CHAPTER

3

THE ACCOUNTING CYCLE:

Capturing Economic Events

Learning Objectives

After studying this chapter, you should be able to:

1. **Identify the steps in the accounting cycle and discuss the role of accounting records in an organization.**
2. **Describe a ledger account and a ledger.**
3. **State the rules of debit and credit for balance sheet accounts.**
4. **Explain the double-entry system of accounting.**
5. **Explain the purpose of a journal and its relationship to the ledger.**
6. **Explain the nature of *net income, revenue,* and *expenses.***
7. **Apply the *realization* and *matching* principles in recording revenue and expenses.**
8. **Explain *why* revenues are recorded with credits and expenses are recorded with debits.**
9. **Prepare a trial balance and explain its uses and limitations.**
10. **Distinguish between accounting cycle procedures and the *knowledge* of accounting.**

PepsiCo China Business Unit Guangzhou PepsiCo Beverage Co. Ltd.

PepsiCo, Inc.

Capturing the economic events of a lemonade stand is a fairly simple process. In fact, for most lemonade stands, an empty cigar box easily serves as a complete information system.

Capturing the economic events of **PepsiCo, Inc.**, however, is an entirely different matter. This giant corporation generates annual revenue in excess of $20 billion from sales of its soft drink products, its Tropicana juices, and its Frito-Lay snack foods. Employing nearly 120,000 people, and operating hundreds of manufacturing facilities and thousands of warehouses and distribution centers, **PepsiCo, Inc.**, must somehow capture complex business transactions occurring in more than 160 countries worldwide.

From lemonade stands to multinational corporations, being able to efficiently capture the effects of economic events, such as sales orders and raw material purchases, is absolutely essential for survival. Companies like **PepsiCo, Inc.**, rely upon sophisticated computer systems to capture economic activities. Some small enterprises, however, may use paper ledgers and journals to record business transactions.

• • •

Although Overnight Auto Service engaged in several business transactions in the previous chapter, we did not illustrate how these events were captured by Overnight for use by management and other interested parties. This chapter demonstrates how accounting systems record economic events related to a variety of business transactions.

THE ACCOUNTING CYCLE

LO 1

Identify the steps in the accounting cycle and discuss the role of accounting records in an organization.

In Chapter 2, we illustrated several transactions of Overnight Auto Service that occurred during the last week in January 2002. We prepared a complete set of financial statements immediately following our discussion of these transactions. For practical purposes, businesses do not prepare new financial statements after every transaction. Rather, they accumulate the effects of individual transactions in their *accounting records.* Then, at regular intervals, the data in these records are used to prepare financial statements, income tax returns, and other types of reports.

The sequence of accounting procedures used to record, classify, and summarize accounting information in financial reports at regular intervals is often termed the **accounting cycle**. The accounting cycle begins with the initial recording of business transactions and concludes with the preparation of a complete set of formal financial statements. The term *cycle* indicates that these procedures must be repeated continuously to enable the business to prepare new, up-to-date, financial statements at reasonable intervals.

The accounting cycle generally consists of eight specific steps. In this chapter, we illustrate how businesses (1) journalize (record) transactions, (2) post each journal entry to the appropriate ledger accounts, and (3) prepare a trial balance. The remaining steps of the cycle will be addressed in Chapters 4 and 5. They include (4) making end-of-period adjustments, (5) preparing an adjusted trial balance, (6) preparing financial statements, (7) journalizing and posting closing entries, and (8) preparing an after-closing trial balance.

The Role of Accounting Records

The cyclical process of collecting financial information and maintaining accounting records does far more than facilitate the preparation of financial statements. Managers and employees of a business frequently use the information stored in the accounting records for such purposes as:

1. Establishing **accountability** for the assets and/or transactions under an individual's control.
2. Keeping track of routine business activities—such as the amounts of money in company bank accounts, amounts due from credit customers, or amounts owed to suppliers.
3. Obtaining detailed information about a particular transaction.
4. Evaluating the efficiency and performance of various departments within the organization.
5. Maintaining documentary evidence of the company's business activities. (For example, tax laws require companies to maintain accounting records supporting the amounts reported in tax returns.)

THE LEDGER

LO 2

Describe a ledger account and a ledger.

An accounting system includes a separate record for each item that appears in the financial statements. For example, a separate record is kept for the asset cash, showing all increases and decreases in cash resulting from the many transactions in which cash is received or paid. A similar record is kept for every other asset, for every liability, for owners' equity, and for every revenue and expense account appearing in the income statement.

The record used to keep track of the increases and decreases in financial statement items is termed a "ledger account" or, simply, an **account**. The entire group of accounts is kept together in an accounting record called a **ledger**.

THE USE OF ACCOUNTS

An account is a means of accumulating in one place all the information about changes in specific financial statement items, such as a particular asset or liability. For example, the Cash account provides a company's current cash balance, a record of its cash receipts, and a record of its cash disbursements.

In its simplest form, an account has only three elements: (1) a title; (2) a left side, which is called the *debit* side; and (3) a right side, which is called the *credit* side. This form of an account, illustrated below and on the following page, is called a *T account* because of its resemblance to the letter "T." In a computerized system, of course, the elements of each account are stored and formatted electronically. More complete forms of accounts will be illustrated later.

A T account—a ledger account in its simplest form

Title of Account	
Left or Debit Side	Right or Credit Side

DEBIT AND CREDIT ENTRIES

An amount recorded on the left, or debit, side of an account is called a **debit**, or a debit entry. Likewise, any amount entered on the right, or credit, side is called a **credit**, or a credit entry. In simple terms, debits refer to the left side of an account, and credits refer to the right side of an account.

To illustrate the recording of debits and credits in an account, let us go back to the eight cash transactions of Overnight Auto Service, described in Chapter 2. When these cash transactions are recorded in the Cash account, the receipts are listed on the debit side, and the payments are listed on the credit side. The dates of the transactions may also be listed, as shown in the following illustration:

Cash transactions entered in ledger account

Cash			
1/20	80,000	1/21	52,000
1/26	600	1/22	6,000
1/31	2,200	1/27	6,800
		1/31	200
		1/31	1,200
1/31 Balance	16,600		

Each debit and credit entry in the Cash account represents a cash receipt or a cash payment. The amount of cash owned by the business at a given date is equal to the *balance* of the account on that date.

Determining the Balance of a T Account The balance of an account is the difference between the debit and credit entries in the account. If the debit total exceeds the credit total, the account has a *debit balance*; if the credit total exceeds the debit total, the account has a *credit balance*.

In our illustrated Cash account, a dotted line has been drawn across the account following the last cash transaction recorded in January. The total cash receipts (debits) recorded in January amount to $82,800, and the total cash payments (credits) amount to $66,200. By subtracting the credit total from the debit total ($82,800 − $66,200), we determine that the Cash account has a debit balance of *$16,600* on January 31.

This debit balance is entered in the debit side of the account just below the line. In effect, the horizontal rule creates a "fresh start" in the account, with the month-end balance representing the *net result* of all the previous debit and credit entries. The Cash account now shows the amount of cash owned by the business on January 31. In a balance sheet prepared at this date, Cash in the amount of $16,600 would be listed as an asset.

YOUR TURN

You as a Student

You probably do not use debits and credits in accounting for your personal financial activities. Does this mean that the concept of double-entry accounting does not apply to changes in your personal financial position? Explain and provide several examples.

*Our comments appear on page 131.

LO 3

State the rules of debit and credit for balance sheet accounts.

Debit Balances in Asset Accounts In the preceding illustration of a Cash account, increases were recorded on the left, or debit, side of the account and decreases were recorded on the right, or credit, side. The increases were greater than the decreases and the result was a debit balance in the account.

All asset accounts *normally have debit balances*. It is hard to imagine an account for an asset such as land having a credit balance, as this would indicate that the business had disposed of more land than it had ever acquired. (For some assets, such as cash, it is possible to acquire a credit balance—but such balances are only *temporary*.)

The fact that assets are located on the left side of the balance sheet is a convenient means of remembering the rule that an increase in an asset is recorded on the *left* (debit) side of the account and an asset account normally has a debit *(left-hand)* balance.

Asset accounts normally have debit balances

Any Asset Account

Debit (representing an increase)	Credit (representing a decrease)

Credit Balances in Liability and Owners' Equity Accounts Increases in liability and owners' equity accounts are recorded by credit entries and decreases in these accounts are recorded by debits. The relationship between entries in these accounts and their position on the balance sheet may be summed up as follows: (1) liabilities and owners' equity belong on the *right* side of the balance sheet, (2) an increase in a liability or an owners' equity account is recorded on the *right* (credit) side of the account, and (3) liability and owners' equity accounts normally have credit *(right-hand)* balances.

Liability and owners' equity accounts normally have credit balances

Any Liability Account or Owners' Equity Account

Debit (representing a decrease)	Credit (representing an increase)

Concise Statement of the Debit and Credit Rules The use of debits and credits to record changes in assets, liabilities, and owners' equity may be summarized as follows:

Debit and credit rules

Asset Accounts	Liability & Owners' Equity Accounts
Normally have debit balances. Thus, increases are recorded by debits and decreases are recorded by credits.	Normally have credit balances. Thus, increases are recorded by credits and decreases are recorded by debits.

Double-Entry Accounting — The Equality of Debits and Credits

The rules for debits and credits are designed so that *every transaction is recorded by equal dollar amounts of debits and credits*. The reason for this equality lies in the relationship of the debit and credit rules to the accounting equation:

$$\underbrace{\textbf{Assets}}_{\textbf{Debit Balances}} = \underbrace{\textbf{Liabilities} + \textbf{Owners' Equity}}_{\textbf{Credit Balances}}$$

LO 4
Explain the double-entry system of accounting.

If this equation is to remain in balance, any change in the left side of the equation (assets) *must be accompanied by an equal change* in the right side (either liabilities or owners' equity). According to the debit and credit rules that we have just described, increases in the left side of the equation (assets) are recorded by *debits,* while increases in the right side (liabilities and owners' equity) are recorded by *credits*.

This system is often called **double-entry accounting**. The phrase *double-entry* refers to the need for both *debit entries* and *credit entries,* equal in dollar amount, to record every transaction. Virtually every business organization uses the double-entry system regardless of whether the company's accounting records are maintained manually or by computer. In addition, the double-entry system allows us to measure net income at the same time we record the effects of transactions on the balance sheet accounts.

RECORDING TRANSACTIONS IN LEDGER ACCOUNTS: AN ILLUSTRATION

The use of debits and credits for recording transactions in accounts now will be illustrated using selected January transactions of Overnight Auto Service. At this point, we discuss only those transactions related to changes in the company's financial position and reported directly in its balance sheet. The revenue and expense transactions that took place on January 31 will be addressed later in the chapter.

Each transaction from January 20 through January 27 is analyzed first in terms of increases in assets, liabilities, and owners' equity. Second, we follow the debit and credit rules for entering these increases and decreases in specific accounts. Asset accounts will be shown on the left side of the analysis; liability and owners' equity accounts will be shown on the right side. For convenience in the following transactions, both the debit and credit entries for the transaction under discussion are shown in *red*. Entries relating to earlier transactions appear in *black*.

Jan. 20 Michael McBryan and family, invested $80,000 cash in exchange for capital stock.

Owners invest cash in the business

ANALYSIS	The asset Cash is increased by $80,000, and owners' equity (Capital Stock) is increased by the same amount.	
DEBIT–CREDIT RULES	Increases in assets are recorded by debits; debit Cash $80,000. Increases in owners' equity are recorded by credits; credit Capital Stock $80,000.	
ENTRIES IN LEDGER ACCOUNTS	**Cash** Debit: 1/20 80,000	**Capital Stock** Credit: 1/20 80,000

Jan. 21 Representing Overnight, McBryan negotiated with both the City of Santa Teresa and Metropolitan Transit Authority (MTA) to purchase an abandoned bus garage. (The city owned the land, but the MTA owned the building.) On January 21, Overnight Auto Service purchased the land from the city for $52,000 cash.

Purchase of an asset for cash

ANALYSIS	The asset Land is increased $52,000, and the asset Cash is decreased $52,000.
DEBIT–CREDIT RULES	Increases in assets are recorded by debits; debit Land $52,000. Decreases in assets are recorded by credits; credit Cash $52,000.

ENTRIES IN LEDGER ACCOUNTS

Cash	
1/20 80,000	1/21 52,000

Land	
1/21 52,000	

Jan. 22 Overnight completed the acquisition of its business location by purchasing the abandoned building from the MTA. The purchase price was $36,000; Overnight made a $6,000 cash down payment and issued a 90-day, non-interest-bearing note payable for the remaining $30,000.

Purchase of an asset, making a small down payment

ANALYSIS	A new asset Building is acquired at a total cost of $36,000. The asset Cash is decreased $6,000, and a liability Notes Payable of $30,000 is incurred.
DEBIT–CREDIT RULES	Increases in assets are recorded by debits; debit Building $36,000. Decreases in assets are recorded by credits; credit Cash $6,000. Increases in liabilities are recorded by credits; credit Notes Payable $30,000.

ENTRIES IN LEDGER ACCOUNTS

Cash	
1/22 80,000	1/21 52,000 1/22 6,000

Notes Payable	
	1/22 30,000

Building	
1/22 36,000	

Jan. 23 Overnight purchased tools and equipment on account from **Snap-On Tools Corp**. The purchase price was $13,800, due in 60 days.

Credit purchase of an asset

ANALYSIS	A new asset Tools and Equipment is acquired at a cost of $13,800, and a liability Accounts Payable of $13,800 is incurred.
DEBIT–CREDIT RULES	Increases in assets are recorded by debits; debit Tools and Equipment $13,800. Increases in liabilities are recorded by credits; credit Accounts Payable $13,800.
ENTRIES IN LEDGER ACCOUNTS	see T-accounts below

Tools and Equipment	
1/23 13,800	

Accounts Payable	
	1/23 13,800

Jan. 24 Overnight found that it had purchased more tools than it needed. On January 24, it sold the excess tools on account to Ace Towing at a price of $1,800. The tools were sold at a price equal to their cost, so there was no gain or loss on this transaction.

Credit sale of an asset (with no gain or loss)

ANALYSIS	Since the tools are sold at cost, there is no gain or loss on this transaction. An asset Accounts Receivable is acquired in the amount of $1,800; the asset Tools and Equipment is decreased $1,800.
DEBIT–CREDIT RULES	Increases in assets are recorded by debits; debit Accounts Receivable $1,800. Decreases in assets are recorded by credits; credit Tools and Equipment $1,800.
ENTRIES IN LEDGER ACCOUNTS	see T-accounts below

Accounts Receivable	
1/24 1,800	

Tools and Equipment	
1/23 13,800	1/24 1,800

Jan. 26 Overnight received $600 in partial collection of the account receivable from Ace Towing.

Collection of an account receivable

ANALYSIS	The asset Cash is increased $600, and the asset Accounts Receivable is decreased $600.
DEBIT–CREDIT RULES	Increases in assets are recorded by debits; debit Cash $600. Decreases in assets are recorded by credits; credit Accounts Receivable $600.
ENTRIES IN LEDGER ACCOUNTS	see T-accounts below

Cash	
1/20 80,000	1/21 52,000
1/26 600	1/22 6,000

Accounts Receivable	
1/24 1,800	1/26 600

Jan. 27 Overnight made a $6,800 partial payment of its account payable to **Snap-On Tools Corp**.

Payment of an account payable

ANALYSIS	The liability Accounts Payable is decreased $6,800, and the asset Cash is decreased $6,800.
DEBIT–CREDIT RULES	Decreases in liabilities are recorded by debits; debit Accounts Payable $6,800. Decreases in assets are recorded by credits; credit Cash $6,800.
ENTRIES IN LEDGER ACCOUNTS	see accounts below

Cash

1/20	80,000	1/21	52,000
1/26	600	1/22	6,000
		1/27	6,800

Accounts Payable

1/27	6,800	1/23	13,800

THE JOURNAL

LO 5

Explain the purpose of a journal and its relationship to the ledger.

In the preceding discussion, we recorded Overnight Auto Service's transactions in the company's ledger accounts. We did this to stress the effects of business transactions on the individual asset, liability, and owners' equity accounts. In an actual accounting system, however, the information about each business transaction is initially recorded in an accounting record called the **journal**.

The journal is a chronological (day-by-day) record of business transactions. At convenient intervals, the debit and credit amounts recorded in the journal are transferred (posted) to the accounts in the ledger. The updated ledger accounts, in turn, serve as the basis for preparing the company's financial statements.

The simplest type of journal is called a **general journal** and is shown at the top of the following page. Note the way in which transactions are recorded in the general journal:

1. The name of the account to be debited is written first, and the dollar amount to be debited appears in the left-hand money column.
2. The name of the account credited appears below the account debited and is indented to the right. The dollar amount credited appears in the right-hand money column.
3. A brief description of each transaction appears immediately below each journal entry.

Accounting software packages automate and streamline the way in which transactions are recorded. However, recording transactions manually—without a computer—is an effective way to conceptualize the manner in which economic events are captured by accounting systems and subsequently reported in a company's financial statements.

Journal entries of Overnight Auto Service for January 20 through January 27

GENERAL JOURNAL			
Date	**Account Titles and Explanation**	**Debit**	**Credit**
2002			
Jan. 20	Cash	80,000	
	Capital Stock		80,000
	Owners invest cash in the business.		
21	Land	52,000	
	Cash		52,000
	Purchased land for business site.		
22	Building	36,000	
	Cash		6,000
	Notes Payable		30,000
	Purchased building from MTA. Paid part cash; balance payable within 90 days.		
23	Tools and Equipment	13,800	
	Accounts Payable		13,800
	Purchased tools and equipment on credit from Snap-On Tools Corp. Due in 60 days.		
24	Accounts Receivable	1,800	
	Tools and Equipment		1,800
	Sold unused tools and equipment at cost to Ace Towing.		
26	Cash	600	
	Accounts Receivable		600
	Collected part of account receivable from Ace Towing.		
27	Accounts Payable	6,800	
	Cash		6,800
	Made partial payment of the liability to Snap-On Tools Corp.		

A familiarity with the general journal form of describing transactions is just as essential to the study of accounting as a familiarity with plus and minus signs is to the study of mathematics. The journal entry is a *tool* for *analyzing* and *describing* the impact of various transactions on a business entity. The ability to describe a transaction in journal entry form requires an understanding of the nature of the transaction and its effect on the financial position of the business.

Posting Journal Entries to the Ledger Accounts (and How to "Read" a Journal Entry)

We have made the point that transactions are recorded *first* in the journal. Ledger accounts are updated *later,* through a process called **posting**. (In a computerized system, postings often occur instantaneously, rather than later.)

Posting simply means *updating the ledger accounts* for the effects of the transactions recorded in the journal. Viewed as a mechanical task, posting basically amounts to performing the steps you describe when you "read" a journal entry aloud.

Consider the first entry appearing in Overnight's general journal. If you were to read this entry aloud, you would say: "Debit Cash, $80,000; credit Capital Stock, $80,000." That's precisely what a person posting this entry should do: Debit the Cash account for $80,000, and credit the Capital Stock account for $80,000.

The posting of Overnight's first journal entry is illustrated in the following diagram:

Posting a transaction from journal to ledger accounts

GENERAL JOURNAL

Date	Account Titles and Explanation	Debit	Credit
2002			
Jan. 20	Cash	80,000	
	Capital Stock		80,000
	Owners invest cash in the business		

GENERAL LEDGER

Cash

Date	Debit	Credit	Balance
2002			
Jan. 20	80,000		80,000

CAPITAL STOCK

Date	Debit	Credit	Balance
2002			
Jan. 20		80,000	80,000

Notice that no new information is recorded during the posting process. Posting involves copying into the ledger accounts information that *already has been recorded in the journal*. In manual accounting systems, this can be a tedious and time-consuming process; but in computer-based systems, it is done instantly and automatically. In addition, computerized posting greatly reduces the risk of errors.

Ledger Accounts after Posting After all the transactions through January 27 have been posted, Overnight's ledger accounts appear as shown below and on the next page. The accounts are arranged in the same order as in the balance sheet—that is, assets first, followed by liabilities and owners' equity. Each ledger account is presented in what is referred to as a *running balance* format (as opposed to simple T accounts). You will notice that the running balance format does not indicate specifically whether a particular account has a debit or credit balance. This causes no difficulty, however, because we know that asset accounts normally have debit balances, and liability and owners' equity accounts normally have credit balances.

In the ledger accounts that follow we have not yet included any of Overnight's revenue and expense transactions discussed in Chapter 2. All of the company's revenue and expense transactions took place on January 31. Before we can discuss the debit and credit rules for revenue and expense accounts, a more in-depth discussion of *net income* is warranted.

Ledger showing transactions from January 20 through January 27

CASH

Date	Debit	Credit	Balance
2002			
Jan. 20	80,000		80,000
21		52,000	28,000
22		6,000	22,000
26	600		22,600
27		6,800	15,800

ACCOUNTS RECEIVABLE

Date	Debit	Credit	Balance
2002			
Jan. 24	1,800		1,800
26		600	1,200

LAND

Date	Debit	Credit	Balance
2002			
Jan. 21	52,000		52,000

BUILDING

Date	Debit	Credit	Balance
2002			
Jan. 22	36,000		36,000

TOOLS AND EQUIPMENT

Date	Debit	Credit	Balance
2002			
Jan. 23	13,800		13,800
24		1,800	12,000

NOTES PAYABLE

Date	Debit	Credit	Balance
2002			
Jan. 22		30,000	30,000

ACCOUNTS PAYABLE

Date	Debit	Credit	Balance
2002			
Jan. 23		13,800	13,800
27	6,800		7,000

CAPITAL STOCK

Date	Debit	Credit	Balance
2002			
Jan. 20		80,000	80,000

WHAT IS NET INCOME?

LO 6

Explain the nature of *net income, revenue,* and *expenses.*

Net income is not an asset—it's an increase in owners' equity

As previously noted, **net income** is *an increase in owners' equity resulting from the profitable operation of the business*. Net income does not consist of any cash or any other specific assets. Rather, net income is a *computation* of the overall effects of many business transactions on *owners' equity*. The effects of net income on the basic accounting equation are illustrated as follows:

Assets	=	Liabilities	+	Owners' Equity
Increase	=	**Decrease**	+	**Increase**

Either (or both) of these effects occur as net income is earned . . .

. . . but this is what "net income" really means.

Our point is that net income represents an *increase in owners' equity* and has no direct relationship to the types or amounts of assets on hand. Even a business operating at a profit may run short of cash and become insolvent.

In the balance sheet, the changes in owners' equity resulting from profitable or unprofitable operations are reflected in the balance of the stockholders' equity account, *Retained Earnings*. The assets of the business organization appear in the *assets* section of the balance sheet.

Retained Earnings

As illustrated in Chapter 1, the Retained Earnings account appears in the stockholders' equity section of the balance sheet. Earning net income causes the balance in the Retained Earnings account to increase. However, many corporations follow a policy of distributing to their stockholders some of the resources generated by profitable operations. Distributions of this nature are termed **dividends**, and they reduce both total assets and stockholders' equity. The reduction in stockholders' equity is reflected by decreasing the balance of the Retained Earnings account.

The balance in the **Retained Earnings** account represents the total net income of the corporation over the *entire lifetime* of the business, less all amounts which have been distributed to the stockholders as dividends. In short, retained earnings represent the earnings that have been *retained* by the corporation to finance growth. Some of the largest corporations have become large by consistently retaining in the business most of the resources generated by profitable operations.

CASE IN POINT

A recent annual report of **Campbell Soup Company** shows total stockholders' equity amounting to nearly $2 billion. Stockholders originally invested only about $71 million—less than 4% of the current equity—in exchange for capital stock. In addition to the original investment, the company has added $1.9 billion to stockholders' equity through profitable operations.

The Income Statement: A Preview

An **income statement** is a financial statement that summarizes the profitability of a business entity for a specified period of time. In this statement, net income is determined by comparing *sales prices* of goods or services sold during the period with the *costs* incurred by the business in delivering these goods or services. The technical accounting terms for these components of net income are **revenue** and **expenses**. Therefore, accountants say that net income is equal to *revenue minus expenses*. Should expenses exceed revenue, a **net loss** results.

A sample income statement for Overnight Auto Service for the year ended December 31, 2002, is shown below. In Chapter 5, we show exactly how this income statement was developed from the company's accounting records. For now, however, the illustration will assist us in discussing some of the basic concepts involved in measuring net income.

A preview of Overnight's income statement for the year ended December 31, 2002

OVERNIGHT AUTO SERVICE
Income Statement
For the Year Ended December 31, 2002

Revenue:		
Repair service revenue		$172,000
Rent revenue earned		3,000
Total revenue		$175,000
Expenses:		
Advertising	$ 3,900	
Salaries and wages	58,750	
Supplies	7,500	
Depreciation: building	1,650	
Depreciation: tools and equipment	2,200	
Utilities	19,400	
Insurance	15,000	
Interest	30	108,430
Income before income taxes		66,570
Income taxes		26,628
Net income		$ 39,942

Income Must Be Related to a Specified Period of Time Notice that our sample income statement covers a *period of time*—namely, the year 2002. A balance sheet shows the financial position of a business at a *particular date*. An income statement, on the other hand, shows the results of business operations over a span of time. We cannot evaluate net income unless it is associated with a specific time period. For example, if an executive says, "My business earns a net income of $10,000," the profitability of the business is unclear. Does it earn $10,000 per week, per month, or per year?

CASE IN POINT

The late J. Paul Getty, one of the world's first billionaires, was once interviewed by a group of business students. One of the students asked Getty to estimate the amount of his income. As the student had not specified a time period, Getty decided to have some fun with his audience and responded, "About $11,000 . . . " He paused long enough to allow the group to express surprise over this seemingly low amount, and then completed his sentence, "an hour." (Incidentally, $11,000 per hour, 24 hours per day, amounts to about $100 million per year.)

Accounting Periods The period of time covered by an income statement is termed the company's **accounting period**. To provide the users of financial statements with timely information, net income is measured for relatively short accounting periods of equal length. This concept, called the **time period principle**, is one of the generally accepted accounting principles that guide the interpretation of financial events and the preparation of financial statements.

The length of a company's accounting period depends on how frequently managers, investors, and other interested people require information about the company's performance. Every business prepares annual income statements, and most businesses prepare quarterly and monthly income statements as well. (Quarterly statements cover a three-month period and are prepared by all large corporations for distribution to their stockholders.)

The 12-month accounting period used by an entity is called its **fiscal year**. The fiscal year used by most companies coincides with the calendar year and ends on December 31. Some businesses, however, elect to use a fiscal year that ends on some other date. It may be convenient for a business to end its fiscal year during a slack season rather than during a time of peak activity.

CASE IN POINT

The **Walt Disney Company** ends its fiscal year on September 30. Why? For one reason, September and October are relatively slow months at Disney's theme parks. For another, September financial statements provide timely information about the preceding summer, which is the company's busiest season.

As another example, many department stores, including **Kmart**, **Neiman-Marcus**, **Nordstrom**, and **J. C. Penney**, end their fiscal years on January 31—after the rush of the holiday season.

Let us now explore the meaning of the accounting terms *revenue* and *expenses* in more detail.

Revenue

Revenue is the price of goods sold and services rendered during a given accounting period. Earning revenue causes owners' equity to increase. When a business renders services or sells merchandise to its customers, it usually receives cash or acquires an account receivable from the customer. The inflow of cash and receivables from customers increases the total assets of the company; on the other side of the accounting equation, the liabilities do not change, but owners' equity increases to match the increase in total assets. Thus revenue is the gross *increase in owners' equity* resulting from operation of the business.

Various account titles are used to describe different types of revenue. For example, a business that sells merchandise rather than services, such as **Wal-Mart** or **General Motors**, uses the term *Sales* to describe its revenue. In the professional practices of physicians, CPAs, and attorneys, revenue usually is called *Fees Earned*. A real estate office, however, might call its revenue *Commissions Earned*.

Overnight Auto Service's income statement reveals that the company records its revenue in two separate accounts: (1) *Repair Service Revenue* and (2) *Rent Revenue Earned.* A professional sports team might also have separate revenue accounts for *Ticket Sales, Concessions Revenue,* and *Revenue from Television Contracts.* Another type of revenue common to many businesses is *Interest Revenue* (or Interest Earned), stemming from the interest earned on bank deposits, notes receivable, and interest-bearing investments.

LO 7

Apply the *realization* and *matching* principles in recording revenue and expenses.

The Realization Principle: When to Record Revenue When should revenue be recognized? In most cases, the **realization principle** indicates that revenue should be recognized *at the time goods are sold or services are rendered.* At this point, the business has essentially completed the earnings process and the sales value of the goods or services can be measured objectively. At any time prior to the sale, the ultimate value of the goods or services sold can only be estimated. After the sale, the only step that remains is to collect from the customer, usually a relatively certain event.

CASH EFFECTS

Assume that on July 25 KGPO Radio contracts with Rancho Ford to run 200 one-minute advertisements during August. KGPO runs these ads and receives full payment from Rancho Ford on September 6. In which month should KGPO recognize the advertising revenue earned from Rancho Ford—July, August, or September?

The answer is August, the month in which KGPO *rendered the services* that earned the revenue.[1] In other words, the revenue is recognized when it is *earned,* without regard to when cash payment for goods or services is received.

Expenses

Expenses are the costs of the goods and services used up in the process of earning revenue. Examples include the cost of employees' salaries, advertising, rent, utilities, and the depreciation of buildings, automobiles, and office equipment. All these costs are necessary to attract and serve customers and thereby earn revenue. Expenses are often called the "costs of doing business," that is, the cost of the various activities necessary to carry on a business.

An expense always causes a *decrease in owners' equity*. The related changes in the accounting equation can be either (1) a decrease in assets or (2) an increase in liabilities. An expense reduces assets if payment occurs at the time that the expense is incurred. If the expense will not be paid until later, as, for example, the purchase of advertising services on account, the recording of the expense will be accompanied by an increase in liabilities.

The Matching Principle: When to Record Expenses A significant relationship exists between revenue and expenses. Expenses are incurred for the *purpose of producing revenue*. In measuring net income for a period, revenue should be offset by *all the expenses incurred in producing that revenue*. This concept of offsetting expenses against revenue on a basis of cause and effect is called the **matching principle**.

Timing is an important factor in matching (offsetting) revenue with the related expenses. For example, in preparing monthly income statements, it is important to offset this month's expenses against this month's revenue. We should not offset this month's expenses against last month's revenue because there is no cause and effect relationship between the two.

CASH EFFECTS

Assume that the salaries earned by sales personnel waiting on customers during July are not paid until early August. In which month should these salaries be regarded as an expense—July or August?

The answer is July, because this is the month in which the sales personnel's services *helped to produce revenue.* Just as revenue and cash receipts are not one and the same, expenses and cash payments are not identical. In fact, the cash payment of an expense may occur before, after, or in the same period that revenue is produced. In deciding when to record an expense, the critical question is "In what period does the cash expenditure help to produce revenue?" *not* "When does the cash payment occur?"

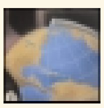
[1] Some readers may wonder what would happen if some of the ads were aired in August and others in September. In this case, KGPO would recognize an *appropriate portion* of the advertising revenue in August and the remainder in September. The accounting procedures for allocating revenue between accounting periods are discussed and illustrated in the next chapter.

Expenditures Benefiting More Than One Accounting Period Many expenditures made by a business benefit two or more accounting periods. Fire insurance policies, for example, usually cover a period of 12 months. If a company prepares monthly income statements, a portion of the cost of such a policy should be allocated to insurance expense each month that the policy is in force. In this case, apportionment of the cost of the policy by months is an easy matter. If the 12-month policy costs $2,400, for example, the insurance expense for each month amounts to $200 ($2,400 cost ÷ 12 months).

Not all transactions can be divided so precisely by accounting periods. The purchase of a building, furniture and fixtures, machinery, a computer, or an automobile provides benefits to the business over all the years in which such an asset is used. No one can determine in advance exactly how many years of service will be received from such long-lived assets. Nevertheless, in measuring the net income of a business for a period of one year or less, accountants must *estimate* what portion of the cost of the building and other long-lived assets is applicable to the current year. Since the allocations of these costs are estimates rather than precise measurements, it follows that income statements should be regarded as useful *approximations* of net income rather than as absolutely correct measurements.

For some expenditures, such as those for advertising or employee training programs, it is not possible to estimate objectively the number of accounting periods over which revenue is likely to be produced. In such cases, generally accepted accounting principles require that the expenditure be charged *immediately to expense*. This treatment is based upon the accounting principle of **objectivity** and the concept of **conservatism**. Accountants require *objective evidence* that an expenditure will produce revenue in future periods before they will view the expenditure as creating an asset. When this objective evidence does not exist, they follow the conservative practice of recording the expenditure as an expense. *Conservatism,* in this context, means applying the accounting treatment that results in the *lowest* (most conservative) estimate of net income for the current period.

CASE IN POINT



Internationally, there is significant disagreement about whether some business expenditures should be immediately expensed or can be recorded as an asset. In particular, research and development costs, which must be expensed as incurred under U.S. accounting standards, can be either expensed immediately *or* recorded as an asset in Sweden and Italy.

The Accrual Basis of Accounting

The policy of recognizing revenue in the accounting records when it is *earned* and recognizing expenses when the related goods or services are *used* is called the **accrual basis of accounting**. The purpose of accrual accounting is to measure the profitability of the *economic activities conducted* during the accounting period.

The most important concept involved in accrual accounting is the *matching principle*. Revenue is offset with all of the expenses incurred in generating that revenue, thus providing a measure of the overall profitability of the economic activity.

An alternative to the accrual basis is called *cash basis accounting*. Under cash basis accounting, revenue is recognized when cash is collected from the customer, rather than when the company sells goods or renders services. Expenses are recognized when payment is made, rather than when the related goods or services are used in business operations. The cash basis of accounting measures the amounts of cash received and paid out during the period, but it does *not* provide a good measure of the *profitability of activities* undertaken during the period.

Airlines sell many tickets weeks or even months *in advance* of scheduled flights. Yet many expenses relating to a flight—such as salaries of the flight crew and the cost of fuel used—may not be paid until *after* the flight has occurred. Recognizing these events when cash is received or paid would fail to "match" revenues and expenses in the period when flights actually occur.

CASE IN POINT

Debit and Credit Rules for Revenue and Expenses

LO 8

Explain *why* revenues are recorded with credits and expenses are recorded with debits.

We have stressed that revenue increases owners' equity and that expenses decrease owners' equity. The debit and credit rules for recording revenue and expenses in the ledger accounts are a natural extension of the rules for recording changes in owners' equity. The rules previously stated for recording increases and decreases in owners' equity are as follows:

- *Increases* in owners' equity are recorded by *credits*.
- *Decreases* in owners' equity are recorded by *debits*.

This rule is now extended to cover revenue and expense accounts:

- *Revenue* increases owners' equity; therefore, revenue is recorded by a *credit*.
- *Expenses* decrease owners' equity; therefore, expenses are recorded by *debits*.

DIVIDENDS

A dividend is a distribution of assets (usually cash) by a corporation to its stockholders. In some respects, dividends are similar to expenses—they reduce both the assets and the owners' equity in the business. However, *dividends are not an expense, and they are not deducted from revenue in the income statement.* The reason why dividends are not viewed as an expense is that these payments do not serve to generate revenue. Rather, they are a *distribution of profits* to the owners of the business.

Since the declaration of a dividend reduces stockholders' equity, the dividend could be recorded by debiting the Retained Earnings account. However, a clearer record is created if a separate Dividends account is debited for all amounts distributed as dividends to stockholders. The disposition of the Dividends account when financial statements are prepared will be illustrated in Chapter 5.

The debit–credit rules for revenue, expense, and dividends are summarized below:

Debit–credit rules related to effect on owners' equity

Owners' Equity

Decreases recorded by Debits	Increases recorded by Credits
Expenses decrease owners' equity	Revenue increases owners' equity
Expenses are recorded by Debits	Revenue is recorded by Credits
Dividends reduce owner's equity	
Dividends are recorded by Debits	

YOUR TURN

You as a Business Owner

You are the sole owner of a small business. The mortgage payment on your home is due, but you have very little money in your personal checking account. Therefore, you write a check for this payment from the business bank account.

Does it matter whether your business is unincorporated or organized as a corporation?

*Our comments appear on page 132.

RECORDING REVENUE AND EXPENSE TRANSACTIONS: AN ILLUSTRATION

In Chapter 2, we introduced Overnight Auto Service, a small auto repair shop formed on January 20, 2002. Early in this chapter we journalized and posted all of Overnight's balance sheet transactions through January 27. At this point we will illustrate the manner in which Overnight's January income statement transactions were handled, and continue into February with additional transactions.

Three transactions involving revenue and expenses were recorded by Overnight on January 31, 2002. The following illustrations provide an analysis of each transaction.

Jan. 31. Recorded Revenue of $2,200, all of which was received in cash.

Revenue earned and collected

ANALYSIS	The asset Cash is increased. Revenue has been earned.
DEBIT–CREDIT RULES	Increases in assets are recorded by debits; debit Cash $2,200. Revenue increases owners' equity and is recorded by a credit; credit Repair Service Revenue $2,200.
JOURNAL ENTRY	Jan. 31 Cash . . . . 2,200 Repair Service Revenue 2,200
ENTRIES IN LEDGER ACCOUNTS	**Cash**: 1/27 Bal. 15,800 (debit); 1/31 2,200 (debit) **Repair Service Revenue**: 1/31 2,200 (credit)

Jan. 31 Paid employees' wages earned in January, $1,200.

Incurred an expense, paying cash

ANALYSIS	Wages to employees are an expense. The asset Cash is decreased.
DEBIT–CREDIT RULES	Expenses decrease owners' equity and are recorded by debits; debit Wages Expense $1,200. Decreases in assets are recorded by credits; credit Cash $1,200.
JOURNAL ENTRY	Jan. 31 Wages Expense . . . . 1,200 Cash 1,200
ENTRIES IN LEDGER ACCOUNTS	**Cash** Debit: 1/27 Bal. 15,800; 1/31 2,200 Credit: 1/31 1,200 **Wages Expense** Debit: 1/31 1,200

Jan. 31 Paid for utilities used in January, $200.

Incurred an expense, paying cash

ANALYSIS	The cost of utilities is an expense. The asset Cash is decreased.
DEBIT–CREDIT RULES	Expenses decrease owners' equity and are recorded by debits; debit Utilities Expense $200. Decreases in assets are recorded by credits; credit Cash $200.
JOURNAL ENTRY	Jan. 31 Utilities Expense . . . . 200 Cash 200
ENTRIES IN LEDGER ACCOUNTS	**Cash** Debit: 1/27 Bal. 15,800; 1/31 2,200 Credit: 1/31 1,200; 1/31 200 **Utilities Expense** Debit: 1/31 200

Having analyzed and recorded all of Overnight's January transactions, next we focus upon the company's February activities. Overnight's February transactions are described, analyzed, and recorded on the following pages.

Feb. 1 Paid *Daily Tribune* $360 cash for newspaper advertising to be run during February.

Incurred an expense, paying cash

ANALYSIS	The cost of advertising is an expense. The asset Cash is decreased.
DEBIT–CREDIT RULES	Expenses decrease owners' equity and are recorded by debits; debit Advertising Expense $360. Decreases in assets are recorded by credits; credit Cash $360.
JOURNAL ENTRY	Feb. 1 Advertising Expense . . . . 360 Cash 360
ENTRIES IN LEDGER ACCOUNTS	**Cash**: 1/31 Bal. 16,600 | 2/1 360 **Advertising Expense**: 2/1 360 |

Feb. 2 Purchased radio advertising from KRAM to be aired in February. The cost was $470, payable within 30 days.

Incurred an expense to be paid later

ANALYSIS	The cost of advertising is an expense. The liability Accounts Payable is incurred.
DEBIT–CREDIT RULES	Expenses decrease owners' equity and are recorded by debits; debit Advertising Expense $470. Increases in liabilities are recorded by credits; credit Accounts Payable $470.
JOURNAL ENTRY	Feb. 2 Advertising Expense . . . . 470 Accounts Payable 470
ENTRIES IN LEDGER ACCOUNTS	**Accounts Payable**: | 1/31 Bal. 7,000; 2/2 470 **Advertising Expense**: 2/1 360; 2/2 470 |

Feb. 4 Purchased various shop supplies (such as grease, solvents, nuts, and bolts) from **NAPA Auto Parts**; cost $1,400, due in 30 days. These supplies are expected to meet Overnight's needs for *three or four months.*

When a purchase clearly benefits future accounting periods, it's an asset, not an expense

ANALYSIS

As these supplies will last for several accounting periods, they are an asset, not an expense of February.[2]

A liability is incurred.

DEBIT–CREDIT RULES

Increases in assets are recorded by debits; debit Shop Supplies $1,400.

Increase in liabilities are recorded by credits; credit Accounts Payable $1,400.

JOURNAL ENTRY

Feb. 4	Shop Supplies	1,400	
	Accounts Payable		1,400

ENTRIES IN LEDGER ACCOUNTS

Shop Supplies

Debit	Credit
1/31 Bal. 0	
2/4 1,400	

Accounts Payable

Debit	Credit
	1/31 Bal. 7,000
	2/2 470
	2/4 1,400

Feb. 15 Collected $4,980 cash for repairs made to vehicles of Airport Shuttle Service.

Revenue earned and collected

ANALYSIS

The asset Cash is increased.

Revenue has been earned.

DEBIT–CREDIT RULES

Increases in assets are recorded by debits; debit Cash $4,980.

Revenue increases owners' equity and is recorded by a credit; credit Repair Service Revenue $4,980.

JOURNAL ENTRY

Feb. 15	Cash	4,980	
	Repair Service Revenue		4,980

ENTRIES IN LEDGER ACCOUNTS

Cash

Debit	Credit
1/31 Bal. 16,600	2/1 360
2/15 4,980	

Repair Service Revenue

Debit	Credit
	1/31 Bal. 2,200
	2/15 4,980

[2] If the supplies are expected to be used within the *current* accounting period, their cost is debited directly to the Supplies Expense account, rather than to an asset account.

Feb. 28 Billed Harbor Cab Co. $5,400 for maintenance and repair services Overnight provided in February. The agreement with Harbor Cab calls for payment to be received by March 10.

Revenue earned but not yet collected

ANALYSIS	An asset Accounts Receivable is acquired. Revenue has been earned.
DEBIT–CREDIT RULES	Increases in assets are recorded by debits; debit Accounts Receivable $5,400. Revenue increases owners' equity and is recorded by a credit; credit Repair Service Revenue $5,400.
JOURNAL ENTRY	Feb. 28 Accounts Receivable . . . . 5,400 Repair Service Revenue 5,400
ENTRIES IN LEDGER ACCOUNTS	See ledger accounts below

Accounts Receivable

Debit	Credit
1/31 Bal. 1,200	
2/28 5,400	

Repair Service Revenue

Debit	Credit
	1/31 Bal. 2,200
	2/15 4,980
	2/28 5,400

YOUR TURN

You as Overnight Auto Service's Accountant

The owner of Harbor Cab Co. approached you at a recent chamber of commerce meeting to inform you that Harbor Cab expects a cash shortage during the month of March. Harbor Cab has asked you to extend its payment deadline from March 10 to April 10 in exchange for free cab service for a month. What would you do?

*Our comments appear on page 132.

Feb. 28 Paid employees' wages earned in February, $4,900.

Incurred an expense, paying cash

ANALYSIS	Wages to employees are an expense. The asset Cash is decreased.
DEBIT–CREDIT RULES	Expenses decrease owners' equity and are recorded by debits; debit Wages Expense $4,900. Decreases in assets are recorded by credits; credit Cash $4,900.
JOURNAL ENTRY	Feb. 28 Wages Expense . . . . 4,900 Cash 4,900
ENTRIES IN LEDGER ACCOUNTS	See ledger accounts below

Cash

1/31	Bal. 16,600		2/1	360
2/15	4,980		2/28	4,900

Wages Expense

1/31	Bal. 1,200	
2/28	4,900	

Feb. 28 Recorded $1,600 utility bill for February. The entire amount is due March 15.

Incurred an expense to be paid later

ANALYSIS	The cost of utilities is an expense. The liability Accounts Payable is incurred.
DEBIT–CREDIT RULES	Expenses decrease owners' equity and are recorded by debits; debit Utilities Expense $1,600. Increases in liabilities are recorded by credits; credit Accounts Payable $1,600.
JOURNAL ENTRY	Feb. 28 Utilities Expense . . . . 1,600 Accounts Payable 1,600
ENTRIES IN LEDGER ACCOUNTS	See ledger accounts below

Accounts Payable

		1/31	Bal. 7,000
		2/2	470
		2/4	1,400
		2/28	1,600

Utilities Expense

1/31	Bal. 200	
2/28	1,600	

Feb. 28 Overnight Auto Services declares and pays a dividend of 40 cents per share to the owners of its 8,000 shares of capital stock—a total of $3,200.[3]

A Dividends account signifies a reduction in owners' equity—but it's not an expense

ANALYSIS	The declaration of a dividend reduces owners' equity. The asset Cash is decreased.
DEBIT–CREDIT RULES	Decreases in owners' equity are recorded by debits; debit Dividends $3,200. Decreases in assets are recorded by credits; credit Cash $3,200.
JOURNAL ENTRY	Feb. 28 Dividends . . . . 3,200 Cash 3,200
ENTRIES IN LEDGER ACCOUNTS	see ledger accounts below

Cash

1/31 Bal.	16,600	2/1	360
2/15	4,980	2/28	4,900
		2/28	3,200

Dividends

1/31 Bal.	0
2/28	3,200

The Journal

In our illustration, journal entries were shown in a very abbreviated form. The actual entries made in Overnight's journal appear on the facing page. Notice that these formal journal entries include short *explanations* of the transactions, which include such details as the terms of credit transactions and the names of customers and creditors.

[3] As explained earlier, dividends are not an expense. In Chapter 5, we will show how the balance in the Dividends account eventually reduces the amount of retained earnings reported in the owners' equity section of the balance sheet.

Journal entries contain more information than just dollar amounts

GENERAL JOURNAL

Date	Account Titles and Explanation	Debit	Credit
2002			
Jan. 31	Cash	2,200	
	Repair Service Revenue		2,200
	Repair services rendered to various customers.		
31	Wages Expense	1,200	
	Cash		1,200
	Paid all wages for January.		
31	Utilities Expense	200	
	Cash		200
	Paid all utilities for January.		
Feb. 1	Advertising Expense	360	
	Cash		360
	Purchased newspaper advertising from *Daily Tribune* to run in February.		
2	Advertising Expense	470	
	Accounts Payable		470
	Purchased radio advertising on account from KRAM; payment due in 30 days		
4	Shop Supplies	1,400	
	Accounts Payable		1,400
	Purchased shop supplies on account from NAPA; payment due in 30 days.		
15	Cash	4,980	
	Repair Service Revenue		4,980
	Repair services rendered to Airport Shuttle Service.		
28	Accounts Receivable	5,400	
	Repair Service Revenue		5,400
	Billed Harbor Cab for services rendered in February.		
28	Wages Expense	4,900	
	Cash		4,900
	Paid all wages for February.		
28	Utilities Expense	1,600	
	Accounts Payable		1,600
	Recorded utility bill for February.		
28	Dividends	3,200	
	Cash		3,200
	Paid cash dividend of 40 cents per share on 8,000 shares of capital stock owned by the McBryan family.		

MANAGEMENT STRATEGY

The accounting records of an enterprise can provide significant information about business strategies being pursued by managers. For example, Overnight Auto appears to be pursuing a business strategy of acquiring other companies as customers (e.g., Airport Shuttle Service and Harbor Cab Co.) rather than individual car owners for customers. If Overnight Auto's accounts receivable records included only receivables from individuals (e.g., Betty Brown and Joe Smith), then it would be creating a very different type of business strategy.

FEBRUARY'S LEDGER BALANCES

After posting all of the January and February transactions, Overnight's ledger accounts appear as shown on the following page. To conserve space, we have illustrated the ledger in T account form and have carried forward each account's summary balance from January 31. For convenience, we show in *red* the *February 28 balance* of each account (debit balances appear to the left of the account; credit balances appear to the right).

The accounts in this illustration appear in *financial statement order*—that is, balance sheet accounts first (assets, liabilities, and owners' equity), followed by the income statement accounts (revenue and expenses).

The Ledger

Asset Accounts

Cash

	1/31 Bal.	16,600	2/1	360
	2/15	4,980	2/28	4,900
Bal. $13,120			2/28	3,200

Accounts Receivable

	1/31	1,200		
Bal. $6,600	2/28	5,400		

Shop Supplies

	1/31 Bal.	0		
Bal. $1,400	2/4	1,400		

Land

Bal. $52,000	1/31 Bal.	52,000		

Building

Bal. $36,000	1/31 Bal.	36,000		

Tools and Equipment

Bal. $12,000	1/31 Bal.	12,000		

Liability and Owners' Equity Accounts

Notes Payable

		1/31 Bal.	30,000	Bal. $30,000

Accounts Payable

		1/31 Bal.	7,000	
		2/2	470	
		2/4	1,400	
		2/28	1,600	Bal. $10,470

Capital Stock

		1/31 Bal.	80,000	Bal. $80,000

Dividends

	1/31 Bal.	0		
Bal. $3,200	2/28	3,200		

Repair Service Revenue

		1/31 Bal.	2,200	
		2/15	4,980	
		2/28	5,400	Bal. $12,580

Advertising Expense

	2/1	360		
Bal. $830	2/2	470		

Wages Expense

	1/31 Bal.	1,200		
Bal. $6,100	2/28	4,900		

Utilities Expense

	1/31 Bal.	200		
Bal. $1,800	2/28	1,600		

THE TRIAL BALANCE

LO 9

Prepare a trial balance and explain its uses and limitations.

Since equal dollar amounts of debits and credits are entered in the accounts for every transaction recorded, the sum of all the debits in the ledger must be equal to the sum of all the credits. If the computation of account balances has been accurate, it follows that the total of the accounts with debit balances must be equal to the total of the accounts with credit balances.

Before using the account balances to prepare a balance sheet, it is desirable to *prove* that the total of accounts with debit balances is in fact equal to the total of accounts with credit balances. This proof of the equality of debit and credit balances is called a **trial balance**. A trial balance is a two-column schedule listing the names and balances of all the accounts *in the order in which they appear in the ledger*; the debit balances are listed in the left-hand column and the credit balances in the right-hand column. The totals of the two columns should agree. A trial balance taken from Overnight Auto's ledger accounts on page 111 is shown below.

A trial balance proves the equality of debits and credits—but it also gives you a feel for how the business stands. But wait—there's more to consider.

OVERNIGHT AUTO SERVICE
Trial Balance
February 28, 2002

Cash	$ 13,120	
Accounts receivable	6,600	
Shop supplies	1,400	
Land	52,000	
Building	36,000	
Tools and equipment	12,000	
Notes payable		$ 30,000
Accounts payable		10,470
Capital stock		80,000
Retained earnings		0
Dividends	3,200	
Repair service revenue		12,580
Advertising expense	830	
Wages expense	6,100	
Utilities expense	1,800	
	$133,050	$133,050

This trial balance proves the equality of the debit and credit entries in the company's accounting system. Notice that the trial balance contains both balance sheet and income statement accounts. Note also that the Retained Earnings balance is *zero.* It is zero because *no debit or credit entries were made to the Retained Earnings account in January or February.* Overnight, like most companies, updates its Retained Earnings balance only *once each year.* In Chapter 5, we show how the Retained Earnings account is updated to its proper balance at year-end on December 31.[4]

[4] The balance of $0 in the Retained Earnings account is a highly unusual situation. Because the company is still in its first year of operations, no entries have ever been made to update the account's balance. In any trial balance prepared after the first year of business activity, the Retained Earnings account may be expected to have a balance other than $0.

Uses and Limitations of the Trial Balance

The trial balance provides proof that the ledger is in balance. The agreement of the debit and credit totals of the trial balance gives assurance that:

1. Equal debits and credits have been recorded for all transactions.
2. The addition of the account balances in the trial balance has been performed correctly.

Suppose that the debit and credit totals of the trial balance do not agree. This situation indicates that one or more errors have been made. Typical of such errors are (1) the posting of a debit as a credit, or vice versa; (2) arithmetic mistakes in determining account balances; (3) clerical errors in copying account balances into the trial balance; (4) listing a debit balance in the credit column of the trial balance, or vice versa; and (5) errors in addition of the trial balance.

The preparation of a trial balance does *not* prove that transactions have been correctly analyzed and recorded in the proper accounts. If, for example, a receipt of cash were erroneously recorded by debiting the Land account instead of the Cash account, the trial balance would still balance. Also, if a transaction were completely omitted from the ledger, the error would not be disclosed by the trial balance. In brief, *the trial balance proves only one aspect of the ledger, and that is the equality of debits and credits*.

SOME CONCLUDING REMARKS

The Accounting Cycle in Perspective

In this chapter we have (1) journalized (recorded) transactions, (2) posted each journal entry to the appropriate ledger accounts, and (3) prepared a trial balance. The steps to be covered in Chapters 4 and 5 include (4) making end-of-period adjustments, (5) preparing an adjusted trial balance, (6) preparing financial statements, (7) journalizing and posting closing entries, and (8) preparing an after-closing trial balance.

We view the accounting cycle as an efficient means of introducing basic accounting terms, concepts, processes, and reports. This is why we introduce it early in the course. As we conclude the accounting cycle in Chapters 4 and 5, please don't confuse your familiarity with this sequence of procedures with a knowledge of *accounting*. The accounting cycle is but one accounting process—and a relatively simple one at that.

LO 10

Distinguish between accounting cycle procedures and the *knowledge* of accounting.

Computers now free accountants to focus upon the more *analytical* aspects of their discipline. These include, for example:

- Determining the information needs of decision makers.
- Designing systems to provide the information quickly and efficiently.
- Evaluating the efficiency of operations throughout the organization.
- Assisting decision makers in interpreting accounting information.
- Auditing (confirming the reliability of accounting information).
- Forecasting the probable results of future operations.
- Tax planning.

We will emphasize such topics in later chapters of this text. But let us first repeat a very basic point from Chapter 1: The need for some familiarity with accounting concepts and processes is not limited to individuals planning careers in accounting. Today, an understanding of accounting information and of the business world go hand in hand. You cannot know much about one without understanding quite a bit about the other.

A SECOND LOOK

PepsiCo, Inc.

In this chapter, we illustrated how Overnight Auto Service's accounting system captured numerous economic events. While a far more complex set of circumstances exist for **PepsiCo, Inc.**, the general accounting concepts that underlie revenue and expense recognition are pretty much the same for a multinational soft drink giant as they are for Overnight Auto Service.

In the following chapter, we examine certain adjustments to revenue and expense accounts required of most companies—both large and small—to comply with generally accepted principles of the accrual-based accounting method.

END-OF-CHAPTER REVIEW

SUMMARY OF LEARNING OBJECTIVES

LO 1

Identify the steps in the accounting cycle and discuss the role of accounting records in an organization.
The accounting cycle generally consists of eight specific steps: (1) journalizing (recording) transactions, (2) posting each journal entry to the appropriate ledger accounts, (3) preparing a trial balance, (4) making end-of-period adjustments, (5) preparing an adjusted trial balance, (6) preparing financial statements, (7) journalizing and posting closing entries, and (8) preparing an after-closing trial balance.

Accounting records provide the information that is summarized in financial statements, income tax returns, and other accounting reports. In addition, these records are used by the company's management and employees for such purposes as:

- Establishing accountability for assets and transactions.
- Keeping track of routine business activities.
- Obtaining details about specific transactions.
- Evaluating the performance of units within the business.
- Maintaining a documentary record of the business's activities. (Such a record is required by tax laws and is useful for many business purposes, including audits.)

LO 2

Describe a ledger account and a ledger.
A ledger account is a device for recording the increases or decreases in one financial statement item, such as a particular asset, a type of liability, or owners' equity. The general ledger is an accounting record that includes all the ledger accounts—that is, a separate account for each item included in the company's financial statements.

LO 3

State the rules of debit and credit for balance sheet accounts.
Increases in assets are recorded by debits and decreases are recorded by credits. Increases in liabilities and in owners' equity are recorded by credits and decreases are recorded by debits. Notice that the debit and credit rules are related to an account's *location in the balance sheet*. If the account appears on the *left side* of the balance sheet (asset accounts), increases in the account balance are recorded by *left-side entries* (debits). If the account appears on the *right side* of the balance sheet (liability and owners' equity accounts), increases are recorded by *right-side entries* (credits).

LO 4

Explain the double-entry system of accounting.
The double-entry system of accounting takes its name from the fact that every business transaction is recorded by *two types of entries*: (1) debit entries to one or more accounts and (2) credit entries to one or more accounts. In recording any transaction, the total dollar amount of the debit entries must equal the total dollar amount of the credit entries.

LO 5

Explain the purpose of a journal and its relationship to the ledger.
The journal is the accounting record in which business transactions are initially recorded. The entry in the journal shows which ledger accounts have increased as a result of the transaction, and which have decreased. After the effects of the transaction have been recorded in the journal, the changes in the individual ledger accounts are then posted to the ledger.

LO 6

Explain the nature of *net income, revenue,* and *expenses.*
Net income is an increase in owners' equity that results from the profitable operation of a business during an accounting period. Net income also may be defined as revenue minus expenses. Revenue is the price of goods sold and services rendered to customers during the period, and expenses are the costs of the goods and services used up in the process of earning revenue.

LO 7

Apply the *realization* and *matching* principles in recording revenue and expenses.
The realization principle indicates that revenue should be recorded in the accounting records when it is *earned*—that is, when goods are sold or services are rendered to customers. The matching principle indicates that expenses should be offset against revenue on the basis of *cause and effect*. Thus, an expense should be recorded in the period in which the related good or service is consumed in the process of earning revenue.

LO 8

Explain *why* revenues are recorded with credits and expenses are recorded with debits.
The debit and credit rules for recording revenue and expenses are based on the rules for recording *changes in owners' equity*. Earning revenue *increases* owners' equity; therefore, revenues are recorded with credit entries. Expenses *reduce* owners' equity and are recorded with debit entries.

LO 9

Prepare a trial balance and explain its uses and limitations.
In a trial balance, separate debit and credit columns are used to list the balances of the individual ledger accounts. The two

columns are then totaled to prove the equality of the debit and credit balances. This process provides assurance that (1) the total of the debits posted to the ledger was equal to the total of the credits and (2) the balances of the individual ledger accounts were correctly computed. While a trial balance proves the equality of debit and credit entries in the ledger, it does *not* detect such errors as failure to record a business transaction, improper analysis of the accounts affected by the transaction, or the posting of debit or credit entries to the wrong accounts.

LO 10

Distinguish between accounting cycle procedures and the *knowledge* of accounting.

Accounting procedures involve the steps and processes necessary to *prepare* accounting information. A knowledge of the discipline enables one to *use* accounting information in evaluating performance, forecasting operations, and making complex business decisions.

In this chapter we have illustrated the initial steps of the accounting cycle for a *service-type* business (accounting for *merchandising* activities will be discussed in Chapter 6). We have seen how businesses analyze and journalize transactions, post transactions to appropriate ledger accounts, and prepare trial balances. In Chapter 4, we will examine adjustments made for the accrual and deferral of revenue and expenses. In Chapter 5, we complete the accounting cycle by illustrating the preparation of financial statements and the year-end closing process.

KEY TERMS INTRODUCED OR EMPHASIZED IN CHAPTER 3

account (p. 86) A record used to summarize all increases and decreases in a particular asset, such as cash, or any other type of asset, liability, owners' equity, revenue, or expense.

accountability (p. 86) The condition of being held responsible for one's actions by the existence of an independent record of those actions. Establishing accountability is a major goal of accounting records and of internal control procedures.

accounting cycle (p. 86) The sequence of accounting procedures used to record, classify, and summarize accounting information. The cycle begins with the initial recording of business transactions and concludes with the preparation of formal financial statements.

accounting period (p. 97) The span of time covered by an income statement. One year is the accounting period for much financial reporting, but financial statements are also prepared by companies for each quarter of the year and for each month.

accrual basis of accounting (p. 100) Calls for recording revenue in the period in which it is earned and recording expenses in the period in which they are incurred. The effect of events on the business is recognized as services are rendered or consumed rather than when cash is received or paid.

conservatism (p. 100) The traditional accounting practice of resolving uncertainty by choosing the solution that leads to the lower (more conservative) amount of income being recognized in the current accounting period. This concept is designed to avoid overstatement of financial strength or earnings.

credit (p. 87) An amount entered on the right side of a ledger account. A credit is used to record a decrease in an asset or an increase in a liability or in owners' equity.

debit (p. 87) An amount entered on the left side of a ledger account. A debit is used to record an increase in an asset or a decrease in a liability or in owners' equity.

dividends (p. 96) A distribution of resources by a corporation to its stockholders. The resource most often distributed is cash.

double-entry accounting (p. 89) A system of recording every business transaction with equal dollar amounts of both debit and credit entries. As a result of this system, the accounting equation always remains in balance; in addition, the system makes possible the measurement of net income and also the use of error-detecting devices such as a trial balance.

expenses (p. 97) The costs of the goods and services used up in the process of obtaining revenue.

fiscal year (p. 98) Any 12-month accounting period adopted by a business.

general journal (p. 92) The simplest type of journal, it has only two money columns—one for credits and one for debits. This journal may be used for all types of transactions, which are later posted to the appropriate ledger accounts.

income statement (p. 96) A financial statement summarizing the results of operations of a business by matching its revenue and related expenses for a particular accounting period. Shows the net income or net loss.

journal (p. 92) A chronological record of transactions, showing for each transaction the debits and credits to be entered in specific ledger accounts. The simplest type of journal is called a general journal.

ledger (p. 86) An accounting system includes a separate record for each item that appears in the financial statements. Collectively, these records are referred to as a company's ledger. Individually, these records are often referred to as ledger accounts.

matching principle (p. 99) The generally accepted accounting principle that determines when expenses should be recorded in the accounting records. The revenue earned during an accounting period is matched (offset) with the expenses incurred in generating this revenue.

net income (p. 96) An increase in owners' equity resulting from profitable operations. Also, the excess of revenue earned over the related expenses for a given period.

net loss (p. 97) A decrease in owners' equity resulting from unprofitable operations.

objectivity (p. 100) Accountants' preference for using dollar amounts that are relatively factual—as opposed to merely matters of personal opinion. Objective measurements can be verified.

posting (p. 93) The process of transferring information from the journal to individual accounts in the ledger.

realization principle (p. 98) The generally accepted accounting principle that determines when revenue should be recorded in the accounting records. Revenue is realized when services are rendered to customers or when goods sold are delivered to customers.

retained earnings (p. 96) That portion of stockholders' (owners') equity resulting from profits earned and retained in the business.

revenue (p. 97) The price of goods and services charged to customers for goods and services rendered by a business.

time period principle (p. 98) To provide the users of financial statements with timely information, net income is measured for relatively short accounting periods of equal length. The period of time covered by an income statement is termed the company's accounting period.

trial balance (p. 112) A two-column schedule listing the names and the debit or credit balances of all accounts in the ledger.

DEMONSTRATION PROBLEM

Epler Consulting Services, Inc., opened for business on January 25, 2002. The company maintains the following ledger accounts:

Cash	Capital Stock
Accounts Receivable	Retained Earnings
Office Supplies	Consulting Revenue
Office Equipment	Rent Expense
Accounts Payable	Utilities Expense

The company engaged in the following business activity in January:

Jan. 20 Issued 5,000 shares of capital stock for $50,000.

Jan. 20 Paid $400 office rent for the remainder of January.

Jan. 21 Purchased office supplies for $200. The supplies will last for several months, and payment is not due until February 15.

Jan. 22 Purchased office equipment for $15,000 cash.

Jan. 26 Performed consulting services and billed clients $2,000. The entire amount will not be collected until February.

Jan. 31 Recorded $100 utilities expense. Payment is not due until February 20.

Instructions

a. Record each of the above transactions in general journal form.
b. Post each entry to the appropriate ledger accounts.
c. Prepare a trial balance dated January 31, 2002.
d. Explain why the Retained Earnings account has a zero balance in the trial balance.

Solution to the Demonstration Problem

a.

GENERAL JOURNAL

Date	Account Titles and Explanation	Debit	Credit
2002			
Jan. 20	Cash	50,000	
	Capital Stock		50,000
	To record the issue of 5,000 shares of capital stock at $10 per share.		
20	Rent Expense	400	
	Cash		400
	To record payment of January rent expense.		
21	Office Supplies	200	
	Accounts Payable		200
	To record purchase of office supplies on account.		
22	Office Equipment	15,000	
	Cash		15,000
	To record the purchase of office equipment.		
26	Accounts Receivable	2,000	
	Consulting Revenue		2,000
	Billed clients for consulting services rendered.		
31	Utilities Expense	100	
	Accounts Payable		100
	To record January utilities expense due in February.		

b.

The Ledger

Asset Accounts

Cash

	Date	Debit	Date	Credit
	1/20	50,000	1/20	400
Bal. $34,600			1/22	15,000

Accounts Receivable

	Date	Debit	Date	Credit
Bal. $2,000	1/26	2,000		

Office Supplies

	Date	Debit	Date	Credit
Bal. $200	1/21	200		

Office Equipment

	Date	Debit	Date	Credit
Bal. $15,000	1/22	15,000		

Liability and Owners' Equity Accounts

Accounts Payable

Date	Debit	Date	Credit	
		1/21	200	
		1/31	100	Bal. $300

Capital Stock

Date	Debit	Date	Credit	
		1/20	50,000	Bal. $50,000

Retained Earnings

Date	Debit	Date	Credit	
				Bal. $0

Consulting Revenue

Date	Debit	Date	Credit	
		1/26	2,000	Bal. $2,000

Rent Expense

	Date	Debit	Date	Credit
Bal. $400	1/20	400		

Utilities Expense

	Date	Debit	Date	Credit
Bal. $100	1/31	100		

wiL96881_c03_84-133 2/27/01 12:48 PM Page 120

EPLER CONSULTING SERVICES, INC. Trial Balance December 31, 2002		
Cash	$34,600	
Accounts receivable	2,000	
Office supplies	200	
Office equipment	15,000	
Accounts payable		$ 300
Capital stock		50,000
Retained earnings		0
Consulting revenue		2,000
Rent expense	400	
Utilities expense	100	
	$52,300	$52,300

c. Epler's Retained Earnings account balance is zero because the company has been in business for only one week and has not yet updated the Retained Earnings account for *any* revenue or expense activities. The periodic adjustment needed to update the Retained Earnings account is discussed in Chapter 5.

SELF-TEST QUESTIONS

Answers to these questions appear on page 132.

1. According to the rules of debit and credit for balance sheet accounts:
  a. Increases in asset, liability, and owners' equity accounts are recorded by debits.
  b. Decreases in asset and liability accounts are recorded by credits.
  c. Increases in asset and owners' equity accounts are recorded by debits.
  d. Decreases in liability and owners' equity accounts are recorded by debits.

2. Sunset Tours has a $3,500 account receivable from the Del Mar Rotary. On January 20, the Rotary makes a partial payment of $2,100 to Sunset Tours. The journal entry made on January 20 by Sunset Tours to record this transaction includes:
  a. A debit to the Cash Received account of $2,100.
  b. A credit to the Accounts Receivable account of $2,100.
  c. A debit to the Cash account of $1,400.
  d. A debit to the Accounts Receivable account of $1,400.

3. Indicate all of the following statements that correctly describe net income. Net income:
  a. Is equal to revenue minus expenses.
  b. Is equal to revenue minus the sum of expenses and dividends.
  c. Increases owners' equity.
  d. Is reported by a company for a specific period of time.

4. Which of the following is provided by a trial balance in which total debits equal total credits?
  a. Proof that no transaction was completely omitted from the ledger during the posting process.
  b. Proof that the correct debit or credit balance has been computed for each account.
  c. Proof that the ledger is in balance.
  d. Proof that transactions have been correctly analyzed and recorded in the proper accounts.

5. Which of the following explains the debit and credit rules relating to the recording of revenue and expenses?
  a. Expenses appear on the left side of the balance sheet and are recorded by debits; revenue appears on the right side of the balance sheet and is recorded by credits.
  b. Expenses appear on the left side of the income statement and are recorded by debits; revenue appears on the right side of the income statement and is recorded by credits.
  c. The effects of revenue and expenses on owners' equity.
  d. The realization principle and the matching principle.

6. Which of the following is *not* considered an analytical aspect of the accounting profession?
  a. Evaluating an organization's operational efficiency.
  b. Forecasting the probable results of future operations.
  c. Designing systems that provide information to decision makers.
  d. Journalizing and posting business transactions.

7. Indicate all correct answers. In the accounting cycle
  a. Transactions are posted before they are journalized.
  b. A trial balance is prepared after journal entries have been posted.
  c. The Retained Earnings account is not shown as an up-to-date figure in the trial balance.
  d. Journal entries are posted to appropriate ledger accounts.

8. Indicate all correct answers. Dividends
  a. Decrease owners' equity.
  b. Decrease net income.
  c. Are recorded by debiting the Dividend account.
  d. Are a business expense.

ASSIGNMENT MATERIAL

DISCUSSION QUESTIONS

1. Baker Construction is a small corporation owned and managed by Tom Baker. The corporation has 21 employees, few creditors, and no investor other than Tom Baker. Thus, like many small businesses, it has no obligation to issue financial statements to creditors or investors. Under these circumstances, is there any reason for this corporation to maintain accounting records?

2. In its simplest form, an account has only three elements or basic parts. What are these three elements?

3. At the beginning of the year, the Office Equipment account of Gulf Coast Airlines had a debit balance of *$126,900.* During the year, debit entries of *$23,400* and credit entries of *$38,200* were posted to the account. What was the balance of this account at the end of the year? (Indicate debit or credit balance.)

4. What relationship exists between the position of an account on the balance sheet and the rules for recording increases in that account?

5. State briefly the rules of debit and credit as applied to asset accounts and as applied to liability and owners' equity accounts.

6. Does the term *debit* mean increase and the term *credit* mean decrease? Explain.

7. What requirement is imposed by the double-entry system in the recording of any business transaction?

8. Explain precisely what is meant by each of the phrases listed below. Whenever appropriate, indicate whether the left or right side of an account is affected and whether an increase or decrease is indicated.
  a. A debit of $200 to the Cash account.
  b. A debit of $600 to Accounts Payable.
  c. A credit of $50 to Accounts Receivable.

d. A debit to the Land account.
e. Credit balance.
f. Credit side of an account.

9. For each of the following transactions, indicate whether the account in parentheses should be debited or credited, and *give the reason* for your answer.
a. Purchased land for cash. (Cash)
b. Sold an old, unneeded computer on 30-day credit. (Office Equipment)
c. Obtained a loan of $30,000 from a bank. (Cash)
d. Purchased a copying machine on credit, promising to make payment in full within 30 days. (Accounts Payable)
e. Williams Word Processing, Inc., issued 10,000 shares of capital stock. (Capital Stock)

10. Explain the effect of operating profitably on the balance sheet of a business entity.

11. Does net income represent a supply of cash that could be distributed to stockholders in the form of dividends? Explain.

12. What is the meaning of the term *revenue?* Does the receipt of cash by a business indicate that revenue has been earned? Explain.

13. What is the meaning of the term *expenses?* Does the payment of cash by a business indicate that an expense has been incurred? Explain.

14. A service enterprise performs services in the amount of $500 for a customer in May and receives payment in June. In which month is the $500 of revenue recognized? What is the journal entry to be made in May and the entry to be made in June?

15. When do accountants consider revenue to be realized? What basic question about recording revenue in accounting records is answered by the *realization principle?*

16. Late in March, Classic Auto Painters purchased paint on account, with payment due in 60 days. The company used the paint to paint customers' cars during the first three weeks of April. Late in May, the company paid the paint store from which the paint had been purchased. In which month should Classic Auto Painters recognize the cost of this paint as expense? What generally accepted accounting principle determines the answer to this question?

17. In what accounting period does the *matching principle* indicate that an expense should be recognized?

18. Explain the rules of debit and credit with respect to transactions recorded in revenue and expense accounts.

19. What are some of the limitations of a trial balance?

20. How do dividends affect owners' equity? Are they treated as a business expense? Explain.

21. How does the accrual basis of accounting differ from the cash basis of accounting? Which gives a more accurate picture of the profitability of a business? Explain.

EXERCISES

EXERCISE 3.1
Accounting Terminology
LO 1–10

Listed below are eight technical accounting terms introduced in this chapter:

Realization principle	Credit
Time period principle	Accounting period
Matching principle	Expenses
Net income	Accounting cycle

Each of the following statements may (or may not) describe one of these technical terms. For each statement, indicate the term described, or answer "None" if the statement does not correctly describe any of the terms.

a. The span of time covered by an income statement.
b. The sequence of accounting procedures used to record, classify, and summarize accounting information.
c. The traditional accounting practice of resolving uncertainty by choosing the solution that leads to the lowest amount of income being recognized.

d. An increase in owners' equity resulting from profitable operations.

e. The generally accepted accounting principle that determines when revenue should be recorded in the accounting records.

f. The type of entry used to decrease an asset or increase a liability or owners' equity account.

g. The generally accepted accounting principle of offsetting revenue earned during an accounting period with the expenses incurred in generating that revenue.

h. The costs of the goods and services used up in the process of generating revenue.

EXERCISE 3.2

The Accounting Cycle

LO 1, 2, 5, 9, 10

Listed below in *random order* are the eight steps comprising a complete accounting cycle:

1. Prepare a trial balance.
2. Journalize and post the closing entries.
3. Prepare financial statements.
4. Post transaction data to the ledger.
5. Prepare an adjusted trial balance.
6. Make end-of-period adjustments.
7. Journalize transactions.
8. Prepare an after-closing trial balance.

a. List these steps in the sequence in which they would normally be performed. (A detailed understanding of these eight steps is not required until Chapters 4 and 5.)

b. Describe ways in which the information produced through the accounting cycle is used by a company's management and employees.

EXERCISE 3.3

The Matching Principle: You as a Driver

LO 6, 7

The purpose of this exercise is to demonstrate the *matching principle* in a familiar setting. Assume that you own a car that you drive about 15,000 miles each year.

a. List the various costs to you associated with owning and operating this car. Make an estimate of the total annual cost of owning and operating the car, as well as the average cost-per-mile that you drive.

b. Assume also that you have a part-time job. You usually do not use your car in this job, but today your employer asks you to drive 100 miles (round trip) to deliver some important documents. Your employer offers to "reimburse you for your driving expenses."

You already have a full tank of gas, so you are able to drive the whole 100 miles without stopping and you don't actually spend any money during the trip. Does this mean that you have incurred no "expenses" for which you should be reimbursed? Explain.

EXERCISE 3.4

Recording Transactions in a Journal

LO 3, 4, 5

Record the following selected transactions in general journal form for Thompson Engineering, Inc. Include a brief explanation of the transaction as part of each journal entry.

Oct. 1	The company issued 5,000 additional shares of capital stock at $20 per share.
Oct. 4	The company purchased computer equipment. The equipment cost $45,000, of which $15,000 was paid in cash; a note payable was issued for the balance.
Oct. 12	Issued a check for $11,000 in full payment of a note payable to West Milton State Bank.
Oct. 19	Purchased office supplies on account for $300. Payment is not due until November 10.
Oct. 25	Collected a $12,000 account receivable from the Lewisburg School District.
Oct. 30	Declared and paid a $6,000 cash dividend to stockholders.

EXERCISE 3.5

Relationship between Journal and Ledger Accounts

LO 2, 3, 4, 5

Transactions are *first* journalized and *then* posted to ledger accounts. In this exercise, however, your understanding of the relationship between the journal and the ledger is tested by asking you to study some ledger accounts and determine the journal entries that probably were made to produce these ledger entries. The following accounts show the first six transactions of Avenson Insurance Company. Prepare a journal entry (including a written explanation) for each transaction.

Cash

Nov. 1	120,000	Nov. 8	33,600
		Nov. 25	12,000
		Nov. 30	1,400

Vehicles

Nov. 30	9,400		

Land

Nov. 8	70,000		

Notes Payable

Nov. 25	12,000	Nov. 8	95,000
		Nov. 30	8,000

Building

Nov. 8	58,600		

Accounts Payable

Nov. 21	480	Nov. 15	3,200

Office Equipment

Nov. 15	3,200	Nov. 21	480

Capital Stock

		Nov. 1	120,000

EXERCISE 3.6

Preparing a Trial Balance

LO 9

Using the information in the ledger accounts presented in Exercise 3–5, prepare a trial balance for Avenson Insurance Company dated November 30.

EXERCISE 3.7

Relationship between Net Income and Owners' Equity

LO 6, 8

Total assets and total liabilities of Reco Plumbing, Inc., as shown by its balance sheets at the beginning and end of the year, were as follows:

	Beginning of Year	End of Year
Assets	$300,000	$335,000
Liabilities	100,000	110,000

Compute the net income or net loss from operations for the year in each of the following independent cases:

a. No dividends were declared or paid during the year and no additional capital stock was issued.

b. No dividends were declared or paid during the year, but additional capital stock was issued in the amount of $20,000.

c. Dividends of $10,000 were declared and paid during the year. No additional capital stock was issued.

d. Dividends of $15,000 were declared and paid during the year, and additional capital stock was issued in the amount of $30,000.

e. No dividends were declared or paid during the year, but additional capital stock was issued in the amount of $35,000.

EXERCISE 3.8

Effects of Transactions on the Accounting Equation

LO 2, 3, 4, 5, 6

Satka Fishing Expeditions, Inc., recorded the following transactions in July:

1. Provided an ocean fishing expedition for a credit customer; payment is due August 10.

2. Paid Marine Service Center for repairs to boats performed in June. (In June, Satka Fishing Expeditions, Inc., had received and properly recorded the invoice for these repairs.)

3. Collected the full amount due from a credit customer for a fishing expedition provided in June.

4. Received a bill from Baldy's Bait Shop for bait purchased and used in July. Payment is due August 3.

5. Purchased a new fishing boat on July 28, paying part cash and issuing a note payable for the balance. The new boat is first scheduled for use on August 5.

6. Declared and paid a cash dividend on July 31.

Indicate the effects that each of these transactions will have upon the following six *total amounts* in the company's financial statements for the month of July. Organize your answer in tabular form, using the column headings shown on the facing page, and use the code letters **I** for increase, **D** for decrease, and **NE** for no effect. The answer to transaction (1) is provided as an example.

	Income Statement			Balance Sheet		
Transaction	Revenue −	Expenses =	Net Income	Assets =	Liabilities +	Owners' Equity
(1)	**I**	**NE**	**I**	**I**	**NE**	**I**

EXERCISE 3.9

Effects of Transactions on the Accounting Equation

LO 2, 3, 4, 5, 6

A number of transactions of Claypool Construction are described below in terms of accounts debited and credited:

1. Debit Wages Expense; credit Wages Payable.
2. Debit Accounts Receivable; credit Construction Revenue.
3. Debit Dividends; credit Cash.
4. Debit Office Supplies; credit Accounts Payable.
5. Debit Repairs Expense; credit Cash.
6. Debit Cash; credit Accounts Receivable.
7. Debit Tools and Equipment; credit Cash and Notes Payable.
8. Debit accounts Payable; credit Cash.

a. Indicate the effects of each transaction upon the elements of the income statement and the balance sheet. Use the code letters **I** for increase, **D** for decrease, and **NE** for no effect. Organize your answer in tabular form using the column headings shown below. The answer for transaction **1** is provided as an example.

	Income Statement			Balance Sheet		
Transaction	Revenue −	Expenses =	Net Income	Assets =	Liabilities +	Owners' Equity
(1)	**NE**	**I**	**D**	**NE**	**I**	**D**

b. Write a one-sentence description of each transaction.

EXERCISE 3.10

When Is Revenue Realized?

LO 6, 7

The following transactions were carried out during the month of May by M. Palmer and Company, a firm of design architects. For each of the five transactions, you are to state whether the transaction represented revenue to the firm during the month of May. Give reasons for your decision in each case.

a. M. Palmer and Company received $25,000 cash by issuing additional shares of capital stock.

b. Collected cash of $2,400 from an account receivable. The receivable originated in April from services rendered to a client.

c. Borrowed $12,800 from Century Bank to be repaid in three months.

d. Earned $83 interest on a company bank account during the month of May. No withdrawals were made from this account in May.

e. Completed plans for guest house, pool, and spa for a client. The $5,700 fee for this project was billed to the client in May, but will not be collected until June 25.

EXERCISE 3.11

When Are Expenses Incurred?

LO 6, 7

During March, the activities of Evergreen Landscaping included the following transactions and events, among others. Which of these items represented expenses in March? Explain.

a. Purchased a copying machine for $2,750 cash.

b. Paid $192 for gasoline purchases for a delivery truck during March.

c. Paid $2,280 salary to an employee for time worked during March.

d. Paid an attorney $560 for legal services rendered in January.

e. Declared and paid an $1,800 dividend to shareholders.

EXERCISE 3.12

Preparing Journal Entries for Revenue, Expenses, and Dividends

LO 4, 6, 7, 8

Shown below are selected transactions of the architectural firm of Baxter, Claxter, and Stone, Inc.

April 5 Prepared building plans for Spangler Construction Company. Sent Spangler an invoice for $900 requesting payment within 30 days. (The appropriate revenue account is entitled Drafting Fees Earned.)

May 17 Declared a cash dividend of $5,000. The dividend will not be paid until June 25.

May 29 Received a $2,000 bill from Bob Needham, CPA, for accounting services performed during May. Payment is due by June 10. (The appropriate expense account is entitled Professional Expenses.)

June 4 Received full payment from Spangler Construction Company for the invoice sent on April 5.

June 10 Paid Bob Needham, CPA, for the bill received on May 29.

June 25 Paid the cash dividend declared on May 17.

a. Prepare journal entries to record the transactions in the firm's accounting records.

b. Identify any of the above transactions that *will not* result in a change in the company's net income.

EXERCISE 3.13

Annual Report; Appendix A

LO 1, 2, 3, 7, 10

Throughout this text we have many assignments based on the annual report of **Tootsie Roll Industries, Inc.**, in Appendix A. Refer to this annual report to respond to the following items:

a. Does the company's fiscal year end on December 31? How can you tell?

b. State the company's balance sheet in terms of A = L + E.

d. Did the company post more debits to the Cash account during the year than credits? How can you tell?

PROBLEMS

PROBLEM 3.1

Journalizing Transactions

LO 3, 4, 5

Glenn Grimes is the founder and president of Heartland Construction, a real estate development venture. The business transactions during February while the company was being organized are listed below.

Feb. 1 Grimes and several others invested $500,000 cash in the business in exchange for 25,000 shares of capital stock.

Feb. 10 The company purchased office facilities for $300,000, of which $100,000 was applicable to the land, and $200,000 to the building. A cash payment of $60,000 was made and a note payable was issued for the balance of the purchase price.

Feb. 16 Computer equipment was purchased from PCWorld for $12,000 cash.

Feb. 18 Office furnishings were purchased from Hi-Way Furnishings at a cost of $9,000. A $1,000 cash payment was made at the time of purchase, and an agreement was made to pay the remaining balance in two equal installments due March 1 and April 1. Hi-Way Furnishings did not require that Heartland sign a promissory note.

Feb. 22 Office supplies were purchased from Office World for $300 cash.

Feb. 23 Heartland discovered that it paid too much for a computer printer purchased on February 16. The unit should have cost only $359, but Heartland was charged $395. PCWorld promised to refund the difference within seven days.

Feb. 27 Mailed Hi-Way Furnishings the first installment due on the account payable for office furnishings purchased on February 18.

Feb. 28 Received $36 from PCWorld in full settlement of the account receivable created on February 23.

Instructions

a. Prepare journal entries to record the above transactions. Select the appropriate account titles from the following chart of accounts:

Cash	Land
Accounts Receivable	Office Building
Office Supplies	Notes Payable
Office Furnishings	Accounts Payable
Computer Systems	Capital Stock

b. Indicate the effects of each transaction on the company's assets, liabilities, and owners' equity for the month of February. Organize your analysis in tabular form as shown below for the February 1 transaction:

Transaction	Assets	=	Liabilities	+	Owners' Equity
Feb. 1	+$500,000 (Cash)		$0		+$500,000 (Capital Stock)

PROBLEM 3.2

Analyzing and Journalizing Transactions

LO 3, 4, 5, 6, 7, 8

Environmental Services, Inc., performs various tests on wells and septic systems. A few of the company's business transactions occurring during August are described below:

1. On August 1, the company billed customers $2,500 on account for services rendered. Customers are required to make full payment within 30 days.
2. On August 3, purchased testing supplies costing $3,800, paying $800 cash and charging the remainder on the company's 30-day account at Penn Chemicals. The testing supplies are expected to last several months.
3. On August 5, returned to Penn Chemicals $100 of testing supplies that were not needed. The return of these supplies reduced by $100 the amount owed to Penn Chemicals.
4. On August 17, the company issued an additional 2,500 shares of capital stock at $8 per share. The cash raised will be used to purchase new testing equipment in September.
5. On August 22, the company received $600 cash from customers it had billed on August 1.
6. On August 29, the company paid its outstanding account payable to Penn Chemicals.
7. On August 30, a cash dividend totaling $6,800 was declared and paid to the company's stockholders.

Instructions

a. Prepare an analysis of each of the above transactions. Transaction **1** serves as an example of the form of analysis to be used.

1. (a) The asset Accounts Receivable was increased. Increases in assets are recorded by debits. Debit Accounts Receivable, $2,500.

(b) Revenue has been earned. Revenue increases owners' equity. Increases in owners' equity are recorded by credits. Credit Testing Service Revenue, $2,500.

b. Prepare journal entries, including explanations, for the above transactions.

c. How does the *realization principle* influence the manner in which the August 1 billing to customers is recorded in the accounting records?

d. How does the *matching principle* influence the manner in which the August 3 purchase of testing supplies is recorded in the accounting records?

PROBLEM 3.3

Analyzing and Journalizing Transactions

LO 3, 4, 5, 6, 7, 8

Weida Surveying, Inc., provides land surveying services. During September, its transactions included the following:

Sept. 1 Paid rent for the month of September, $4,400.

Sept. 3 Billed Fine Line Homes $5,620 for surveying services. The entire amount is due on or before September 28. (Weida uses an account entitled Surveying Revenue when billing clients.)

Sept. 9 Provided surveying services to Sunset Ridge Developments for $2,830. The entire amount was collected on this date.

Sept. 14 Placed a newspaper advertisement in the *Daily Item* to be published in the September 20 issue. The cost of the advertisement was $165. Payment is due in 30 days.

Sept. 25 Received a check for $5,620 from Fine Line Homes for the amount billed on September 3.

Sept. 26 Provided surveying services to Thompson Excavating Company for $1,890. Weida collected $400 cash, with the balance due in 30 days.

Sept. 29 Sent a check to the *Daily Item* in full payment of the liability incurred on September 14.

Sept. 30 Declared and paid a $7,600 cash dividend to the company's stockholders.

Instructions

a. Analyze the effects that each of these transactions will have on the following six components of the company's financial statements for the month of September. Organize your answer in tabular form, using the column headings shown below. Use **I** for increase, **D** for decrease, and **NE** for no effect. The September 1 transaction is provided for you:

	Income Statement			Balance Sheet		
Transaction	Revenue −	Expenses =	Net Income	Assets =	Liabilities +	Owners' Equity
Sept. 1	**NE**	**I**	**D**	**D**	**NE**	**D**

b. Prepare a journal entry (including explanation) for each of the above transactions.

c. Three of September's transactions involve cash payments, yet only one of these transactions is recorded as an expense. Describe three situations in which a cash payment would *not* involve recognition of an expense.

PROBLEM 3.4

The Accounting Cycle: Journalizing, Posting, and Preparing a Trial Balance

LO 1–10

In June 2002, Wendy Winger organized a corporation to provide aerial photography services. The company, called Aerial Views, began operations immediately. Transactions during the month of June were as follows:

June 1 The corporation issued 60,000 shares of capital stock to Wendy Winger in exchange for $60,000 cash.

June 2 Purchased a plane from Utility Aircraft for $220,000. Made a $40,000 cash down payment and issued a note payable for the remaining balance.

June 4 Paid Woodrow Airport $2,500 to rent office and hangar space for the month.

June 15 Billed customers $8,320 for aerial photographs taken during the first half of June.

June 15 Paid $5,880 in salaries earned by employees during the first half of June.

June 18 Paid Hannigan's Hangar $1,890 for maintenance and repair services on the company plane.

June 25 Collected $4,910 of the amounts billed to customers on June 15.

June 30 Billed customers $16,450 for aerial photographs taken during the second half of the month.

June 30 Paid $6,000 in salaries earned by employees during the second half of the month.

June 30 Received a $2,510 bill from Peatree Petroleum for aircraft fuel purchased in June. The entire amount is due July 10.

June 30 Declared a $2,000 dividend payable on July 15.

The account titles used by Aerial Views are

Cash	Retained Earnings
Accounts Receivable	Dividends
Aircraft	Aerial Photography Revenue
Notes Payable	Maintenance Expense
Accounts Payable	Fuel Expense
Dividends Payable	Salaries Expense
Capital Stock	Rent Expense

Instructions

a. Analyze the effects that each of these transactions will have on the following six components of the company's financial statements for the month of June. Organize your answer in tabular form, using the column headings shown on the facing page. Use **I** for increase, **D** for decrease, and **NE** for no effect. The June 1 transaction is provided for you:

	Income Statement			Balance Sheet		
Transaction	Revenue −	Expenses =	Net Income	Assets =	Liabilities +	Owners' Equity
June 1	**NE**	**NE**	**NE**	**I**	**NE**	**I**

b. Prepare journal entries (including explanations) for each transaction.

c. Post each transaction to the appropriate ledger accounts (use a running balance format as illustrated on pages 94–95).

d. Prepare a trial balance dated June 30, 2002.

e. Using figures from the trial balance prepared in part **d,** compute total assets, total liabilities, and owners' equity. Are these the figures that the company will report in its June 30 balance sheet? Explain your answer briefly.

PROBLEM 3.5
The Accounting Cycle: Journalizing, Posting, and Preparing a Trial Balance
LO 1–10

Dr. Schekter, DVM, opened a veterinary clinic on May 1. The business transactions for May are shown below:

May 1 Dr. Schekter invested $400,000 cash in the business in exchange for 5,000 shares of capital stock.

May 4 Land and a building were purchased for $250,000. Of this amount, $70,000 applied to the land, and $180,000 to the building. A cash payment of $100,000 was made at the time of the purchase, and a note payable was issued for the remaining balance.

May 9 Medical instruments were purchased for $130,000 cash.

May 16 Office fixtures and equipment were purchased for $50,000. Dr. Schekter paid $20,000 at the time of purchase and agreed to pay the entire remaining balance in 15 days.

May 21 Office supplies expected to last several months were purchased for $5,000 cash.

May 24 Dr. Schekter billed clients $2,200 for services rendered. Of this amount, $1,900 was received in cash, and $300 was billed on account (due in 30 days).

May 27 A $400 invoice was received for several radio advertisements aired in May. The entire amount is due on June 5.

May 28 Received a $100 payment on the $300 account receivable recorded May 24.

May 31 Paid employees $2,800 for salaries earned in May.

A partial list of account titles used by Dr. Schekter includes:

Cash	Notes Payable
Accounts Receivable	Accounts Payable
Office Supplies	Capital Stock
Medical Instruments	Veterinary Service Revenue
Office Fixtures and Equipment	Advertising Expense
Land	Salary Expense
Building	

Instructions

a. Analyze the effects that each of these transactions will have on the following six components of the company's financial statements for the month of May. Organize your answer in tabular form, using the column headings shown below. Use **I** for increase, **D** for decrease, and **NE** for no effect. The May 1 transaction is provided for you:

	Income Statement			Balance Sheet		
Transaction	Revenue −	Expenses =	Net Income	Assets =	Liabilities +	Owners' Equity
May 1	**NE**	**NE**	**NE**	**I**	**NE**	**I**

b. Prepare journal entries (including explanations) for each transaction.

c. Post each transaction to the appropriate ledger accounts (use T account format as illustrated on page 87).

d. Prepare a trial balance dated May 31, 2002.

e. Using figures from the trial balance prepared in part **d,** compute total assets, total liabilities, and owners' equity. Did May appear to be a profitable month?

CASES AND UNSTRUCTURED PROBLEMS

CASE 3.1

Revenue Recognition

LO 7, 10

The realization principle determines when a business should recognize revenue. Listed below are three common business situations involving revenue. After each situation, we give two alternatives as to the accounting period (or periods) in which the business might recognize this revenue. Select the appropriate alternative by applying the realization principle, and explain your reasoning.

a. Airline ticket revenue: Most airlines sell tickets well before the scheduled date of the flight. (Period ticket sold; period of flight)

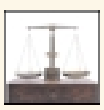
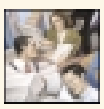
b. Sales on account: In June 2002, a San Diego–based furniture store had a big sale, featuring "No payments until 2003." (Period furniture sold; periods that payments are received from customers)

c. Magazine subscriptions revenue: Most magazine publishers sell subscriptions for future delivery of the magazine. (Period subscription sold; periods that magazines are mailed to customers)

CASE 3.2

Measuring Income Fairly

LO 6, 7, 10

Kim Morris purchased Print Shop, Inc., a printing business, from Chris Stanley. Morris made a cash down payment and agreed to make annual payments equal to 40% of the company's net income in each of the next three years. (Such "earn-outs" are a common means of financing the purchase of a small business.) Stanley was disappointed, however, when Morris reported a first year's net income far below Stanley's expectations.

The agreement between Morris and Stanley did not state precisely how "net income" was to be measured. Neither Morris nor Stanley was familiar with accounting concepts. Their agreement stated only that the net income of the corporation should be measured in a "fair and reasonable manner."

In measuring net income, Morris applied the following policies:

1. Revenue was recognized when cash was received from customers. Most customers paid in cash, but a few were allowed 30-day credit terms.

2. Expenditures for ink and paper, which are purchased weekly, were charged directly to Supplies Expense, as were the Morris family's weekly grocery and dry cleaning bills.

3. Morris set her annual salary at $60,000, which Stanley had agreed was reasonable. She also paid salaries of $30,000 per year to her husband and to each of her two teenage children. These family members did not work in the business on a regular basis, but they did help out when things got busy.

4. Income taxes expense included the amount paid by the corporation (which was computed correctly), as well as the personal income taxes paid by various members of the Morris family on the salaries they earned working for the business.

5. The business had state-of-the-art printing equipment valued at $150,000 at the time Morris purchased it. The first-year income statement included a $150,000 equipment expense related to these assets.

Instructions

a. Discuss the fairness and reasonableness of these income-measurement policies. (Remember, these policies do *not* have to conform to generally accepted accounting principles. But they should be *fair* and *reasonable*.)

b. Do you think that the net *cash flow* generated by this business (cash receipts less cash outlays) is higher or lower than the net income as measured by Morris? Explain.

BUSINESS WEEK ASSIGNMENT

BusinessWeek

CASE 3.3

LO 10

With the rapid growth in E-commerce technology, capturing economic events and managing strategic information has never been more important to businesses. In an August 28, 2000, *Business Week* article entitled, "From Gearhead to Grand Pooh-Bah,'' author Andy Reinhardt describes exciting career opportunities for chief information officers (CIOs). In short, the future has never looked brighter. In companies such as **General Electric**; **Cisco Systems, Inc.**; and **Charles Schwab & Company**, CIOs report directly to the chief executive officers (CEOs). In many companies, CIOs have spearheaded initiatives that have resulted in cost reductions amounting to millions of dollars. In this fast-paced field, attaining the knowledge required to stay abreast of technology is often the key to success.

Assume that you have career aspirations of one day becoming the CIO of a successful company. If you were designing your own major, what courses would you select to best prepare for this goal? Explain briefly your reasons for selecting these courses. Would your degree plan include any courses in accounting? Explain your answer.

INTERNET ASSIGNMENT

INTERNET 3.1

Revenue from Various Sources

LO 6

Visit the home page of **Johnson & Johnson Corporation** at the following Internet location:

www.jnj.com

Assess the company's most recent annual report from the Investor Relations menu. From the annual report contents, select Segments of Business and Geographic Areas. How many dollars of revenue, in total, were generated by the company's worldwide operations? Of this amount, how much was generated in each of the company's four major geographic trade areas?

Internet sites are time and date sensitive. It is the purpose of these exercises to have you explore the Internet. You may need to use the Yahoo! search engine http://www.yahoo.com *(or other favorite search engines) to find a company's current web address.*

OUR COMMENTS ON THE "YOUR TURN" CASES

You as a Student (p. 88) The concept of double-entry accounting *does* apply to your personal financial position. The financial position of an individual may be described by the equation:

Assets = Liabilities + Net Worth

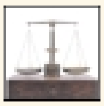
Any change in the amount of any asset or liability causes an offsetting change *elsewhere* in the equation. Thus two or more accounts within the accounting equation must change—this is what is meant by double-entry.

For example, your spending cash results in the acquisition of another asset, in the reduction of a liability, or in the reduction of your personal net worth (the equivalent of owners' equity in a business organization). A cash receipt implies the reduction of another asset, an increase in liabilities, or an increase in net worth.

Although individuals usually do not use debits and credits to record changes in their financial positions, the concept of double-entry—that is, corresponding changes in the accounting equation—still applies.

You as a Business Owner (p. 102) Indeed it does. If the business is *unincorporated,* its assets belong to you. Thus, you may withdraw these assets from the business at any time and use them for any purpose. But if the business is a corporation, these assets belong to *the corporate entity.* Even though you are the sole owner of the company, you may *not* withdraw assets from the business without *proper authorization.* Thus, your personal use of corporate assets must be viewed as compensation to you (i.e., salary), a loan, or a dividend.

Note: For income tax purposes, treating this expenditure as a loan probably is the best alternative. If you treat it as either salary or a dividend, you are receiving taxable income. Tax planning often plays a major role in transactions between a corporation and its owners.



You as Overnight Auto Service's Accountant (p. 106) The Institute of Management Accountants (IMA) has established a code of ethics that includes a requirement of integrity. Integrity is defined to include avoiding conflicts of interest by refusing compromising gifts and favors and by refusing to subvert organizational objectives. The offer from Harbor Cab Co. would require you to violate the integrity requirement. Free cab service for a month is a compromising gift and delaying the payment due date would subvert the organizational objectives of Overnight Auto. For more information on the IMA's code of ethics, visit their website at www.rutgers.edu/Accounting/raw/ima/imaethic.

ANSWERS TO SELF-TEST QUESTIONS

1. d **2.** b **3.** a, c, and d **4.** c **5.** c **6.** d **7.** b, c, and d **8.** a and c