefore, common shares = $\$40,000/5 \times \$10 = \$80,000$

(Net income/Earnings per share) \times issued value

(6) Bonds payable = $\$80,000/8$ divided by $0.08\% = \$125,000$

[Income before interest and income taxes/Times interest earned]/Interest rate]

(7) If the ratio of equity to total assets is 0.60 to 1, then the ratio of liabilities to total assets is 0.40 to 1.

(8) Total assets = $(\$120,000 + 125,000)/0.4 = \$612,500$

[(Total current liabilities + total non-current liabilities)/Total debt to total assets ratio]

(9) Net PPE = $\$612,500 - 270,000 = \$342,500$

(Total assets – current assets)

(10) PPE = $\$342,500 + 100,000 = \$442,500$

(Net PPE + accumulated depreciation)

(11) Total liabilities and equity = Total assets = $\$612,500$.

(12) Retained earnings = $\$612,500 - 245,000 - 80,000 = \$287,500$

(Total liabilities and equity – total liabilities – common shares)

Chapter 13 Solutions

PROBLEM 13–1

1. Schedule to allocate the 2015 net income to partners:

	<i>Bog</i>	<i>Cog</i>	<i>Fog</i>	<i>Total</i>
Profit to be allocated				\$40,000
<i>Interest allocation:</i>				
Bog: \$60,000 × 10%	\$ 6,000			
Cog: \$100,000 × 10%		\$ 10,000		
Fog: \$20,000 × 10%			\$ 2,000	
Balance				22,000
<i>Salary allocation:</i>	24,000	30,000	48,000	(102,000)
Balance (deficit)				(80,000)
<i>Balance allocated in profit and loss sharing ratio:</i>				
Bog: (\$80,000) × 5/10	(40,000)			
Cog: (\$80,000) × 3/10		(24,000)		
Fog: (\$80,000 × 2/10			(16,000)	
Balance				\$ -0-
Total allocated to partners	<u>(\$10,000)</u>	<u>\$16,000</u>	<u>\$34,000</u>	

2. Entry to record the division of the 2015 net income:

General Journal				
Date	Account/Explanation	R	Debit	Credit
	Income Summary		40,000	
	Bog, Capital		10,000	
	Cog, Capital			16,000
	Fog, Capital			34,000
	To record net income allocation to partners.			



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