CHAPTER 1

BASIC FINANCIAL ACCOUNTING REVIEW

INTRODUCTION

Every profit or nonprofit business entity requires a reliable internal system of accountability. A business accounting system provides this accountability by recording all activities regarding the creation of monetary inflows of revenue and monetary outflows of expenses resulting from operating activities. The accounting system provides the financial information needed to evaluate the effectiveness of current and past operations. In addition, the accounting system maintains data required to present reports showing the status of asset resources, creditor liabilities, and ownership equities of the business entity.

In the past, much of the work required to maintain an effective accounting system required extensive individual manual effort that was tedious, aggravating, and time consuming. Such systems relied on individual effort to continually record transactions, to add, subtract, summarize, and check for errors. The rapid advancement of computer technology has increased operating speed, data storage, and reliability accompanied by a significant cost reduction. Inexpensive microcomputers and accounting software programs have advanced to the point where all of the records posting, calculations, error checking, and financial reports are *provided* quickly by the computerized system. The efficiency and cost-effectiveness of supporting computer software allows management to maintain direct personal control of the accounting system.

To effectively understand concepts and analysis techniques discussed within this text, it is essential that the reader have a conceptual as well as a practical understanding of accounting fundamentals. This chapter reviews basic accounting

principles, concepts, conventions, and practices. This review should be of particular benefit to the reader who has taken an introductory accounting course or who has not received accounting training for some time.

CHAPTER OBJECTIVES

After studying this chapter and completing the assigned exercises and problems, the reader should be able to

1. Define and explain the accounting principles, concepts, and the conceptual difference between the cash and accrual methods of accounting.
2. Explain the rules of debits and credits and their use as applied to double-entry accounting by increasing or decreasing an account balance of the five basic accounts; **A**ssets, **L**iabilities, **O**wnership **E**quity, **S**ales **R**evenue, and **E**xpenses.
3. Explain the basic balance sheet equation: **A**ssets = **L**iabilities + **O**wner's **E**quity.
4. Explain and demonstrate the difference between journalizing and posting of an accounting transaction.
5. Explain the income statement and its major elements as discussed and applied to the hospitality industry.
6. Complete an unadjusted trial balance, balance sheet, and income statement.
7. Explain and demonstrate end-of-period adjusting entries required by the matching principle.
8. Demonstrate the use of four depreciation methods.
9. Complete an analysis to convert a business entity from cash to an accrual accounting basis.

Financial accounting is concerned with providing information to users outside of business that are in some way concerned or affected by the performance of the business; stockholders, creditors, lenders, governmental agencies, and other outside users.

Hospitality management accounting is concerned with providing specialized internal information to managers that are responsible for directing and controlling operations within the hospitality industry. Internal information is the basis for *planning* alternative short- or long-term courses of action and the decision as to which course of action is selected. Specific detail is provided as to how the selected course of action will be implemented. Managers *direct* the needed material resources and *motivate* the human resources needed to carry

out a selected course of action. Managers *control* the implemented course of action to ensure the plan is being followed and, as necessary, modified to meet the objectives of the selected course of action.

CAREERS IN HOSPITALITY ACCOUNTING

For the student interested in accounting, there are a variety of career opportunities in the hospitality industry. First, there is general accounting, which includes the recording and production of accounting information and/or specialization in a particular area such as food service and beverage cost control. Second, larger organizations might offer careers in the design (or revision) and implementation of accounting systems. A larger organization might also offer careers in budgeting, tax accounting, and auditing that verifies accounting records and reports of individual properties in the chain.

HOSPITALITY ACCOUNTING OVERVIEW

Hospitality business operations, as well as others, are generally identified as having a number of different cyclical sales revenue cycles. First, there is the **daily operating cycle** that applies particularly to restaurant operations where daily sales revenue typically depends on meal periods. Second, there is a **weekly cycle.** On the one hand, business travelers normally use hotels, motels, and other hospitality operations during the week and generally provide little weekend hospitality business. On the other hand, local people most often frequent restaurants on Friday through Sunday more than they do during the week. Third, there is a **seasonal cycle** that depends on vacationers to provide revenue for hospitality operations during vacation months. Fourth, a **generalized business cycle** will exist during a recession cycle and hospitality operations typically experience a major decline in sales revenue.

The various repetitive **accounting cycles** encountered in hospitality operations create unique difficulties in forecasting revenue and operating costs. In particular, variable costs (e.g., cost of sales and labor costs) require unique planning and procedures that assist in budget forecasting. Since hospitality operations are people-oriented and people-driven, it is more difficult to effectively automate and control hospitality costs than it is in other nonhospitality business sectors.

Unfortunately, most accounting textbooks and generalized accounting courses emphasize accounting systems using procedures and applications that

are applicable to services, retailing, and manufacturing businesses. These types of businesses do not normally require the use of the unique accounting procedures and techniques required by hospitality operations. In manufacturing operations, all costs are generally assigned to products or product lines and identified as direct costs and indirect costs. **Direct costs** include all materials and labor costs that are traceable directly to the product manufactured. **Indirect costs** generally refer to manufacturing or factory overhead, and include such items as factory supporting costs such as administrative salaries, wages and miscellaneous overhead, utilities, interest, taxes, and depreciation. The basic nature of indirect costs presents difficulties isolating specific costs since they are not directly traceable to a particular product. Portions of supporting indirect costs are assigned by allocation techniques to each product or product line.

However, a hospitality operation tends to be highly departmentalized with separate operating divisions that provide rooms, food, beverage, banquet, and gift shop services. A hospitality accounting system must allow an independent evaluation of each operating department and its operating divisions. Costs directly traceable to a department or division are identified as *direct costs.* Typically, the major direct costs include cost of sales (cost of goods sold), salary and wage labor, and specific operating supplies. After direct costs are determined, they are deducted from revenue to isolate **contributory income,** which represents the department's or division's contribution to support undistributed *indirect costs* of the whole operation.

Indirect costs are those costs not easily traceable to a department or division. Generally, no attempt is made at this stage of the evaluation to allocate indirect costs to the department or divisions. Managers review operating results to ensure that contributory income from all departments or divisions is sufficient to cover total indirect costs for the overall hospitality operation and provide excess funds to meet the desired level of profit.

GENERAL FINANCIAL ACCOUNTING TERMS

The objective of this text is to provide managers in the hospitality industry with a working knowledge of how an accounting system develops, maintains, and provides financial information. Managerial analysis is enhanced with an understanding of the information provided by an accounting system. Without management's understanding of the information being provided, management effectiveness will be greatly reduced.

Financial accounting is a common language developed by accountants over time to define the principles, concepts, procedures, and broad rules necessary for management's use in a viable accounting system for making decisions and maintaining an efficient, effective, and profitable business. An accounting system shows detailed information regarding assets, debts, ownership equity, sales revenue, and

operating expenses, and it governs recording, reporting, and preparation of financial statements that show the financial condition of a business entity.

CASH VERSUS ACCRUAL ACCOUNTING

The cash and accrual basis are the two methods of accounting. The difference between the two methods is how and when sales revenue and expenses are recognized. The **cash basis** of accounting recognizes sales revenue inflows when cash is received and operating expense outflows to generate sales revenue when cash is paid. Simply put, the cash basis recognizes sales revenue and operating expenses only when cash changes hands. The **accrual basis** of accounting recognizes inflows of sales revenue when earned and operating expense outflows to produce sales revenues when incurred; it does not matter when cash is received or paid. Many small operations use the cash basis of accounting when appropriate for their type of business; no requirement exists to prepare and report their financial position to external users.

The cash basis can be computed as follows:

Beginning cash + Cash sales revenue − Cash payments = Ending cash

There is no basic equation for the accrual basis.

To illustrate cash accounting, we will assume that a new restaurant purchased and sold inventory on a cash basis for two months of operation. A partial income statement prepared on a cash basis for the first two months of operation, assuming monthly sales revenue of $10,000 and total inventories of $8,000 for resale, would show the following:

	Month 1	Month 2
Cash sales revenue	$10,000	$10,000
Cash purchases	(8,000)	-0-
Gross margin (before other expenses)	$ 2,000	$10,000

This method gives a distorted view of the operations over the two months. The combined two-month gross profit would be $12,000; however, the accrual method will give a more accurate picture of the real situation, a gross margin (before other expenses) of $6,000 each month. In the following accrual example, cost of sales is estimated at 40 percent of sales revenue. Cost of sales refers to cost of goods sold.

	Month 1	Month 2
Cash sales revenue	$10,000	$10,000
Cost of sales	(4,000)	(4,000)
Gross margin (before other expenses)	$ 6,000	$ 6,000

The examples given are not meant to suggest that the cash basis of accounting is never used. As indicated in the previous discussions, many small businesses find the cash basis appropriate. However, the cash basis is not considered adequate for medium and larger business organizations, which normally use the accrual basis of accounting. The accrual method is used throughout this text, except in cases where the cash concept supplements the decision-making process. Exceptions to the accrual method will be discussed in Chapter 10, "Statement of Cash Flows and Working Capital Analysis, Indirect Method," Chapter 11, "Cash Management," and Chapter 12, "Capital Budgeting and the Investment Decision."

Without a basic knowledge of the system and the information provided, it will be difficult to produce or understand financial reports. The two major financial reports are the balance sheet and income statement.

BALANCE SHEETS AND INCOME STATEMENTS

The **balance sheet** reveals the financial condition of a business entity by showing the status of its assets, liabilities, and ownership equities on the specific ending date of an operating period. The **income statement** reports the economic results of the business entity by matching sales revenue inflows, and expense outflows to show the results of operations—net income or net loss. The income statement is generally considered the more important of the two major financial reports. Since it reports the results of operations, it clearly identifies sales revenue inflows and the cost outflows to produce sales revenue. We will discuss the income statement later in this chapter.

The balance sheet provides an easier basis for understanding double entry accounting, so it will be discussed first. The **accounting equation,** as it is known, consists of three key elements and defines the basic format of the balance sheet. The basic configurations of a balance sheet and an income statement discussed in this chapter are expanded in Chapter 2.

The balance sheet equation is $A = L + OE$.

Assets (*A*)	Resources of value used by a business entity to create revenue, which, in turn, increases assets.
Liabilities (*L*)	Debt obligations owed to creditors as a result of operations to generate sales revenue; to be paid in the near future with assets. Liabilities represent creditor equity or claims against the assets of the business entity.
Ownership Equity (*OE*)	Ownership equity represents claims to assets of a business entity. There are three basic forms of ownership equity: **1.** Proprietorship—entity financing provided by a sole owner. **2.** Partnership—entity financing provided by two or more owners (partners).

3. Corporation—a legal entity incorporated under the laws of a state, separate from its owners.
- *Capital stock:* Financing provided by stockholders (or shareholders) with ownership represented by shares of corporate stock. Each share of stock represents one ownership claim.
- *Retained earnings:* Earnings of the corporation that have been retained.

The equality point indicates an absolute necessity to maintain equality on both sides of the equation. The sum total of the left side of the equation, total assets, *A,* must equal the total sum of the right side of the equation, liabilities, *L,* plus ownership equity, *OE*. When a transaction affects both sides of the equation, equality of the equation must be maintained. One side of the equation cannot increase or decrease without the other side increasing or decreasing by the same amount. If a transaction exists that affects only one side of the equation, total increases must equal total decreases.

The assets consumed produce sales revenue that become cost of sales and operating expenses. The liabilities + ownership equity elements of the equation represent the claims against assets by creditors (liabilities) and claims against the assets by the ownership (OE). The following describes the balance sheet elements:

ASSETS	**=**	**LIABILITIES**	**+**	**OWNERSHIP EQUITY**
⇕		⇕		⇕
Resources		**Creditors' Equity**		**Ownership Equity**

Because the balance sheet equation is a simple linear equation, knowing dollar values of two of the three basic elements allows the value of the missing element to be identified. The following balance sheet equation has values given for all three elements. Then each of the three examples has the value of one element omitted from the equation to show how to find the value of the missing element:

ASSETS	=	LIABILITIES	+	OWNERSHIP EQUITY
⇕		⇕		⇕
$100,000	=	$25,000	+	$75,000

$[A - L = OE] = \$100{,}000 - \$25{,}000 = \underline{\underline{\$\ 75{,}000}}$

$[A - OE = L] = \$100{,}000 - \$75{,}000 = \underline{\underline{\$\ 25{,}000}}$

$[L + OE = A] = \$\ 25{,}000 + \$75{,}000 = \underline{\underline{\$100{,}000}}$

DOUBLE-ENTRY–ACCRUAL ACCOUNTING

The analysis of accounting transactions, the recording, posting, adjusting, and reporting economic results and financial condition of a business entity is the heart of **double-entry–accrual accounting.**

For an accounting transaction to exist, at least one element of the balance sheet equation or the income statement elements must be created or changed. An exchange between a business entity where services are rendered or goods are sold to an external entity for cash or on credit, or where services are received or goods are purchased, creates a transaction. Following the transaction, adjusting entries must be made to adjust the operating accounts of the business entity at the end of an operating period to recognize internal accruals and deferrals. Such transactions will recognize sales revenues earned but not yet received or recorded, and expenses incurred but not yet paid or recorded. To complete the accounting period, a requirement also exists to close the temporary income statement operating accounts (sales revenue and expenses) to bring them to a zero balance and transfer net income or net loss to the capital account(s) or the retained earnings account. Note that this requirement means that an entry is made on both sides of the equation—thus, the name *double-entry accounting.* Adjusting and closing entries will be discussed in detail later in this chapter.

Since no transaction can affect only one account, the *balance sheet equation is kept in balance* and the equality between both sides of the equation, $A = L + OE$, is maintained. Each transaction directs the change to be made to each account involved in the transaction. Each directed change will cause an increase or decrease in a stated dollar amount to a specified account. It is important to understand how a journal entry directs such changes to a specific account. This is accomplished through the use of *two account columns* to receive numerical values that follow the rules of debit and credit entries.

GENERALLY ACCEPTED ACCOUNTING PRINCIPLES

Accounting is not a static system; it is a dynamic process that incorporates **generally accepted accounting principles (GAAP)** that evolve to suit the needs of financial statement readers, such as business managers, equity owners, creditors, and governmental agencies with meaningful, dependable information. The general principles and concepts discussed in this text will include business entity, monetary unit, going concern, cost, time period, conservatism, consistency, materiality, full disclosure, objectivity, and matching principle. In addition, the gain or loss recognition on the disposal of depreciable assets will be discussed.

BUSINESS ENTITY PRINCIPLE

From an accounting, if not from a legal, point of view, the transactions of a **business entity** operating as a proprietorship, partnership, or corporation are considered to be separate and distinct from all personal transactions of its owners. The separation of personal transactions of the owners from the business entity must be maintained, even if the owners work in or for the business entity. Only the effects to assets, liabilities, ownership equity, and other transactions of the business entity are entered to the organization's accounting records. The ownership's personal assets, debts, and expenses are not part of the business entity.

MONETARY UNIT PRINCIPLE

The assumption of the **monetary unit principle** is that the primary national monetary unit is used for recording numerical values of business exchanges and operating transactions. The U.S. monetary unit is the *dollar.* Thus, the accounting function in our case records the dollar value of sales revenue inflows and expense outflows of the business entity during its operations. The monetary unit of the dollar also expresses financial information within the financial statements and reports. Information provided and maintained in the accounting system is recorded in dollars.

GOING CONCERN PRINCIPLE

Under normal circumstances, the **going concern principle** makes the assumption that a business entity will remain in operation indefinitely. This continuity of existence assumes that the cost of business assets will be recovered over time by way of profits that are generated by successful operations. The balance sheet values for long-lived assets such as land, building, and equipment are shown at their actual acquisition cost. Since there is no intention to sell such assets, there is no reason to value them at market value. The original cost of a long-lived physical asset (other than land) is recovered over its useful life using depreciation expense.

COST PRINCIPLE

The assumption made by the monetary concept is tied directly to the **cost principle,** which requires the value of business transactions be recorded at the actual or equivalent **cash cost.** During extended periods of inflation or deflation, comparing income statements for different years becomes difficult, if not meaningless, under the stable dollar assumption. However, some exceptions are made with the valuation of inventories for resale, and also to express certain balance sheet and income statement items in terms of current, rather than historic, dollars.

TIME PERIOD PRINCIPLE

The time period principle requires a business entity to complete an analysis to report financial condition and profitability of its business operation over a specific **operating time period.** An ongoing business operates continuously. Electrical power in reality flows continuously to the user, yet in theory the flow stops when the service meter data is recorded. The billing statement records that service for the time period technically ended at a certain date, although service continued without interruption. This example relates to a monthly period; however, the theory *applies to any time period*—daily, weekly, monthly, quarterly, semiannually, or annually. An accounting year, or **fiscal year,** is an account period of one year. A fiscal year is for any 12 consecutive months and may or may not coincide with a **calendar year** that begins on January 1 and ends on December 31 of the same year. In the hospitality business, statements are frequently prepared on a monthly and, in some cases, a weekly basis.

CONSERVATISM PRINCIPLE

A business should never prepare financial statements that will cause balance sheet items such as assets to be *overstated* or liabilities to be *understated,* sales revenues to be overstated, or expenses to be understated. Situations might exist where estimates are necessary to determine the inventory values or to decide an appropriate depreciation rate. The inventory valuation should be *lower* rather than higher. **Conservatism** in this situation increases the cost of sales and decreases the gross margin (also called the gross profit).

The costs of long-lived assets (other than land) are systematically recovered through **depreciation expense,** and should be higher rather than lower. Conservatism in this case will increase expenses and lower reported operating income; its goal is to avoid overstating income. However, caution must be exercised to ensure that conservatism is not taken to the extreme, creating misleading results. For example, restaurant equipment with an estimated five-year life could be fully depreciated in its first year of use. Although this procedure is certainly conservative, it is hardly realistic.

CONSISTENCY PRINCIPLE

The **consistency principle** was established to ensure *comparability* and *consistency* of the procedures and techniques used in the preparation of financial statements from one accounting period to the next. For example, the *cash basis* requires that cash be exchanged before sales revenue or expenses can be recognized. The *accrual basis* of accounting requires recognition of revenue when earned and expenses when incurred. Switching back and forth between the two would not be consistent, nor would randomly changing inventory valuation

methods from one period to the next. When changes made are not consistent with the last accounting period, the disclosure principle indicates the *disclosure* of such changes to probable and potential readers of the statements. The disclosure should show the economic effects of the changes on financial results of the current period and the probable economic impact on future periods.

MATERIALITY CONCEPT

Theoretically, items that may affect the decision of a user of financial information are considered important and material and must be reported in a correct way. The **materiality concept** allows immaterial small dollar amount items to be treated in an expedient although incorrect manner. In the previous discussion of conservatism, an item of restaurant equipment with a five-year life could be fully depreciated in its first year. This technique would be considered overly conservative, particularly if it has a material effect to operating income. Consider the alternatives. First, equipment costing $50,000 with no estimated residual value could be fully depreciated the first year to maximize depreciation expense, thus reducing operating income. Second, the equipment could be systematically depreciated over each year of estimated life, to allocate depreciation expense charges against sales revenue in each year of serviceable life.

	First Alternative, First Year Fully Depreciate $50,000 First Year	**Second Alternative, First Year Depreciate $10,000 per Year, 5 Years**
Sales revenue	$500,000	$500,000
Operating expenses	(450,000)	(450,000)
Income before depreciation	$ 50,000	$ 50,000
Depreciation expense	(50,000)	(10,000)
Operating income	$ -0-	$ 40,000

Depreciating equipment *systematically* each year over the life of the asset provides the most realistic alternative. This technique recovers the cost of a long-lived physical asset by allocating depreciation expense based on the consumption of the benefits received from the asset over five years of use. On the other hand, a restaurant might have purchased a supply of letterhead stationery for use over the next five years at a cost of $200. The restaurant could show the total amount of $200 as an expense in the year purchased, opting not to expense the stationery at $40 per year over five years. Operating income would not be materially affected by completely expensing the purchase in year one.

FULL DISCLOSURE PRINCIPLE

Financial statements are primarily concerned with a past period. The **full disclosure principle** states that any *future event* that may or will occur, and that will have a *material economic impact* on the financial position of the business, should be disclosed to probable and potential readers of the statements. Such disclosures are most frequently made by footnotes.

For example, a hotel should report the building of a new wing, or the future acquisition of another property. A restaurant facing a lawsuit from a customer who was injured by tripping over a frayed carpet edge should disclose the contingency of the lawsuit. Similarly, if accounting practices of the current financial statements were changed and differ from those previously reported, the changes should be disclosed. Changes from one period to the next that affect current and future business operations should be reported if possible. Changes of this nature include changes made to the method used to determine depreciation expense or to the method of inventory valuation; such changes would increase or decrease the value of ending inventory, cost of sales, gross margin, and net income or loss. All changes disclosed should indicate the dollar effects such disclosures have on financial statements.

OBJECTIVITY PRINCIPLE

This **objectivity principle** requires a transaction to have a basis in fact. Some form of objective evidence or documentation must exist to support a transaction before it can be entered into the accounting records. Such evidence is the receipt for the payment of a guest check or the acceptance of a credit card, or billing a house account that supports earned sales revenue. The accrual basis of accounting recognizes revenue when earned, not necessarily when received. Sales revenue is earned when cash is received or when credit is given, thereby creating accounts receivable—a record of the amount expected to be received in the near future. Expenses are *incurred* when cash is paid or when credit is received, creating an accounts payable on which payment is to be made in the near future.

If payment of a receivable becomes uncollectable, it may be written off as **bad debt** expense (*income statement method* for income tax purposes). An uncollectable account may also be written off through the creation of an allowance for uncollectable accounts (*balance sheet method* for financial reporting purposes). The **allowance for uncollectable accounts** may be established to provide for future bad debts. However, the creation of an allowance account for bad debts (balance sheet method) is an example of an exception to the objectivity concept. The allowance account has no absolute basis in fact because it relates to future events that might or might not occur. However, the allowance account for bad debts is normally based on past historical experience on the percentage of receivables not collected. Evidence of past receivables that were not collected

is considered supporting evidence within the bounds of the objectivity concept and the conservatism concept.

MATCHING PRINCIPLE

The **matching principle** reinforces the accrual basis of accounting. Assets are consumed to generate sales revenue inflows; outflows of assets are identified as operating expenses. The matching principle requires that for each accounting period all sales revenues earned must be recognized, whether payment is received or not. It also requires the recognition of all operating expenses incurred, whether paid or not paid during the period. As previously discussed, sales revenue is recognized when *earned* and operating expenses are recognized when *incurred,* regardless of when cash is received or paid.

The matching principle also conforms to the timing of the recognition of sales revenue inflows and expense outflows that allow matching of revenue to expenses for an accounting period. When a profit-directed operation ends its operating period, it seeks to determine the best estimate of operating results—**net income** or **net loss.** When total sales revenue is greater than total expenses, net income will exist. When total sales revenue is less than total expenses, a net loss will exist. The financial statement that discloses financial results for an accounting period is the income statement. If all sales revenues earned and operating expenses incurred at the end of an operating period are not recognized, the resulting net income or net loss will not provide the most accurate estimate of profit or loss.

If a depreciable asset is disposed of, the total accumulated depreciation charges over its life are deducted from its original cost to find its **book value.** When a long-lived asset is sold, traded, or otherwise disposed of, the book value of the asset is matched against the *value received* (not original historical cost) to determine if a gain or loss is to be recognized at its disposal.

THE LEDGER ACCOUNT AND DEBIT–CREDIT FUNCTIONS

THE LEDGER ACCOUNT

In a manual accounting system, the **general ledger** maintains separate accounts for each type of accounting transaction. These accounts are identified by name and account number using a standardized format. Ledger accounts are necessary to record transactions on all items reported on the financial statements. The ledger account records each dollar value posted and reports the account balance after each entry is posted. The journal entry is the source of instructions that identifies a specific account by name, the dollar value, and the debit or credit

column to be entered. The effect of the debit or credit entry will increase or decrease the balance of the account posted, dependent on whether the normal balance is a debit or credit balanced account. A ledger account page generally uses the following format:

Account Name: _____ ***Account No:*** _____

Date	Explanation	P/R	Debit	Credit	Balance

P/R is the posting reference that identifies the journal entry page number that directs posting of an account by name and a dollar amount.

A **modified T account** is a simple format used to aid in understanding account posting. This format shows a continuous balance that eliminates the need to total the debit and credit columns to find the correct balance of an account. The same principle of posting dollar amounts to the left or debit column and the right or credit column applies when a manual or computerized system is being used. A modified T format shows the key elements of a ledger account. The use of this format is more than adequate for academic understanding.

Any Account

Left side or **Debit** side	Right side or **Credit** side	Account **Balance**

RULES OF DEBIT–CREDIT FUNCTIONS AND THEIR EFFECT ON THE BALANCE SHEET ACCOUNTS

Assets are debit-balanced accounts and are increased by debits and decreased by credits. Liabilities and ownership equity accounts are credit-balanced and increased by credits and decreased by debits. The debit–credit rules as applied to balance sheet accounts are summarized as follows:

Assets (Debit-balanced accounts)	=	**Liabilities** (Credit-balanced accounts)	+	**Ownership Equity** (Credit-balanced accounts)
Increased by debits **Decreased by credits**		**Increased by credits** **Decreased by debits**		**Increased by credits** **Decreased by debits**

RULES OF DEBIT–CREDIT FUNCTIONS AND THEIR EFFECT ON INCOME STATEMENT ACCOUNTS

Sales revenue accounts are credit-balanced accounts; credits increase a credit-balanced account and debits decrease a credit-balanced account. Expense accounts are debit-balanced; debits increase a debit-balanced account and credits decrease a debit-balanced account. The debit–credit rules for income statement accounts are summarized below:

Sales revenue accounts	**Expense accounts**
⇕	⇕
(Credit-balanced accounts)	**(Debit-balanced accounts)**

THE JOURNAL AND JOURNAL ENTRY

A **journal** includes all accounting transactions and is considered the historical record for a business entity. All transactions must be recorded through a **journal entry** that provides specific instructions in a line-by-line sequence. Each line names a specific account and an amount designated as a debit or credit function to be posted to each named account:

1. The journal entry *must* identify at least two accounts.
2. The journal entry *must* show at least one debit and one credit entry.
3. Last but not least, the *sum* of the debits and credits *must* be equal.

Each business transaction must be analyzed to determine the effects of increasing or decreasing an asset, liability, owners' equity item, sales revenue, or expense accounts. It is incorrect to view debits as increases and credits as decreases in the balance of all ledger accounts. All accounts are referred to as being normally **debit** or **credit** balanced, based on their classifications. The normal account balances for each of the five types of accounts and their debit–credit relationships as a review are summarized as follows:

Account Category	*Normal Balance*	*Balance Increased by*	*Balance Decreased by*
Assets	Debit	Debits	Credits
Liabilities	Credit	Credits	Debits
Ownership equity	Credit	Credits	Debits
Sales revenue	Credit	Credits	Debits
Operating expenses	Debit	Debits	Credits

Date	*Account Titles*	*P/R*	*Debit*	*Credit*
05-01-2003	Cash	101	$100,000	
	Gram Disk, Capital	502		$100,000

P/R: the posting reference identifying the number of the account posted.

Dates and account numbers are used in this exhibit to clarify their use in a typical ledger account format and will not be used in future journal entries.

EXHIBIT 1.1

Journal Entry to Initiate Accounting System

Consider the following transaction: A proprietor, Gram Disk, begins a business entity called the Texana Restaurant on May 1, 2003. He makes an initial investment of $100,000 cash to begin operations. The transaction creates the following balance sheet equation:

Assets		**Liabilities**		**Ownership Equity**
$100,000	**=**	**-0-**	**=**	**$100,000**

Exhibit 1.1 shows the journal entry to record the $100,000 initial cash investment.

The journal entry from Exhibit 1.1 is posted as follows:

Cash (*Asset*)

Debit	Credit	Balance
$100,000		$100,000

Gram Disk, Capital (*OE*)

Debit	Credit	Balance
	$100,000	$100,000

On May 5, 2003, the restaurant owner, Gram Disk, purchased a former restaurant building for $150,000, paying $45,000 in cash and assuming a **note payable** for $105,000 balance owed. In addition, he purchased $8,000 of food inventory and $2,000 of beverage inventory for cash. He purchased equipment for $12,000 on credit (**accounts payable**). These transactions were journalized in a compound entry, which uses more than two accounts. Then they were posted to modified T ledger accounts, as shown in Exhibit 1.2.

As can be seen, six new ledger accounts were created to post operating journal entry 1.

Account Titles	*Debit*	*Credit*
Food inventory	$ 8,000	
Beverage inventory	2,000	
Building	150,000	
Equipment	12,000	
Accounts payable		$ 12,000
Notes payable		105,000
Cash		55,000

EXHIBIT 1.2

Operating Journal Entry 1

Cash (*Asset*)

Debit	Credit	Balance
$100,000		$100,000
	$ 55,000	45,000

Food Inventory (*Asset*)

Debit	Credit	Balance
$ 8,000		$ 8,000

Beverage inventory (*Asset*)

Debit	Credit	Balance
$ 2,000		$ 2,000

Building (*Asset*)

Debit	Credit	Balance
$150,000		$150,000

Equipment (*Asset*)

Debit	Credit	Balance
$ 12,000		$ 12,000

Accounts Payable (*Liability*)

Debit	Credit	Balance
	$ 12,000	$ 12,000

Notes Payable (*Liability*)

Debit	Credit	Balance
	$105,000	$105,000

Gram Disk, Capital (*OE*)

Debit	Credit	Balance
	$100,000	$100,000

After posting the journal entry, the balance sheet equation and a balance sheet become:

Assets	=	**Liabilities**	+	**Ownership Equity**
⇕		⇕		⇕
$217,000		**$117,000**		**$100,000**

Texana Restaurant
Balance Sheet (Interim)
May 5, 2003

Assets		Liabilities and Ownership Equity	
Cash	$ 45,000	Accounts payable	$ 12,000
Food inventory	8,000	Notes payable	105,000
Beverage inventory	2,000	Total liabilities	$117,000
Building	150,000	Ownership Equity:	
Equipment	12,000	Capital, Gram Disk	$100,000
Total Assets	$217,000	Total Liabilities & OE	$217,000

THE INCOME STATEMENT

The income statement equation consists of three basic elements that produce three possible outcomes in for-profit operations:

Sales revenue (*SR*) Sales revenue produced from the sale of goods and/or services.
Cost of sales (*CS*) Cost of sales reflects the cost of inventories purchased for resale that were sold.

When total sales revenue equals the total cost of producing the revenue, **breakeven** is achieved; no profit or loss exists. If total sales revenue exceeds total cost of producing the revenue, **profit** exists. If total sales revenue is less than the total cost of producing the revenue, a **loss** exists. The income statement shows the ending results of operations as of a specific date for a specific period. These outcomes can be described by the following relationships:

Sales revenue = Cost of sales + Expenses; *Breakeven*
Sales revenue > Cost of sales + Expenses; *Net income*
Sales revenue < Cost of sales + Expenses; *Net loss*

A few other terms are useful when discussing income statements:

Gross margin (*GM*) Sales revenue minus cost of sales (also known as gross profit).
Expenses (*E*) The cost of assets consumed to produce sales revenue.
Breakeven (*BE*) An economic result of operations when total sales revenue equals total costs; no profit (operating income) or loss will exist.
Operating income (*OI*) Income before taxes.
Net income (*NI*) An economic result of operations when total sales revenue is greater than total costs after income taxes.

Net loss (*NL*) An economic result of operations when total sales revenue is less than total costs.

Note that because gross margin equals sales revenue minus cost of sales, the income statement can be restated this way:

Gross margin − Expenses = Net income or Net loss

Sales revenue is earned when cash is received or when credit is extended, creating a receivable. *Credit card sales* represent the major source of sales revenue made on credit in the hospitality industry today. **Accounts receivable** (or house accounts) continue to be used but represent a small portion of total sales made on credit. Credit card sales create **credit card receivables** on which reimbursement is normally received in an average of one to five operating days, depending on the type of credit card accepted.

Continuing from the preceding May 1 and 5 Texana Restaurant transactions, we will look at typical operating transactions regarding sales revenue and operating expenses. Assume during the period May 6 to May 31 that the following additional transactions occurred:

Paid two-year premium on liability and casualty insurance	$ 3,600
Purchased food inventory on account	4,200
Paid employee wages	3,400
Purchased beverage inventory for cash	1,400
Paid employee salaries	1,800
Received and paid May utilities expense	282
Sales revenue for May; $24,280 cash, $620 on credit cards	24,900
Paid miscellaneous expenses for the month	818

To maintain continuity and simplicity, no date or posting reference columns are shown in Exhibit 1.3, and each transaction is journalized separately.

The journal entries in Exhibit 1.3 are posted for Texana Restaurant as follows:

General Ledger

Cash (*Asset*)

Debit	Credit	Balance
$100,000		$100,000
	$55,000	45,000
	3,600	41,400
	3,400	38,000
	1,400	36,600
	1,800	34,800
	282	34,518
24,280		58,798
	818	57,980

Credit Card Receivables (*Asset*)

Debit	Credit	Balance
$620		$620

Prepaid Insurance (*Asset*)

Debit	Credit	Balance
$3,600		$3,600

Food Inventory (*Asset*)

Debit	Credit	Balance
$ 8,000		$ 8,000
4,200		12,200

Beverage Inventory (*Asset*)

Debit	Credit	Balance
$ 2,000		$ 2,000
1,400		3,400

Building (*Asset*)

Debit	Credit	Balance
$150,000		$150,000

Equipment (*Asset*)

Debit	Credit	Balance
$ 12,000		$ 12,000

Accounts Payable (*Liability*)

Debit	Credit	Balance
	$ 12,000	$ 12,000
	4,200	16,200

Notes Payable (*Liability*)

Debit	Credit	Balance
	$105,000	$105,000

Sales Revenue (*Income*)

Debit	Credit	Balance
	$ 24,900	$ 24,900

Wages Expense (*Expense*)

Debit	Credit	Balance
$ 3,400		$ 3,400

Salaries Expense (*Expense*)

Debit	Credit	Balance
$ 1,800		$ 1,800

Utilities Expense (*Expense*)

Debit	Credit	Balance
$ 282		$ 282

Miscellaneous Expense (*Expense*)

Debit	Credit	Balance
$ 818		$ 818

Gram Disk, Capital (*OE*)

Debit	Credit	Balance
$100,000		$100,000

At this point, it is advantageous to prepare an **unadjusted trial balance.** All accounts with balances are listed in this order:

1. Current assets
2. Fixed assets and contra assets
3. Current liabilities
4. Long-term liabilities
5. Owners' capital
6. Contra capital
7. Sales revenue
8. Expenses

The objective is to confirm that the sum of all debit-balanced accounts is equal to the sum of all credit-balanced accounts. As you will see from the following unadjusted trial balance, the totals of the debits and credits are equal. However, it should not be assumed that everything is necessarily correct. For example, an entry might have been made for the correct amount but posted to

the wrong account. Two accounts could be correctly identified with the wrong amount shown in both cases, or a transaction might have been entirely omitted and not journalized.

Such errors are not uncommon in a manual or computerized system; they normally show up in later stages in the accounting process. When a journal entry or posting error is identified, it is corrected by an adjusting journal entry.

The unadjusted trial balance for Texana Restaurant accounts is shown in Exhibit 1.4.

Account Titles	*Debit*	*Credit*
Prepaid insurance	$3,600	
Cash		$ 3,600
Food inventory	$ 4,200	
Accounts payable		$ 4,200
Wages expense	$ 3,400	
Cash		$ 3,400
Beverage inventory	$1,400	
Cash		$ 1,400
Salaries expense	$ 1,800	
Cash		$ 1,800
Utilities expense	$ 282	
Cash		$ 282
Cash	$24,280	
Credit card receivables	620	
Sales Revenue		$24,900
Miscellaneous expense	$ 818	
Cash		$ 818

EXHIBIT 1.3
Operating Journal Entry 2

END-OF-PERIOD ADJUSTING ENTRIES

Adjusting entries are needed to ensure that information for the income statement and the balance sheet will be as accurate as possible. Generally, an operating period is one year. A fiscal year is any 12 month period that can begin on any day and end 365 days later. A calendar year begins on January 1 and ends on December 31, of the same year. In addition to annual periods, many organizations operate on monthly, quarterly, or semiannual operating periods.

At the end of an operating period, **adjustments** are made to recognize all sales revenue earned. This might be sales revenue not yet recorded or sales revenue that was earned but will not be received until sometime in the new accounting period. Adjustment must also be made to recognize expenses not yet recorded or expenses that were incurred in the current period but not expected to be paid until sometime in the new operating period.

Adjusting entries are needed to ensure that correct amounts of sales revenue and expenses are reported in the income statement, and to ensure that the balance sheet reports the proper assets and liabilities. Adjusting entries are also used for items that, by their nature, are normally deferred. These consist of two types of adjustments:

1. *The use or consumption of an asset and recognition of it as an expense.* This type of adjustment typically adjusts supplies, prepaid expenses, and depreciable assets.

Account Titles	*Debit*	*Credit*
Cash	$ 57,980	
Credit card receivables	620	
Prepaid insurance	3,600	
Food inventory	12,200	
Beverage inventory	3,400	
Building	150,000	
Equipment	12,000	
Accounts payable		$ 16,200
Notes payable		105,000
Gram Disk, capital		100,000
Sales revenue		24,900
Wages expense	3,400	
Salaries expense	1,800	
Utilities expense	282	
Miscellaneous expense	818	
Accounts Totals	$246,100	$246,100

EXHIBIT 1.4

Unadjusted Trial Balance, May 31, 2003

2. *The reduction of a liability and recognition of revenue.* This adjustment concerns the recognition of unearned revenue as being recognized as earned.

Operating supplies are assets until they are consumed. At the end of a period, the difference between the balance in the supplies ledger account and the value of supplies remaining in inventory represents the amount consumed and to be expensed. Assume that a supplies account had a balance of $1,200 at the end of an operating period and that supplies on hand were $400. Thus, $1,200 − $400 = $800 of supplies was used. The adjusting entry is:

Account Title	Debit	Credit
Supplies expense	$800	
Supplies		$800

All prepaid items such as prepaid rent and prepaid insurance are paid for in advance and are considered to be assets from which benefits will be received over the life of the prepaid. The amount of a prepaid asset to be expensed over its expected life can be expressed in months or years:

Cost of the prepaid / Life (time) = Amount expensed

For example, assume rent was prepaid for two years for $24,000. The rent expense for one year would be $12,000 ($24,000 / 2 years):

Account Title	Debit	Credit
Rent expense	$12,000	
Prepaid rent		$12,000

Period-ending monthly adjustments are needed to ensure that financial statements are based on accurate data. The income statement and balance sheet *must* conform to the principle of matching revenues to expenses, and must include such end-of-period adjustments as are necessary to recognize accruals and deferrals.

Accruals represent end-of-period adjustments recognizing sales revenue earned and expenses incurred, with the receipt of payment or the making of payment expected to occur in the next accounting period. *Deferrals* represent end-of-period adjustments to revenues and expenses, and also include adjustments to assets and liabilities to reflect sales revenue earned and expenses incurred. In our continuing example, we will discuss six adjustments: cost of sales, inventory, prepaid expenses, depreciation, wages, and salaries expense.

COST OF SALES AND INVENTORY ADJUSTMENTS

Any business purchasing inventory or producing it for resale will not expect to sell all items available during an accounting period. A restaurant operation will always maintain a minimum food and beverage inventory to take care of current daily and near-future business operations. At the end of an accounting period, the cost of inventory sold is identified as an expense described as **cost of sales.** Ending inventory not sold will continue to be classified as an asset and not expensed. Cost of sales describes cost of goods sold. It is determined easily: Know the beginning inventory, add inventory purchases, and deduct inventory not sold. Using previously discussed information for Texana Restaurant, we can calculate cost of sales. Assuming ending food inventory on May 31, 2003, is $3,200, and ending beverage inventory is $1,175, the cost of sales for both product inventory accounts is $11,225.

	Beginning inventory	**+**	**Purchases**	**−**	**Ending inventory**	**=**	**Cost of sales**
Food:	**-0-**	**+**	**$12,200**	**−**	**$3,200**	**=**	**$ 9,000**
Beverage:	**-0-**	**+**	**$3,400**	**−**	**$1,175**	**=**	**$ 2,225**
					Total Net Cost of Sales:		**$11,225**

Several different methods may be used to adjust the inventory for resale accounts to find cost of inventory sold. The cost of sales method will be used in this discussion. Normally, the first of two adjustments requires that cost of sales be debited in the amount equal to the balance of the inventory account, followed by credit to the inventory account equal to its balance. Posting of the entry brings

Account Titles	*Debit*	*Credit*
Cost of sales	$12,200	
Food inventory		$12,200
Food inventory	$ 3,200	
Cost of sales		$ 3,200

EXHIBIT 1.5

Cost of Sales and Food Inventory Adjustment

the inventory to a zero balance, and in effect transfers the inventory account balance to the cost of sales account. The next adjustment requires the value of ending inventory to be debited to the inventory account and credited to the cost of sales account, and the second entry restores the inventory account to the value of the end of the period closing inventory. Adjusting entries for food and beverage inventory accounts are written and posted as shown in Exhibit 1.5.

Posting the adjusting entry will create the cost of sales account, thereby adjusting the food inventory account to the correct ending balance. Study the posting effects below:

Food Inventory (*Asset*)			**Cost of Sales** (*Expense*)		
Debit	Credit	Balance	Debit	Credit	Balance
$8,000		$ 8,000			-0-
4,200		12,200	$12,200		$12,200
	$12,200	-0-		$ 3,200	9,000
3,200		3,200			

Following the same procedures as before, the journal entry adjusts beverage inventory and cost of sales to the correct ending balances when posted, as shown in Exhibit 1.6.

Posting the journal entry adjusts cost of sales and adjusts beverage inventory to the correct ending balance. Study these posting effects:

Beverage Inventory (*Asset*)			**Cost of Sales** (*Expense*)		
Debit	Credit	Balance	Debit	Credit	Balance
$2,000		$2,000			-0-
1,400		3,400	$12,200		$12,200
	$ 3,400	-0-		$ 3,200	9,000
1,175		1,175	3,400		12,400
				1,175	11,225

Account Titles	*Debit*	*Credit*
Cost of sales	$3,400	
Beverage inventory		$3,400
Beverage inventory	$1,175	
Cost of sales		$1,175

EXHIBIT 1.6

Cost of Sales and Beverage Inventory Adjustment

This text discusses the two inventory control methods commonly used in hospitality operations—periodic and perpetual inventory controls. The **periodic method** is used to continue the discussion of end-of-period adjustments for Texana Restaurant. This method relies on an actual physical count and costing of the inventory over a specific period to determine the cost of sales. Generally, a physical count is conducted weekly to maintain adequate inventory, and cost evaluation is normally completed on a monthly basis. During a given period, there is no record of inventory available for sale on any particular day unless a computerized inventory control system is used with computerized point-of-sale terminals. The periodic method is usually preferred for inventory control when many low-cost items are involved.

The **perpetual method** requires a greater number of records for continuous updating of inventory showing the receipt and sale of each inventory item, and maintaining a running balance of inventory available. Perpetual inventory control is discussed in Chapter 2.

PREPAID EXPENSE ADJUSTMENTS

When expenses are paid in advance for future periods, normally exceeding a month, for such items as rent or insurance, a prepaid asset account is created. The prepaid item names the benefit to be received and consumed as an expense over a specified number of time periods (e.g., months, quarters, or years). In our example, Texana Restaurant paid in advance $3,600 for a two-year insurance policy on May 6. If the prepaid is expensed on a monthly basis, insurance expense for the month of May will be $150 per month ($3,600 / 24). The prepaid insurance account will be reduced $150 and the insurance expense account will increase by $150 when the journal entry is posted.

Prepaid cost / life of prepaid = Amount expensed

Prepaid / months = $3,600 / 24 = $150 per month

Alternative: Prepaid cost / years = $3,600 / 2 = $1,800 per year; or
$1,800 per year / 12 months = $150 per month

Account Titles	*Debit*	*Credit*
Insurance expense	$150	
Prepaid insurance		$150

EXHIBIT 1.7

Prepaid Expense Adjusting Journal Entry

The adjusting journal entry to reduce the prepaid insurance account and recognize one month of insurance expense is shown below in Exhibit 1.7.

Posting of the adjusting journal entry creates the insurance expense account and adjusts the prepaid insurance account. Study the posting effects of the adjusting entry shown below.

Insurance Expense (*Expense*)

Debit	Credit	Balance
$ 150		$ 150

Prepaid Insurance (*Asset*)

Debit	Credit	Balance
$3,600		$3,600
	$ 150	3,450

WAGES AND SALARIES ACCRUAL ADJUSTMENTS

Payday seldom falls on the last day of the month. It is not unusual for wages and salaries to be earned but not paid by the end of the month. An accrual adjusting entry is made to record payroll expense belonging to the month just ended. This adjustment ensures that the income statement and balance sheet reflect the correct expense and payroll payable. Continuing the Texana Restaurant discussion, we will assume that two days of wages and salaries were earned but not paid by May 31. The payroll owed consists of wages, $400, and salaries, $480. The adjusting entry is shown in Exhibit 1.8.

Account Titles	*Debit*	*Credit*
Wages expense	$400	
Salaries expense	480	
Payroll payable		$880

EXHIBIT 1.8

Accrued Payroll Expense Adjustment

An additional account, payroll payable, is created for this transaction. The previous entry is posted as follows:

Wages Expense (*Expense*)			**Salaries Expense** (*Expense*)			**Payroll Payable** (*Liability*)		
Debit	Credit	Balance	Debit	Credit	Balance	Debit	Credit	Balance
$3,400		$3,400	$1,800		$1,800		$ 880	$ 880
400		3,800	480		2,280			

DEPRECIATION EXPENSE ADJUSTMENT

Depreciation is the systematic expensing of the cost of a long-lived physical asset (except land) that provides economic benefits in excess of one year. Estimated value recovered at the end of the asset's serviceable life, such as trade-in value, salvage, or scrap value, is referred to as **residual value.**

All long-lived depreciable assets must remain in the accounting records at their historical cost. This requirement precludes the reduction of the depreciable asset's cost when depreciation expense is recognized. It necessitates the creation of a special offset account called a **contra asset account** to depreciation expense. The offset account has the task of recording and accumulating all depreciation expense charges that occur over the life of the depreciable long-lived asset. The account is named to identify its purpose and is called **accumulated depreciation.** It is credit balanced. Each depreciable asset has a specific credit-balanced, accumulated depreciation account assigned by name and ledger account number.

The balance of the accumulated depreciation account is used to determine the book value of a depreciable asset in the event the asset is disposed of. The book value is used to determine whether a gain or loss has occurred on the disposal of a depreciable asset. If the value received for the depreciable asset is greater than its book value, a gain is recognized. Conversely, if the value received for the asset is less than its book value, a loss is recognized. Each depreciable asset is shown on the balance sheet as a fixed asset and shows its historical cost minus the balance of its accumulated depreciation account as its book value.

This section discusses four methods of depreciation: straight line, units of production, sum-of-the-years' digits, and double declining balance. Monthly and yearly depreciation will be used for straight-line depreciation to confirm the amount of monthly depreciation expense used in the continuing development of Texana Restaurant. Units of production, sum-of-the-years' digits, and double-declining balance will be discussed based on specific assets named to find depreciation-expense-based units used or on a yearly basis.

Straight-Line Depreciation

Straight-line depreciation breaks depreciation expense to be recovered into equal time periods, such as months, quarters, half years, or years. Texana Restaurant purchased equipment and building on May 5, 2003. Straight-line

depreciation systematically breaks the amount to be recovered through depreciation expense into equal amounts over its estimated useful life based on given time periods; months, quarters, and years. Straight line is not accelerated over the early years of a depreciable asset's useful life. Straight-line depreciation will be described using the equipment and building based on monthly and yearly time periods. Monthly depreciation is used in the continuing illustration for the Texana Restaurant.

Equipment Depreciation Calculation: Purchased equipment for $12,000 that has an eight-year estimated life and no residual value. (Cost − Residual / Life) = Depreciation expense:

(Cost − Residual / Life) = $12,000 / 96 months
= $125 depreciation expense per month

(Cost − Residual / Life) = $12,000 / 8 years
= $1,500 depreciation expense per year

Building Depreciation Calculation: Purchased a building for $150,000 that has a 25-year life and a residual value of $30,000. (Cost − Residual / Life) = Depreciation expense:

(Cost − Residual / Life) = Depreciation expense:
$150,000 − $30,000 / 300 months = $400 per month

(Cost – Residual / Life) = Depreciation expense:
$150,000 − 30,000 / 25 years = $4,800 per year

The adjusting journal entry to recognize depreciation expense for the month of May on the equipment and the building at May 31 for Texana Restaurant is shown in Exhibit 1.9, followed by its posting to the ledger accounts.

Depreciation Expense (*Expense*)			**Accumulated Depr: Equip.** (*Contra*)			**Accumulated Depr: Bldg.** (*Contra*)		
Debit	Credit	Balance	Debit	Credit	Balance	Debit	Credit	Balance
$525		$525		$125	$125		$400	$400

Units-of-Production Depreciation Method

Units-of-production depreciation shares some of the elements of straight-line depreciation. Cost minus residual remains the numerator, and the denominator again expresses the life of the asset. However, the life of the asset is expressed in units. Miles driven, gallons produced, and hours used are a few examples. Assume that a van was purchased for $29,800 with an estimated residual value of $1,800 based on life of 140,000 miles. During the month of May,

Account Titles	*Debit*	*Credit*
Depreciation expense	$525	
Accumulated depreciation: Equip.		$125
Accumulated depreciation: Bldg.		400

EXHIBIT 1.9
Depreciation Expense Adjustment

the van recorded 580 miles of use. The depreciation expense is calculated as follows:

(Cost − Residual) / Life in units = Depreciation expense per unit
× Units used = Depreciation expense
($29,800 − $1,800) / 140,000 = $28,000 / 140,000 =
$0.20 per mile × 580 = $116 Depreciation expense

Subsequent months or years of depreciation would be calculated in the same manner by using the depreciation rate per mile multiplied by the miles driven. In a generic sense, both straight line and units of production methods are based on the consumption of a depreciable asset. Time periods is the basis for straight-line depreciation. Units of production uses units as the basis of use or consumption during a time period. The production method estimates the life of the depreciable asset, as does the straight-line method, and is useful for budgeting purposes. Like straight-line, units of production provide the ability to create accelerated depreciation expense charges.

Sum-of-the-Years'-Digits Depreciation

Commonly called **SYD, sum-of-the-years'-digits depreciation** is an *accelerated* depreciation method that allows greater amounts of depreciation to be expensed in the early years of a depreciable asset's life. An accelerated method presumes that an asset becomes less and less efficient over its life. Thus, it allows the matching of depreciation to the efficiency loss of the asset over time. SYD determines the amount to be depreciated using a fraction multiplied by the cost minus the residual value. The maximum years of a depreciable asset's life becomes the numerator in the first year and then reduces the numerator by one in each subsequent year of the asset's life. The denominator of the fraction is found by summing the years of an asset's life, or by using an equation.

An example using each method of determining the denominator will be based on equipment, which is purchased for $34,200 with a life of five years and a residual value of $600:

Additive function:
Yr 1 + Yr 2 = 3 + Yr 3 = 6 + Yr 4 = 10 + Yr 5 = 15 is the denominator

The additive function can be somewhat cumbersome as the years of life of depreciable asset increase. Both methods determine the denominator, which represents 100 percent of the amount to be depreciated. The letter *n* in the equation represents the number of years in a depreciable asset's life:

$$\frac{n(n+1)}{2} = \frac{5(5+1)}{2} = \frac{5 \times 6}{2} = \frac{30}{2} = \underline{\underline{15}} \text{ is the denominator}$$

The equation to calculate SYD depreciation for each year of the asset's life is:

SYD fraction × Cost − Residual = Depreciation expense

The numerator of the fraction will begin with maximum years of the asset's life in the first year, minus one each subsequent year. A five-year SYD depreciation schedule would look like this:

Year	*SYD fraction*	×	*Cost − Residual*	=	*Depreciation*
1	5/15	×	$33,600	=	$11,200
2	4/15	×	$33,600	=	$ 8,960
3	3/15	×	$33,600	=	$ 6,720
4	2/15	×	$33,600	=	$ 4,480
5	1/15	×	$33,600	=	$ 2,240
	$\sum$ = 15/15 or 1		Total depreciation		$33,600

The SYD depreciation schedule indicates that the depreciation expense has accelerated by expensing larger amounts in the earlier years.

Double-Declining-Balance Depreciation

The **double-declining-balance method,** also called DDB depreciation, is the second *accelerated* method to be discussed. This method doubles the straight-line depreciation rate (1 / Years) to find a DDB%. This method, unlike straight line, units of production, and SYD, ignores any type of residual value in the calculation of the depreciation expense. The DDB% is multiplied by *book value* to determine the amount of depreciation expense.

In the first year, no accumulated depreciation account exists until after the depreciation expense is calculated, journalized, and posted. Thus, in the first year, the book value of an asset using the DDB method is the depreciable assets' *Cost − Accumulated depreciation,* which is Cost − Zero because no previous depreciation expense was recorded. After the first year of DDB depreciation expense is posted, the book value changes to Cost − First-year depreciation expense. In subsequent years, book value will decrease each year by the amount of depreciation

expense charged in the previous year. Although the DDB method ignores residual values, the book value of an asset that is fully depreciated may be more, but must not be less, than *cost minus residual value* if residual value exists.

Assume equipment that had a five-year life and a residual value of $1,000 was purchased for $16,000. The DDB equation is stated below, followed by a discussion of each equation element:

DDB% × Book value = Depreciation expense

- DDB% is calculated as 100 percent, or 1 divided by years of life:

  100% / 5 = 20% × 2 = 40% or 1 / 5 = 20% × 2 = 40%

  In other words, the straight-line rate has doubled.
- Alternative: Since DDB% doubles the straight-line rate, the numerator can be expressed as follows:

  100% × 2 = 200% or 2 divided by years of life = 2 / 5 = 40%.

- Book value is Cost − Accumulated depreciation.
- Depreciation expense is DDB% × Book value.

Referring to the previous equipment information, the DDB equation, and the identification of each of its elements, study the following five-year DDB depreciation schedule:

5-Year DDB Depreciation Schedule

Year	*DDB%*	×	*Book Value*	=	*Depr. Expense*	*Net Book Value*
0						$16,000
1	40%	×	$16,000	=	$ 6,400	9,600
2	40%	×	9,600	=	3,840	5,760
3	40%	×	5,760	=	2,304	3,456
4	40%	×	3,456	=	1,382	2,074
5	40%	×	2,074	=	830	1,244
Total accumulated depreciation (expense)					$14,756	
Cost − Accumulated depreciation:			$16,000	−	$14,756	= $1,244 Book value

Using the same equipment discussed in the previous example of DDB, cost is $16,000 with a five-year life. Assume its residual value is changed from $1,000 to $1,500. The DDB depreciation schedule previously discussed had a book value of $1,244 ($16,000 − $1,000) at the end of Year 5, but book value cannot be less than the new $1,500 residual value. Thus, the new residual value will force a reduction in the fifth-year depreciation expense to ensure that the book

value after the final depreciation expense charge is not less than residual value. Study the following depreciation schedule extract:

Year	*DDB%*	×	*Book Value*	=	*Depr. Expense*	*Net Book Value*
4	40%	×	3,456	=	1,382	2,074
5	$2,074	−	1,500	=	574	1,500
Total accumulated depreciation (expense)					$14,500	
Cost − Accumulated depreciation:			$16,000 − $14,500 =		$1,500	Book value

It is apparent that the total depreciation expense changed from $14,756 with a residual value of $1,000, to $14,500 ($16,000 − $1,500) with a new residual value of $1,500. Since the ending book value must be equal to or greater than residual value, the change to the depreciation expense for Year 5 must be $574 ($2,074 − $1,500). The forced change to Year 5's depreciation expense conforms to the rule that the final book value may never be less than the residual value.

CLOSING JOURNAL ENTRIES

The general ledger showing the posted operating and adjusting journal entries is shown for review. The general ledger is the source used to prepare an adjusted trial balance that confirms the ledger accounts are in balance. Study the updated general ledger:

General Ledger

Cash (*Asset*)

Debit	Credit	Balance
$100,000		$100,000
	$ 55,000	45,000
	3,600	41,400
	3,400	38,000
	1,400	36,600
	1,800	34,800
	282	34,518
24,280		58,798
	818	57,980

Credit Card Receivables (*Asset*)

Debit	Credit	Balance
$ 620		$ 620

Prepaid Insurance (*Asset*)

Debit	Credit	Balance
$ 3,600		$ 3,600
	$ 150	3,450

Food Inventory (*Asset*)

Debit	Credit	Balance
$ 8,000		$ 8,000
4,200		12,200
	$ 12,200	-0-
3,200		3,200

Beverage Inventory (*Asset*)

Debit	Credit	Balance
$ 2,000		$ 2,000
1,400		3,400
	$ 3,400	-0-
1,175		1,175

Building (*Asset*)

Debit	Credit	Balance
$150,000		$150,000

Accumulated Depr: Bldg (*Contra*)

Debit	Credit	Balance
	$ 400	$ 400

Equipment (*Asset*)

Debit	Credit	Balance
$ 12,000		$ 12,000

Accumulated Depr: Equip (*Contra*)

Debit	Credit	Balance
	$ 125	$ 125

Accounts Payable (*Liability*)

Debit	Credit	Balance
	$ 12,000	$ 12,000
	4,200	16,200

Payroll Payable (*Liability*)

Debit	Credit	Balance
	$ 880	$ 880

Notes Payable (*Liability*)

Debit	Credit	Balance
	$105,000	$105,000

Sales Revenue (*SR*)

Debit	Credit	Balance
	$ 24,900	$ 24,900

Wages Expense (*Exp*)

Debit	Credit	Balance
$ 3,400		$ 3,400
400		3,800

Salaries Expense (*Exp*)

Debit	Credit	Balance
$ 1,800		$ 1,800
480		2,280

Utilities Expense (*Exp*)

Debit	Credit	Balance
$ 282		$ 282

Miscellaneous Expense (*Exp*)

Debit	Credit	Balance
$ 818		$ 818

Insurance Expense (*Exp*)

Debit	Credit	Balance
$ 150		$ 150

Depreciation Expense (*Exp*)

Debit	Credit	Balance
$ 525		$ 525

Cost of Sales (*Exp*)

Debit	Credit	Balance
$ 12,200		$ 12,200
	$ 3,200	9,000
3,400		12,400
	1,175	11,225

Gram Disk, Capital (*OE*)

Debit	Credit	Balance
	$100,000	$100,000

Before determining operating income or loss, an adjusted trial balance is prepared by extracting each ledger account by name and balance, after adjustments are posted (see Exhibit 1.10). The purpose is to verify that the Texana Restaurant ledger is in balance.

The income statement in Exhibit 1.11 is prepared for Texana Restaurant from information given in the adjusted trial balance using the following format:

Sales revenue − Cost of sales − Expenses = Operating income

which can also be written

Gross margin − Expenses = Operating income

The last step in moving through the accounting cycle is to create closing entries, bringing the temporary accounts balances to zero. Closing the temporary accounts will transfer sales revenue and operating expenses to the **income summary** account. The income summary account receives sales revenue and expenses

Accounts	*Debit*	*Credit*
Cash	$ 57,980	
Credit card receivables	620	
Prepaid insurance	3,450	
Food inventory	3,200	
Beverage inventory	1,175	
Building	150,000	
Accumulated depreciation: Building		$ 400
Equipment	12,000	
Accumulated depreciation: Equipment		125
Accounts payable		16,200
Payroll payable		880
Notes payable		105,000
Capital, Gram Disk		100,000
Sales revenue		24,900
Cost of sales	11,225	
Wages expense	3,800	
Salaries expense	2,280	
Utilities expense	282	
Miscellaneous expense	818	
Insurance expense	150	
Depreciation expense	525	
Accounts Totals	$247,505	$247,505

EXHIBIT 1.10

Adjusted Trial Balance, May 31, 2003

to include cost of sales; its final balance represents net income or net loss.

Closing of the income summary account will transfer operating income or operating loss to the capital account. Operating income exists when total sales revenue is greater than the cost of sales and the total operating expenses. An operating loss exists when the cost of sales and total operating expenses are greater than sales revenue. Operating income is the income before tax, and will become net income after tax is applied. Consider the possibilities shown in Exhibit 1.12 that may exist after closing the temporary income statement accounts.

The function of the income summary is to transfer income or loss to the capital account. This is shown through an analysis of the summary account:

Sales Revenue		$24,900
Less: Cost of sales		(11,225)
Gross Margin		$13,675
Expenses:		
Wages expense	$3,800	
Salaries expense	2,280	
Utilities expense	282	
Miscellaneous expense	818	
Insurance expense	150	
Depreciation expense	525	
Total Expenses		(7,855)
Net Operating Income		$ 5,820

EXHIBIT 1.11

Income Statement Texana Restaurant, Month Ended May 31, 2003

Income Summary

Debit (Beginning)	Credit	Balance
		-0-
	$24,900	$24,900
$19,080		5,820
5,820		-0-

Total Sales Revenue is closed to Income Summary
Total Operating Expenses is closed to Income Summary
$SR - E = \$24{,}900 - \$19{,}080 = \$5{,}820$ OI

Gram Disk, Capital

Debit	Credit	Balance
$100,000		$100,000
	$5,820	105,820

After closing entries are posted from the closing journal entry to the ledger, only permanent balance sheet accounts remain in the Texana Restaurant ledger (see Exhibit 1.13). The **post-closing trial balance** is the source of information needed to prepare a final balance sheet.

From the post-closing trial balance, a final post-closing balance sheet is prepared for Texana Restaurant for the month of May (see Exhibit 1.14).

WORKSHEET

A worksheet can be prepared at the end of an accounting period to ensure that all the accounts are in balance and to show all information needed to journalize adjusting and closing entries, and to prepare major financial statements. The sequence of completion of the worksheet begins with an unadjusted trial balance. End-of-period adjustments are made in the adjustment columns and

Account Titles	*Debit*	*Credit*
Sales revenue	$24,900	
Income summary		$24,900
Income summary	$19,080	
Cost of sales		$11,225
Wages expense		3,800
Salaries expense		2,280
Utilities expense		282
Miscellaneous expense		818
Insurance expense		150
Depreciation expense		525
Income Summary	$ 5,820	
Gram Disk, Capital		$ 5,820

EXHIBIT 1.12

Closing Journal Entries, Month Ended May 31, 2003

then extended to the adjusted trial balance columns. Each account shown in the adjusted trial balance columns belongs to the income statement or balance sheet columns. Sales revenue, cost of sales, and expense accounts are extended to the income statement. Assets, liabilities, and ownership equity accounts are extended to the balance sheet. The debit–credit balances of each of the five two-column sets must be equal. If any total debit and credit balances of the five two-column sets are not equal, an error has been made, and it must be corrected before continuing completion of the worksheet. If all column sets are balanced correctly, the worksheet is completed if no errors are noted.

All information is shown in the worksheet to journalize adjusting and closing entries, and to prepare the income statement and balance sheet. A worksheet is shown in Exhibit 1.15 to illustrate all operating transactions, adjusting, and closing journal entries, including the income statement and balance sheet for Texana Restaurant.

Cash	$ 57,980	
Credit card receivables	620	
Prepaid insurance	3,450	
Food inventory	3,200	
Beverage inventory	1,175	
Building	150,000	
Accumulated depreciation: Building		$ 400
Equipment	12,000	
Accumulated depreciation: Equipment		125
Accounts payable		16,200
Payroll payable		880
Notes payable		105,000
Gram Disk, capital		105,820
Post-closing trial balance totals	$228,425	$228,425

EXHIBIT 1.13

Post-Closing Trial Balance, Month Ended May 31, 2003

The following describes the column contents in Exhibit 1.15:

- *Debit–credit column sets 1, 2, and 3:* Unadjusted trial balance, adjustments, and adjusted trial balance column sets verify that total debits are equal to total credits.
- *Debit–credit column set 4:* The income statement column shows a subtotal for total operating expense outflows and total sales revenue inflows. Unless total expenses are equal to total sales revenue (breakeven), the debit–credit subtotals will not be equal. If sales revenue is greater than expenses, the amount of the difference represents operating income. If total expenses exceed total sales revenue, the amount of the difference represents operating loss. The amount-of-the-difference debit or credit is used to bring the balance of the total debit–credit columns into equality.
- *Debit–credit column set 5:* The balance sheet columns show the ending balance of total assets, liabilities, and ownership equity. Operating income

Assets		Liabilities and Owner's Equity	
		Liabilities	
Cash	$ 57,980	Accounts payable	$ 16,200
Credit card receivables	620	Payroll payable	880
Prepaid insurance	3,450	Notes payable	105,000
Food inventory	3,200	Total liabilities	$122,080
Beverage inventory	1,175		
Building	150,000	**Owner's Equity**	
Accumulated depr: Building	(400)	Gram Disk, Capital	$100,000
Equipment	12,000	Operating income, May 2003	5,820
Accumulated depr: Equipment	(125)	Total Owner's Equity	$105,820
Total Assets	$227,900	Total Liabilities and OE	$227,900

EXHIBIT 1.14

Texana Restaurant Balance Sheet, Month Ended May 31, 2003

increases ownership equity, whereas an operating loss decreases ownership equity. The worksheet shows all information needed to prepare an end-of-period balance sheet.

The accounting cycle can be summarized in these steps:

1. *Perform transactional analysis.* Verify documentation or information such as invoices, sales, and checks to indicate that a journal entry is required.
2. *Journalize.* Record a business transaction in the journal.
3. *Post a journal entry.* Transfer journal instructions to a specific account and in the amount directed.
4. *Prepare an unadjusted trial balance.* List all accounts in the ledger with balances to confirm the debit-balanced accounts are equal to the credit-balanced accounts.
5. *Prepare a worksheet (optional).* Record the unadjusted trial balance, record end-of-period adjusting entries, develop adjusted trial balance, and extend appropriate accounts to the income statement and balance sheet columns.
6. *Adjust the ledger accounts.* Journalize and post end-of-period adjustments to the specified accounts. An unadjusted trial balance or a completed worksheet will provide needed information.
7. *Close the temporary accounts.* Journalize and post closing entries to bring the temporary accounts to a zero balance. An adjusted trial balance or a completed worksheet shows needed information.
8. *Prepare a post-closing trial balance.* Take information from the ledger accounts or a post-closing trial balance, or complete a worksheet to show needed information. The post-closing trial balance verifies the accuracy of

	1		2		3		4		5	
	Unadjusted Trial		Adjustments		Adjusted Trial		Income Statement		Balance Sheet	
Account Titles	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 57,980				$ 57,980				$ 57,980	
Credit card receivables	620				620				620	
Prepaid insurance	3,600			(c) $ 150	3,450				3,450	
Food inventory	12,200		(a) $3,200	(a) 12,200	3,200				3,200	
Beverage inventory	3,400		(b) 1,175	(b) 3,400	1,175				1,175	
Building	150,000				150,000				150,000	
Equipment	12,000				12,000				12,000	
Accounts payable		$ 16,200				$ 16,200				$ 16,200
Notes payable		105,000				105,000				105,000
Capital, Gram Disk		100,000				100,000				100,000
Sales revenue		24,900				24,900		$24,900		
Wages expense	3,400		(e) 400		3,800		$ 3,800			
Salaries expense	1,800		(e) 480		2,280		2,280			
Utilities expense	282				282		282			
Miscellaneous expense	818				818		818			
Unadjusted Trial Balance Totals	$246,100	$246,100								
Cost of sales			(a) 12,200	(a) 3,200	11,225		11,225			
			(b) 3,400	(b) 1,175						
Insurance expense			(c) 150		150		150			
Depreciation expense			(d) 525		525		525			
Accumulated depreciation: Equip.				(d) 125		125				125
Accumulated depreciation: Bldg.				(d) 400		400				400
Payroll payable				(e) 880		880				880
Totals			$21,530	$21,530	$242,505	$247,505	19,080	24,900		
Operating Income, Increases Capital							5,820			5,820
Totals							$24,900	$24,900	$223,425	$228,425

Adjustments: **(a)** Adjusts Cost of Sales. **(b)** Adjusts Food and Beverage Inventories. **(c)** Adjusts Prepaid Insurance and Insurance Expense. **(d)** Adjusts Depreciation Expense and Accumulated Depreciation. **(e)** Adjusts Wages Expense, Salaries Expense and Payroll Payable.

EXHIBIT 1.15

Texana Restaurant Worksheet Month Ended May 31, 2003

the adjusting and closing procedures and confirms that all temporary accounts have been closed to a zero balance.

9. *Prepare the income statement.* Take information from the income statement ledger accounts or from a completed worksheet and prepare an income statement in proper format.
10. *Prepare the balance sheet.* Take information from the balance sheet ledger accounts or a post-closing trial balance, or complete a worksheet, and prepare a balance sheet in proper format.

SUMMARY

Accounting has been developed to accumulate, maintain, and provide financial information regarding internal business transactions. In this chapter we discussed and used basic accounting principles and procedures common to a manual system. Computerized systems incorporate all of the fundamental accounting principles of the manual system.

A common language has developed from the practice of accounting with its own set of rules or assumptions, commonly called principles and concepts. It is important to have a good understanding of each of these principles and concepts to be able to interpret financial information correctly. These assumptions include the following:

- Business entity principle
- Monetary unit principle
- Going concern principle
- Cost principle
- Time period principle
- Conservatism principle
- Consistency principle
- Materiality principle
- Full disclosure principle
- Objectivity principle
- Matching principle

Journal entries provide the instructions needed to create and maintain accounts that reflect all transactions of a business entity. A journal entry must, as a minimum, consist of two accounts. There must be at least one debit and one credit entry, and the sum of the debits and credits must be equal.

Ledger accounts are identified by name and are described as being normally either debit- or credit-balanced, based on its category of account. Each ledger account has two specific columns that are identified to receive numerical values. The left column is identified to receive only debit entries and the right column receives only credit entries. The category of an account will determine if an entry in the left or right column of a ledger account will increase or decrease the balance of an account. The debit–credit rules of whether entries increase or decrease the balance for each category of balance sheet accounts are as follows:

Assets	=	Liabilities	+	Ownership Equity
(Debit-balanced accounts)		(Credit-balanced accounts)		
Increased by debits		Increased by credits		Increased by credits
Decreased by credits		Decreased by debits		Decreased by debits

Contra Assets	Contra Equity
(Credit-balanced accounts)	(Debit-balanced accounts)
Increased by credits	Increased by debits
Decreased by debits	Decreased by credits

The income statement equation describes the economic results of for-profit operations: net income, net loss, or breakeven. The income statement format is expressed as:

Revenue − Cost of sales − Expenses = Net income or Net loss

or **Gross margin − Expenses = Net income or Net loss**

The debit–credit rules of whether entries increase or decrease the balance for each category of income statement accounts are as follows:

Sales Revenue Accounts	Expense Accounts
(Credit-balanced accounts)	(Debit-balanced accounts)
Increased by credits	(Increased by debits)
Decreased by debits	(Decreased by credits)

Adjusting entries are made at the end of an operating period to recognize sales revenue earned and expenses incurred but not yet recorded. Prepaid expense items are consumed over the life of the prepaid:

Prepaid cost / Life (years, months) = Prepaid expense per period

Depreciation is a method of systematically writing off the cost of long-lived assets (except land) over the life of the asset. Only a portion of the cost is shown as a depreciation expense deduction from income on each period's income statement. Four depreciation methods were discussed:

Straight line: (Cost − Residual) / Life (time) = Depreciation expense

Units of Production:
[(Cost − Residual) / Life (units)] × Units used = Depreciation expense

SYD: SYD fraction × (Cost − Residual) = Depreciation expense

DDB: DDB% × (Book value) = Depreciation expense

Each depreciable asset has a separate credit-balanced contra account called accumulated depreciation. The contra asset account is used to accumulate all depreciation expense charges over the life of the asset. Historical cost of the asset minus its accumulated depreciation equals the book value of the asset.

DISCUSSION QUESTIONS

1. Explain the major difference between cash and accrual accounting.
2. In what way can a business manager use accounting information?
3. Using examples, give a short description of five accounting principles or concepts using examples.
4. Explain why a ledger account has only a debit and credit column to receive dollar value entries.
5. Explain if it is possible for a transaction to affect an asset account without also affecting some other asset or a liability or owners' equity account.
6. Why is the rule for debit and credit entries the same for liability and owners' equity accounts?
7. Discuss why adjusting entries is necessary at the end of each operating period are made before the end-of-period financial statements are prepared.
8. A hotel shows office supplies such as stationery on its balance sheet as a $500 asset, even though to any other hotel these supplies might have a value only as scrap paper. Which accounting principle or concept justifies this?
9. Define the concept of depreciation.
10. What is the purpose of an accumulated depreciation account?
11. Explain the concept of accelerated depreciation discussed in this chapter.
12. Describe the double-declining balance and the sum-of-the-years'-digits depreciation equations.
13. Describe the straight-line and units-of-production methods of depreciation.
14. Explain how the book value of a depreciable asset is determined.
15. A restaurant has purchased a new electronic point-of-sale register. With adequate maintenance the machine could last 10 years; however, with the rapid advance of technological improvements, it is expected that a newer register will be purchased within 5 years to replace the unit recently purchased.

For depreciation purposes, what would be the useful life of the machine? Explain why.

16. Under what circumstances might the individual account balances not be correct even though a trial balance is in balance?

ETHICS SITUATION

A restaurant manager has a contract with the restaurant's owner that he is entitled to eat meals in the restaurant without charge when on duty. The manager lives in a rented apartment above the restaurant with his wife and two children. Generally, the family members eat their meals in the restaurant every day of the week. No sales checks or other records make note of the consumed meals. Discuss the ethics of this situation based on the accounting principles and concepts discussed in this chapter.

EXERCISES

E1.1 A number of accounting principles and concepts (such as the matching principle) were discussed in this chapter. For each of the following situations, state which principle or concept is involved.

a. A case of food poisoning occurred in a restaurant. The restaurant is being sued by a number of its customers who were hospitalized. The estimated cost that the restaurant is likely to suffer from this lawsuit is disclosed in a footnote because of the _____ principle.

b. A hotel has traditionally depreciated its furniture and equipment using the straight-line method. This year a different depreciation method was used without advising its financial statement readers of this change. As a result, it is violating both the _____ principle and the _____ principle.

c. A motel's normal payday for employees is every Friday. The year-end occurs on a Monday. The pay earned by employees for those three days is recorded in the motel's accounts because of the _____ principle.

d. Last year a remote fishing resort purchased a floatplane to fly guests to the resort. The aircraft cost at that time was $150,000. This year, the plane is worth $160,000. However, it continues to be recorded on the books at $150,000 because of the _____ principle and the _____ principle.

e. If a restaurant operator takes home food from the restaurant and uses these products for his or her personal use, this act violates the _____ principle.

f. If a hotel estimated expenses to be higher than they actually might be, this reduces the hotel's profit and conforms to the _____ _____ principle.

g. A hotel purchased a box of 100 pencils for office use. At the end of the month, 90 pencils remain, with a total value of $4.50. The remaining pencils are not included as inventory on the balance sheet because of the _____ concept.

E1.2 Write a short explanation of the following terms:

a. Operating income

b. Net income

c. Net loss

d. Breakeven

E1.3 Identify the normal balance as debit or credit for each of the following categories of accounts:

Account:	Assets	Liabilities	Ownership Equity	Sales Revenue	Operating Expenses
Balance:	_____	_____	_____	_____	_____

E1.4 Write the abbreviated linear equation for the balance sheet and income statement.

Balance sheet equation _____

Income statement equation _____

E1.5 At the end of an accounting period, it was determined that wages of employees ($680) and management salaries ($800) have been earned. Journalize the entry to accrue the wages and salaries expense.

Account Title	Debit	Credit

E1.6 Equipment was purchased for $98,000. The equipment is estimated to have a serviceable life of 10 years and a residual value of $2,000. Using straight-line depreciation, answer the following:

a. What is the depreciation expense per month and per year?

b. Give the journal entry to record the depreciation expense for one year.

Account Title	Debit	Credit

E1.7 A new van was purchased for $40,000 and was estimated to have a life of five years or 120,000 miles; residual value is estimated to be $4,000. In the first year of use, the van was driven for 22,000 miles. Using the units-of-production method, what is depreciation per mile and depreciation expense in year one?

E1.8 Equipment was purchased for $46,000 with an estimated life of five years and residual value is estimated at $2,000. What is depreciation expense for the first year using each of the following separate depreciation methods?

a. Sum of the years' digits

b. Double declining balance

c. Straight line

E1.9 A restaurant paid $9,600 cash in advance for liability and casualty insurance for two years of coverage:

a. Journalize the transaction for the payment.

Account Title	Debit	Credit

b. What is the amount of insurance expense for one year and one month?

c. Record the journal entry for six months of insurance expense.

Account Title	Debit	Credit

E1.10 Referring to the journal entries you completed for E1.9, (a) and (c), name and post the journal entries using modified T account format as shown below.

Name: Cash

Debit	Credit	Balance
(Beginning Balance)		$18,400

Name: _____

Debit	Credit	Balance
(Beginning Balance)		$ -0-

Name: _____

Debit	Credit	Balance
(Beginning Balance)		$ -0-

E1.11 A business using the cash basis of accounting cannot locate all of its records for a given month of operations. Beginning cash was $14,840 and ending cash was $11,320. Cash payments of $148,000 were verified from vendor receipts. The amount of cash sales is unknown. Determine unknown cash sales revenue.

E1.12 A restaurant pays $9,000 for six months building rent in advance and recognizes rental expense every month.

a. What is the monthly rental expense?

b. Journalize the monthly adjusting entry.

Account Title	Debit	Credit

PROBLEMS

P1.1 Study the restaurant transactions for the month of March 2004 shown below, and record the necessary journal entries, skipping a line between each entry. Journal entries and modified T ledger accounts can be prepared easily on lined paper following the examples shown in the text. To further simplify the problem, use the following account titles shown by category to prepare modified T accounts. *Balance sheet accounts, Assets:* Cash, Credit Cards Receivable, Accounts Receivable, Food Inventory, Beverage Inventory, Prepaid Rent, Prepaid Insurance, Supplies, Equipment, and Furnishings. *Liabilities:* Accounts Payable, Note Payable. *Ownership Equity:* Capital. *Income Statement Accounts:* Sales Revenue, Salaries Expense, Wages Expense, and Interest Expense.

a. Owner opened a business account and deposited $65,000 in the bank.

b. Owner borrowed and deposited $20,000 on a note payable to the bank.

c. Owner paid one year of rent in advance on the restaurant space, $14,400 cash.

d. Equipment was purchased for $44,000—$15,000 in cash and the balance on account.

e. Furnishings were purchased for $28,400 cash.

f. Owner purchased $3,000 of food inventory on account and paid $4,000 cash for beverage inventory.

g. Owner purchased supplies for $2,650 cash.

h. Owner purchased $3,800 of food inventory on account.

i. Owner paid $2,400 for a one-year liability and casualty insurance policy.

j. Employees were paid wages of $12,800 and salaries of $2,400.

k. Revenue for the first month was $32,800—92 percent cash, 6 percent on credit cards, and 2 percent on accounts receivable.

l. Owner paid $12,000 on accounts payable.

m. Owner paid $2,000 on notes payable, plus interest of $200.

After journalizing and posting each transaction, prepare an unadjusted trial balance for the month ended March 31, 2004.

P1.2 A friend has asked you to look at the accounts of his small restaurant and recommend the end-of-period adjusting entries. After viewing the accounts, it was apparent that the following adjusting entries were required. Complete journal entries for each required adjustment.

a. A total of $2,040 of prepaid insurance must be expensed.

b. A total of $5,000 of prepaid rent has been consumed.

c. Kitchen equipment depreciation in the amount of $3,500 must be recognized.

d. Wages earned and due employees but not paid total $692.

e. Supplies of $874 have been used.

f. Interest on a note payable in the amount of $290 must be accrued.

P1.3 The following transactions occurred for a new motel prior to and during the first month of business operations. Study the motel transactions shown below and record the necessary journal entries, skipping a line between each entry. Journal entries and modified T ledger accounts can be prepared easily on lined paper following the examples shown in the text.

a. Owner invested $360,000 cash deposited in the business bank account.

b. Owner paid $128,000 cash for land.

c. Owner borrowed $330,000 on a mortgage payable at 6% interest.

d. Owner paid cash for building $395,400.

e. Equipment was purchased for $62,000, paying $22,000 cash and the balance on a note payable.

f. Furnishings were purchased for $98,000 cash.

g. Linen inventory was purchased for $6,474 on account.

h. Supplies were purchased for $2,800 on account.

i. Vending inventory was purchased for $380 cash.

j. Room revenue during month was $44,000 cash.

k. Vending revenue from vending machines was $800 cash.

l. Wages of $2,900 cash were paid.

m. Owner paid $2,200 on accounts payable.

n. Owner paid $4,800 on annual liability and casualty insurance policy.

o. Owner paid $1,000 on the mortgage payable and $1,650 for interest.

After journalizing and posting the operating transactions, journalize the following adjusting entries: (Use separate entries for clarity.)

a. Estimated closing value of the linen inventory is $5,700.

b. Wages earned by employees but unpaid are $400.

c. One-twelfth of the prepaid insurance has been consumed.

d. Interest owing, but not yet paid, on the equipment notes payable account is 1 percent of the balance owing at month-end.

e. Equipment depreciation is based on a life of 12 years with a $5,000 residual value, straight-line depreciation.

f. Furnishings depreciation is based on an eight-year life with a $4,000 residual (salvage) value, straight-line depreciation.

g. Building has a 20-year life with a residual (salvage) value of $45,000, straight-line depreciation.

h. Supplies used during the first month are $600.

P1.4 Joe Fast started a mobile snack food service on January 2, 2003, investing $12,000 cash deposited in a bank account in the name of "Fast Snacks." He purchased a second-hand, fully equipped truck. Joe operated on the cash basis of accounting, and at year's end, he asks you to help him find his income or loss for the first year of operation. You have determined the following:

a. He purchased a $25,000 truck that is depreciable at 20 percent per year. He paid $10,000 cash from his funds and financed $15,000 on a note at 8 percent interest.

b. He started the operation with $2,000 cash available.

c. He has $324 cash on hand and $27,255 cash in the bank.

d. His receipts for cash purchases of inventory for resale total $29,648.

e. The value of his ending inventory for resale is $575.

f. He paid $914 cash for all truck operating costs and in addition, he has an unpaid invoice for a recent truck repair in the amount of $157.

g. He informed you that he took $1,500 a month for 12 months to use for living and other personal expenses.

h. He paid $1,200 of interest on the truck loan.

You discover Joe kept no record of the cash sales he made during the year. Cash sales revenue must be determined from the information already noted. Show Joe how cash sales were determined and prepare an income statement using accrual accounting to show his operating income for the year.

P1.5 Art Angel operated a small seasonal lake marina, renting boats and selling snacks. He rents marina space for four months in Year 2004, from May 15 to September 15, for $800 per month. He started the current

season with $15,000 in the bank and paid the marina seasonal rent in advance. In May, he bought three new boats for cash at $12,500 each and borrowed $25,000 at 6 percent interest. The new boats are estimated to have a 10-season life and a residual (trade-in) value of $2,500 each. Straight-line depreciation will be used.

Purchase invoices show he paid $7,458 cash for food and beverage inventory. One unpaid invoice for food in the amount of $73 remains unpaid. No food or beverage inventory remained at season end. Other costs incurred during the season were boat maintenance, $1,211, and casual labor costs, $1,440. He paid the interest for the year based on the amount of the loan outstanding on May 15 and repaid $10,000 of the loan. In addition, Art said he withdrew $2,000 per month during the season. The season-ending cash balance in the bank is $14,697. No records exist regarding the amount of cash sales.

Cash sales revenue must be determined using only the information already noted. Show him how you determine the unknown cash sales and prepare an accrual income statement to show him operating income before tax for the year.

CASE 1

This is the first part of an ongoing case that will appear at the end of most subsequent chapters. It is recommended that you keep case solutions, notes, and other case information in a separate file or binder for quick reference.

Charlie Driver has $30,000 saved and has decided to attend college, taking courses in marketing and retailing. To help pay his tuition and living expenses, he contracted with a mobile catering company as an independent driver. Charlie will run his mobile catering business on a cash basis; he has named his business Charlie's Convenient Catering, or the 3C Company for short. He opened a company bank account with $30,000. He bought a used, fully equipped mobile catering truck for $26,000, and operated from January 4 to December 31, 2003. At the end of the year, Charlie had $26,010 in the bank and $148 in a cash drawer. Invoices show he purchased food, beverages, and supplies inventories for $45,296; ending inventory remaining on the truck was $350. His invoices for truck operating expenses total $3,828 paid, and he has one unpaid truck repair invoice for $254. Charlie withdrew $2,000 a month for personal expenses. The truck has a five-year life and no residual value, and straight-line depreciation is to be used.

Charlie asks you to help him put together his business information and reconstruct his cash sales. He recorded his daily cash sales in a notebook that cannot be found. Calculate 3C Company's revenue and prepare an accrual income statement. Charlie is concerned that he has less cash now than he had when he started. Explain why.