



## THE “ACCOUNT” SYSTEM

**LO3** Explain the nature, format, and purpose of an account.

The basic component of an accounting system is the **account**, which is an individual record of the increases and decreases in a specific asset, liability, or stockholders' equity item. An account is created for each individual asset, liability, and stockholders' equity item on a company's financial statements.

Some common account titles are Cash, Accounts Receivable, Notes Payable, Fee Revenue, and Rent Expense.

### Chart of Accounts

Businesses maintain a chart of accounts to facilitate the analysis of a company's business activities. A **chart of accounts** is a list of the titles of all accounts in a business's accounting system. Account titles are grouped by, and in the order of, the six major components of the expanded accounting equation: assets, liabilities, stockholders' equity, revenues, expenses, and dividends. **Exhibit 2-4** shows the chart of accounts for WebWork and indicates the account numbers that will be used throughout this illustration. (Each company maintains its own unique set of accounts and its own numbering system.)

**Exhibit 2-4** Chart of Accounts for WebWork

Assets		Equity	
110	Cash	310	Common Stock
120	Accounts Receivable	320	Retained Earnings
130	Office Supplies	<del>330</del>	<del>Dividends</del>
150	Prepaid Rent		
170	Office Equipment		
175	Accumulated Depreciation— Office Equipment		
Liabilities		Revenues	
210	Accounts Payable	410	Fee Revenue
220	Interest Payable		
230	Wages Payable		
250	Unearned Revenue		
260	Notes Payable		
		Expenses	
		510	Supplies Expense
		520	Wage Expense
		530	Rent Expense
		540	Depreciation Expense— Office Equipment
		550	Interest Expense
		Dividends	
		610	Dividends



### System of Debits and Credits

**LO4** Describe the system of debits and credits and its use in recording transactions.

One basic characteristic of all accounts is that data entries separately record the increases and decreases to an account. The method of recording data entries in the accounts is a matter of convention; that is, a simple set of rules is followed, which involves debits and credits.

A **T-account** is a simplified form of an account which is used to capture these effects. T-accounts are so named because they resemble the letter “T” as shown below:

Account Title (e.g., Cash)	
Debit	Credit
Always the left side	Always the right side

The terms **debit** and **credit** refer to the left side and the right side, respectively, of an account. Regardless of what amount is recorded in an account, any entry made on the left side is a debit to the account while any entry recorded on the right side is a credit to the

Dec. 31	Wage Expense (+E, -SE)	810	
	Wages payable (+L)		810
	<i>To record accrued wages for the final week of December.</i>		

$$A = L + SE$$

$$+ 810 \quad -810$$

$$\text{Exp}$$

Wages Payable		
	0	Unadjusted
	810	(e)
	810	Adjusted

Wage Expense		
Unadjusted	1,620	
(e)	810	
Adjusted	2,430	

This adjustment enables WebWork's December income statement to show the cost of all wages *incurred* during the month rather than just the wages *paid*. Also, WebWork's balance sheet will correctly show a liability for unpaid wages at the end of December.

When the employee is paid on the next regular payday in January, WebWork must ensure that the one week of accrued wages for December is not again charged to expense. When the employee is paid \$1,620 on Friday, January 3, the following entry is made:

Jan. 3	Wages payable (-L)	810	
	Wage expense (+E, -SE)	810	
	Cash (-A)		1,620
	<i>To record two weeks wages paid.</i>		

$$A = L + SE$$

$$-1,620 \quad -810 \quad -810$$

$$\text{Exp}$$

This entry eliminates the liability recorded in Wages Payable at the end of December and debits January Wage Expense for only those wages earned by the employee in January.

### Accrued Interest

On December 1, 2019, WebWork obtained a bank loan in the amount of \$36,000 and signed a two-year note payable. The annual interest rate on the note is 10 percent, with interest payable each November 30. The amount of interest expense must be reflected in net income for the period. Interest expense (or interest revenue) is computed based on three factors: (1) the principal amount of the money borrowed (or loaned); (2) the rate of interest expressed as an annual rate; and (3) the amount of time in the calculation. The first year's interest of \$3,600 (\$36,000 × 10 percent) is due on November 30, 2020. Because interest accumulates as time passes, an adjusting entry is needed on December 31, 2019, to reflect the interest expense for December. December's interest is \$300 (\$3,600/12 months), and the computation and adjusting entry at December 31 follow:

Principal Amount of Note	×	Annual Interest Rate	×	Time as a fraction of a year	=	Interest
\$36,000	×	10%	×	1/12	=	\$300

Dec. 31	Interest expense (+E, -SE)	300	
	Interest payable (+L)		300
	<i>To record accrued interest expense for December.</i>		

$$A = L + SE$$

$$+300 \quad -300$$

$$\text{Exp}$$

Interest Payable		
	0	Unadjusted
	300	(f)
	300	Adjusted

Interest Expense		
Unadjusted	0	
(f)	300	
Adjusted	300	

When this adjusting entry is posted to the general ledger, the correct interest expense for December is shown as well as a liability for one month's interest that has accrued as of December 31.

When the first year's interest of \$3,600 is paid on November 30, 2020, WebWork must remember that \$300 of that amount relates to 2019. On November 30, 2020, the following entry records the interest payment:

Nov. 30	Interest payable (-L)	300	
	Interest expense (+E, -SE)	3,300	
	Cash (-A)		3,600
	<i>To record payment of annual interest.</i>		

$$A = L + SE$$

$$-3,600 \quad -300 \quad -3,300$$

$$\text{Exp}$$

This entry eliminates the interest payable that was accrued on December 31, 2019, and debits the Interest Expense account for \$3,300 (\$300 times 11 months), the correct interest expense for the first 11 months of 2020.

Exhibit 3-2 Adjusting Entries for WebWork, Inc.				
GENERAL JOURNAL				
Date	Description	Debit	Credit	
2019				
Dec. 31	Supplies expense (+E, −SE) Office supplies (−A) <i>To record expense of office supplies used in December.</i>	1,320	1,320	(a)
Dec. 31	Rent expense (+E, −SE) Prepaid rent (−A) <i>To record rent expense for December.</i>	1,800	1,800	(b)
Dec. 31	Depreciation expense (+E, −SE) Accumulated depreciation—Office equipment (+XA, −A) <i>To record December depreciation.</i>	450	450	(c)
Dec. 31	Unearned revenue (−L) Fee revenue (+R, +SE) <i>To record portion of advance earned in December.</i>	750	750	(d)
Dec. 31	Wage expense (+E, −SE) Wages payable (+L) <i>To record accrued wages for the final week of December.</i>	810	810	(e)
Dec. 31	Interest expense (+E, −SE) Interest payable (+L) <i>To record accrued interest expense for December.</i>	300	300	(f)
Dec. 31	Accounts receivable (+A) Fee revenue (+R, +SE) <i>To record accrued fee revenue earned in December.</i>	150	150	(g)

**Exhibit 3-3** lists the four types of accounting adjustments and also shows (1) examples of how each type of adjustment arises, (2) the generic adjusting entry for each type of adjustment, and (3) what accounts are overstated or understated *prior to* any adjustment. As we explained, each adjustment affects at least one balance sheet (asset or liability), ~~which we show in blue in Exhibit 3-3, account and at least one income statement account (expense or revenue), which we show in red.~~

Exhibit 3-3 Four Types of Accounting Adjustments				
Accounting Adjustment	Examples	Adjusting Entry	Financial Effects If Not Adjusted	
			Balance Sheet	Income Statement
<b>Deferrals</b>				
Prepaid expenses	Expiration of prepaid rent, insurance, and advertising; depreciation of buildings and equipment	Dr. Expense Cr. Asset (or contra asset)	Asset overstated Equity overstated	Expense understated
Unearned revenues	Recognition of prepayments on customer orders, gift cards, and subscriptions	Dr. Liability Cr. Revenue	Liability overstated Equity understated	Revenue understated
<b>Accruals</b>				
Accrued expenses	Incurred but not yet paid amounts for wages, interest, and tax expenses	Dr. Expense Cr. Liability	Liability understated Equity overstated	Expense understated
Accrued revenues	Earned but not yet received amounts for service, sales, and interest revenues	Dr. Asset Cr. Revenue	Asset understated Equity understated	Revenue understated

Deals with amounts that have previously been recorded in a balance sheet account.

Deals with amounts that have not been previously recorded in an account.

- b. The amount in the Insurance Expense account represents the adjustment made at January 31 for January insurance expense. If the original insurance premium was for one year, what was the amount of the premium and on what date did the insurance policy start?
- c. If we assume that no balance existed in Wages Payable or Wages Expense on January 1, how much cash was paid as wages during January?
- d. If the truck has a useful life of five years, what is the monthly amount of depreciation expense and how many months has Rome owned the truck?

**LO3, 4 E3-10B. Analysis of the Impact of Adjustments on Financial Statements** At the end of the first month of operations, the Lamar Company's accountant prepared financial statements that showed the following amounts:

Assets . . . . .	\$90,000
Liabilities . . . . .	30,000
Stockholders' equity . . . . .	60,000
Net income . . . . .	11,000

In preparing the statements, the accountant overlooked the following items:

- a. Depreciation for the month, \$4,500.
- b. Service revenue earned but unbilled at month-end, \$1,850.
- c. Employee wages earned but unpaid at month-end, \$450.

Determine the correct amounts of assets, liabilities, and stockholders' equity at month-end and net income for the month.

**LO6 E3-11B. Closing Entries** The adjusted trial balance of the Murray Corporation, prepared December 31, contains the following accounts:

	Debit	Credit
Service fees earned . . . . .		\$102,500
Interest income . . . . .		7,000
Salaries expense . . . . .	\$49,800	
Advertising expense . . . . .	4,300	
Depreciation expense . . . . .	9,500	
Income tax expense . . . . .	1,100	
Common stock . . . . .		80,000
Retained earnings . . . . .		57,700
Cash dividends . . . . .	17,000	

Prepare journal entries to close the accounts directly to Retained Earnings. After these entries are posted, what is the ending balance in the Retained Earnings account?

**LO7 (Appendix 3A) E3-12B. Closing Entries** Use the information provided in E3-5B to prepare journal entries to close the accounts using the Income Summary account. After these entries are posted, what is the balance in the Retained Earnings account?

**LO7 (Appendix 3A) E3-13B. Closing Entries** In the midst of closing procedures, La Verne Corporation's accountant became ill. You have volunteered to complete the closing of the books, and you find that all revenue and expense accounts have zero balances and that the Income Summary account has a single debit entry for \$318,800 and a single credit entry for \$370,000. The Cash Dividends account has a debit balance of \$14,000, and the Retained Earnings account has a credit balance of \$117,000. Prepare journal entries to complete the closing procedures as of year-end.

**LO8 (Appendix 3B) E3-14B. Worksheet** Identify each of the 10 amount columns of the worksheet and indicate to which column the adjusted balance of the following accounts would be extended:

- |                             |                        |
|-----------------------------|------------------------|
| a. Accounts Receivable      | f. Interest Receivable |
| b. Accumulated Depreciation | g. Prepaid Rent        |
| c. Dividends                | h. Service Fees Earned |
| d. Salaries Payable         | i. Common Stock        |
| e. Wages Expense            | j. Retained Earnings   |



- d. Prepare a statement of stockholders' equity for the month of June.
- e. Prepare a balance sheet as of June 30.
- f. Prepare closing entries.
- g. Prepare a post-closing trial balance.

**P3-13A. Transaction Analysis, Trial Balance, and Financial Statements** On December 1, a group of individuals formed a corporation to establish the *Local*, a neighborhood weekly newspaper featuring want ads of individuals and advertising of local firms. The free paper will be mailed to about 8,000 local residents; revenue will be generated from advertising and want ads. The December transactions are summarized as follows:

**LO3, 4, 5**

- 1 Sold common stock of **Local**, Inc., for cash, \$40,000.
- 2 Paid December rent on furnished office, \$1,200.
- 3 Purchased for \$750, on account, T-shirts displaying company logo. The T-shirts were distributed at a grand opening.
- 4 Paid to creditor on account, \$750.
- 5 Collected "Help wanted" ad revenue in cash, \$5,000.
- 6 Paid post office for cost of bulk mailing, \$910.
- 7 Billed various firms for advertising in the first two issues of the newspaper, \$5,600.
- 8 Paid Acme Courier Service for transporting newspapers to post office, \$50.
- 9 Paid for printing newspaper, \$2,900.
- 10 Collected "Help wanted" ad revenue in cash, \$2,570.
- 11 Received invoice for December utilities, to be paid in January, \$890.
- 12 Paid for printing newspaper, \$2,900.
- 13 Paid December salaries, \$4,100.
- 14 Billed various firms for advertising in two issues of the newspaper, \$8,850.
- 15 Paid post office for cost of bulk mailing, \$775.
- 16 Paid Acme Courier Service for transporting newspapers to post office, \$350.
- 17 Collected \$5,100 on accounts receivable.
- 18 Purchased a printer for office in exchange for a six-month note payable, \$1,400.

**Required**

- a. Set up accounts for the following items: Cash, Accounts Receivable, Office Equipment, Accounts Payable, Notes Payable, Common Stock, Advertising Revenue, Want Ad Revenue, Printing Expense, Advertising Expense, Utilities Expense, Salaries Expense, Rent Expense, and Delivery Expense. Prepare journal entries in a general journal and record the foregoing transactions in the accounts.
- b. Prepare a trial balance as of December 31.
- c. Prepare an income statement for the month of December.
- d. Prepare a balance sheet as of December 31. (Note: In this problem, the net income for December becomes the amount of retained earnings at December 31.)

**P3-14A. Balance Sheets for a Corporation** The following balance sheet data are given for Norman Catering Service, a corporation, as of May 31:

**LO5**

Accounts receivable . . . . .	\$20,300	Accounts payable . . . . .	\$ 5,200
Notes payable . . . . .	23,000	Cash . . . . .	12,200
Equipment . . . . .	50,000	Common stock . . . . .	42,500
Supplies . . . . .	19,400	Retained earnings . . . . .	?

Assume that on June 1, the following transactions occurred:

- June 1 Purchased additional equipment costing \$18,000, giving \$3,000 cash and a \$15,000 note payable.
- 1 Paid a cash dividend of \$8,000.

**Required**

- a. Prepare a balance sheet as of May 31.
- b. Prepare a balance sheet as of June 2.

**P3-15A. Determination of Net Income and Retained Earnings** The following selected income statement and balance sheet information is available for Floyd Appraisers at the end of the current month:

**LO5**

To illustrate LIFO's income tax advantage, assume that the Huntington Corporation has beginning inventory of 10 units costing \$500 each, and that only two transactions occur. In the first transaction, it purchases 10 more units costing \$630 each, for a total cash purchase price of \$6,300. In the second transaction, it sells 10 units for \$700 each, for a total cash sale of \$7,000. Both transactions are for cash and, for simplicity, we assume that the company's operating expenses are zero and the applicable income tax rate is 20 percent. **Exhibit 6-10** presents the income statements and cash flows for Huntington under both FIFO and LIFO.

<b>Exhibit 6-10 FIFO vs. LIFO Comparison: Phantom Profit Effect and Tax Benefit</b>				
	FIFO		LIFO	
	Income Statement	Cash In (Out)	Income Statement	Cash In (Out)
Sales (10 @ \$700) . . . . .	\$ 7,000	\$7,000	\$ 7,000	\$7,000
Cost of goods sold				
Beginning inventory (10 @ \$500) . . . . .	5,000		5,000	
Purchases (10 @ \$630) . . . . .	6,300	(6,300)	6,300	(6,300)
Goods available (20 units) . . . . .	11,300		11,300	
Ending inventory				
10 @ FIFO . . . . .	6,300			
10 @ LIFO . . . . .			5,000	
Cost of goods sold . . . . .	5,000		6,300	
Pretax income . . . . .	2,000		700	
Income tax (at 20%) . . . . .	400	(400)	140	(140)
<b>Net income . . . . .</b>	<b>\$ 1,600</b>		<b>\$ 560</b>	
<b>Net cash proceeds . . . . .</b>		<b>\$ 300</b>		<b>\$ 560</b>

Under FIFO, Huntington reports **\$1,600** of net income, but cash from sales (\$7,000) only leaves net cash proceeds of \$300 after replacing the inventory sold (\$5,000) and pay the income tax **(\$400)** on the \$2,000 in FIFO pretax net income. The net income of **\$1,600** is not fully realized in cash, and consequently, is unavailable to pay dividends or be reinvested in the business or replace the sold inventory. As a consequence, FIFO net income is sometimes referred to as *phantom profit*.

Under LIFO, Huntington reports net income of **\$560** as a consequence of its higher cost of goods sold (\$6,300). With a lower net income, it incurs a smaller cash outflow (**\$140**) for income taxes. The attractiveness of LIFO during periods of rising inventory purchase prices is evidenced by LIFO's more favorable net cash flow (**\$560**) as compared with FIFO (\$300). Use of LIFO during times of falling inventory purchase prices, however, has the opposite income tax effect.

Management is usually free to select different accounting treatments for financial reporting to shareholders and for income tax reporting to the Internal Revenue Service (IRS). For example, it is acceptable for a business to use different methods of computing depreciation when reporting under GAAP on the income statement and for reporting under income tax regulations on a company's income tax return. An exception to this flexibility occurs when a company chooses to use LIFO for income tax reporting to benefit from the lower income taxes that result when purchase prices are rising. A U.S. federal tax regulation known as the **LIFO conformity rule** requires any company that selects LIFO for income tax reporting to also use LIFO for financial reporting to shareholders. In other words, it is currently not possible to report lower taxable income to the IRS using LIFO while also reporting higher net income to shareholders using FIFO.



Bank Statement						
TO Thurman, Inc. St. Louis, MO			September 30 STATE BANK			
Date	Deposits	No.	Date	Charges	Date	Balance
Sept. 1 .....	\$1,170	597	Sept. 1 .....	\$ 650	Aug. 31 .....	\$14,300
2 .....	1,120	607	5 .....	1,850	Sept. 1 .....	14,820
5 .....	850	608	5 .....	1,100	2 .....	15,940
9 .....	744	609	9 .....	552	5 .....	13,840
15 .....	585	610	8 .....	640	8 .....	13,200
17 .....	1,540	611	15 .....	817	9 .....	13,392
25 .....	1,028	612	17 .....	488	15 .....	13,160
30 .....	680	614	25 .....	920	17 .....	14,212
		NSF	29 .....	991	25 .....	14,320
		SC	30 .....	36	29 .....	13,329
					30 .....	13,973

**Item Codes:** EC: Error Correction      DM: Debit Memo      CM: Credit Memo  
 SC: Service Charge      OD: Overdraft      RT: Returned Item  
 IN: Interest Earned      NSF: Non-sufficient Funds

A list of deposits made and checks written during September is shown below:

Deposits Made			Checks Written		
Sept. 1 .....	\$1,120	No. 607 .....	\$1,850		
4 .....	850	608 .....	1,100		
8 .....	744	609 .....	552		
12 .....	585	610 .....	640		
16 .....	1,540	611 .....	871		
24 .....	1,028	612 .....	488		
29 .....	680	613 .....	310		
30 .....	1,266	614 .....	920		
	<u>\$7,813</u>	615 .....	386		
		616 .....	420		
			<u>\$7,537</u>		

The Cash in Bank account balance on September 30 was \$14,386. In reviewing checks returned by the bank, the accountant discovered that check No. 611 written for \$817 for advertising expense, was recorded in the cash disbursements journal as \$871. The NSF check for \$991, which Thurman deposited on September 24, was a payment on account from customer D. Walker.

### Required

- Prepare a bank reconciliation for Thurman, Inc., at September 30.
- Prepare the necessary journal entries to bring the Cash in Bank account into agreement with the reconciled cash balance on the bank reconciliation.

### P7-6A. Reporting Cash

Tina Company has the following items at year-end.

**LO3**

Currency and coin in safe .....	\$ 4,100
Funds in savings account (requires \$2,500 compensating balance) .....	26,540
Funds in checking account .....	6,750
Traveler's checks .....	625
Postdated check .....	1,250
Not-sufficient-funds check .....	1,880
Money market fund .....	35,100

### Required

Identify the amount of the above items that should be reported as cash and cash equivalents on Tina Company's balance sheet.



Internal control principles:

- Establish clear lines of authority and responsibility.
- Segregation of duties.
- Hire competent personnel.
- Use control numbers on all business documents.
- Develop plans and budgets.
- Maintain adequate accounting records.
- Provide physical and electronic controls.
- Conduct internal audits.

### LO5

**P7-9B. Bank Reconciliation** The Chicago Skate Company's bank statement for the month of June indicated a balance of \$4,320. The company's cash account in the general ledger showed a balance of **\$3,377** on June 30. Other relevant information includes the following:

Homework  
MBC



- Deposits in transit on June 30 total \$2,550.
- The bank statement shows a debit memorandum for a \$10 check printing charge.
- Check No. 160 payable to Simon Company was recorded in the accounting records for \$124 and cleared the bank for this same amount. A review of the records indicated that the Simon account now has a \$28 credit balance and the check to them should have been \$142.
- Outstanding checks as of June 30 totaled \$3,175.
- Check No. 176 was correctly written and paid by the bank for \$345. The check was recorded in the accounting records as a debit to accounts payable and a credit to cash for \$354.
- The bank returned an NSF check in the amount of \$311.
- The bank included a credit memorandum for \$630 representing a collection of a customer's note. The principal portion was \$610 and the interest portion was \$20. The interest had not been accrued.

### Required

- Prepare the June bank reconciliation for the Chicago Skate Company.
- Prepare any necessary adjusting entries.

## SERIAL PROBLEM: KATE'S CARDS

(Note: This is a continuation of the Serial Problem: Kate's Cards from Chapters 1 through 6.)



**SP7.** On February 15, 2019, Kate Collins, owner of Kate's Cards, asks you to investigate the cash handling activities in her business. She believes that a new employee might be stealing funds. "I have no proof," she says, "but I'm fairly certain that the January 31, 2019, undeposited receipts amounted to more than \$12,000, although the January 31 bank reconciliation prepared by the cashier (who works in the treasurer's department) shows only \$7,238.40. Also, the January bank reconciliation doesn't show several checks that have been outstanding for a long time. The cashier told me that these checks needn't appear on the reconciliation because he had notified the bank to stop payment on them and he had made the necessary adjustment on the books. Does that sound reasonable to you?"

At your request, Kate shows you the following (unaudited) January 31, 2019, bank reconciliation prepared by the cashier:

KATE'S CARDS Bank Reconciliation January 31, 2019			
Ending balance from bank statement . . .	\$ 4,843.69	Balance from general ledger . . .	\$10,893.89
Add: Deposits in transit . . . . .	<u>7,238.40</u>		
	\$12,082.09		
Less:		Less:	
Outstanding checks:		Bank service charge . . . . .	\$ 60.00
No. 2351 . . . . .	\$1,100.20	Unrecorded credit . . . . .	<u>1,200.00</u>
No. 2353 . . . . .	578.32		<u>(1,260.00)</u>
No. 2354 . . . . .	<u>969.68</u>		
	(2,448.20)		
Reconciled cash balance . . . . .	<u>\$ 9,633.89</u>	Reconciled cash balance . . . . .	<u>\$ 9,633.89</u>



- SE9-2. Depreciation Expense Using the Straight-Line Method** The Peete Company purchased an office building for \$4,500,000. The building had an estimated useful life of 25 years and an expected salvage value of \$500,000. Calculate the depreciation expense for the second year using the straight-line method. **L02**
- SE9-3. Depreciation Expense Using the Double-Declining Balance Method** The Peete Company purchased an office building for \$4,500,000. The building had an estimated useful life of 25 years and an expected salvage value of \$500,000. Calculate the depreciation expense for the second year using the double-declining balance method. **L02**
- SE9-4. Depreciation Expense Using the Units-of-Production Method** The Sonya Company is a coal company based in West Virginia. The company recently purchased a new coal truck for \$50,000. The truck had an expected useful life of 200,000 miles and an expected salvage value of \$2,000. Calculate the depreciation expense using the units-of-production method assuming the truck travelled 40,000 miles on company business during the year. **L02**
- SE9-5. Sale of a Building** The Mite Company sold a building for \$350,000 that had a book value of \$450,000. The building had originally cost the company \$12,000,000 and had accumulated depreciation to date of \$11,550,000. Prepare a journal entry to record the sale of the building. **L04**
- SE9-6. Goodwill Impairment** Bruce Farms Equipment Company had goodwill valued at \$80 million on its balance sheet at year-end. A review of the goodwill by the company's CFO indicated that the goodwill was impaired and was now only worth \$45 million. Prepare a journal entry to record the goodwill impairment on the books of the company. **L05**
- SE9-7. Amortization Expense** Smith & Daughters obtained a patent for a new optical scanning device. The fees incurred to file for the patent and to defend the patent in court against several companies which challenged the patent amounted to \$90,000. Smith & Daughters concluded that the expected economic life of the patent was 12 years. Calculate the amortization expense that should be recorded in the second year, and record the journal entry for the amortization expense on the books of Smith & Daughters. **L05**
- SE9-8. Return on Assets** The Queen Company reported net income of \$80,000 and average total assets of \$450,000. Calculate the company's return on assets. **L07**
- SE9-9. Asset Turnover** The Kingwood Company reported sales revenue of \$520,000 and average total assets of \$500,000. Calculate the company's asset turnover. **L07**
- SE9-10. Return on Assets and Asset Turnover** Last year, the Miller Company reported a return on assets of 15 percent and an asset turnover of 1.6. In the current year, the company reported a return on assets of 19 percent but an asset turnover of only 1.2. If sales revenue remained unchanged from last year to the current year, what would explain the two ratio results? **L07**
- SE9-11. Sale of Equipment** Prepare the journal entry for the following transactions: (1) Geysler Company sold some old equipment that initially cost \$30,000 and had \$25,000 of accumulated depreciation and received cash in the amount of \$2,000. (2) Assume the same facts except Geysler received \$8,000. **L04**
- SE9-12. Financial Statement Placement** Name the financial statement where each of the following will appear: (IS) Income Statement; (BS) Balance Sheet; (SCF) Statement of Cash Flows; (N) None. **L06**
- Book value of equipment purchased five years ago
  - Market value of equipment purchased five years ago
  - Cash proceeds from the sale of land
  - Gain on the sale of buildings
  - Accumulated depreciation on equipment
  - Impairment loss on land
- SE9-13. Depletion expense** Digger, Inc. paid \$100,000 for the rights to mineral deposits containing an estimated 20,000 tons of ore. Digger paid an additional \$20,000 for exploration and development and estimated there would be no salvage value once the ore was fully extracted. Calculate depletion expense if Digger extracted and sold 8,000 tons of ore? **L05**



- e. Paid \$280 to replace a cracked windshield on a used truck that was just purchased for company use. The company bought the truck knowing the windshield was cracked.
- f. Paid \$750 for a building permit from the city for a storage shed the company is going to have built.

**E9-7B. Sale of Plant Asset** Shannon Company has equipment that originally cost \$68,000. Depreciation has been recorded for six years using the straight-line method, with a \$9,000 estimated salvage value at the end of an expected eight-year life. After recording depreciation at the end of six years, Shannon sells the equipment. Prepare the journal entry to record the equipment's sale for: **LO4**

- a. \$30,000 cash.
- b. \$23,750 cash.
- c. \$21,000 cash.

**E9-8B. Amortization Expense** For each of the following unrelated situations, calculate the annual amortization expense and prepare a journal entry to record the expense: **LO5**

- a. A patent with a 15-year remaining legal life was purchased for \$756,000. The patent will be commercially exploitable for another six years.
- b. A patent was acquired on a device designed by a production worker. Although the cost of the patent to date consisted of \$88,200 in legal fees for handling the patent application, the patent should be commercially valuable during its entire remaining legal life of 15 years and is currently worth \$720,000.
- c. A franchise granting exclusive distribution rights for a new wind turbine within a three-state area for four years was obtained at a cost of \$72,000. Satisfactory sales performance over the four years permits renewal of the franchise for another four years (at an additional cost determined at renewal).

**E9-9B. Return on Assets Ratio and Asset Turnover Ratio** United Systems reported the following financial data (in millions) in its annual report: **LO7**

	2018	2019
Net income . . . . .	\$21,500	\$16,134
Net sales . . . . .	49,540	52,250
Total assets . . . . .	68,734	78,128

If the company's total assets are \$65,676 in 2017, calculate the company's (a) return on assets and (b) asset turnover for 2018 and 2019.

**E9-10B. Financial Statement Presentation** Olin Corp. reported the following amounts for the year just ended: **LO6**

Land . . . . .	\$ 90
Trademarks . . . . .	16
Equipment . . . . .	83
Buildings . . . . .	110
Goodwill . . . . .	32
Accumulated amortization . . . . .	10
Accumulated depreciation . . . . .	55

Prepare a partial balance sheet for these amounts.

**E9-11B. Natural Resources** The Stein Company acquires a silver mine at the cost of \$950,000 on January 1. Along with the purchase price Stein pays additional costs associated with development of \$75,000. Stein expects the mine will have a salvage value of \$125,000 once all the silver has been mined. Best estimates are that the mine contains 300,000 tons of ore. **LO6**

**Required**

- a. Prepare the entry to record the purchase of the silver mine.
- b. Prepare the December 31 year-end adjusting entry to record depletion if 40,000 tons of ore are mined and all the ore is sold.
- c. Prepare the December 31 year-end adjusting entry to record depletion if 40,000 tons of ore are mined but only 10,000 tons of the ore are sold.



	Useful Life	Salvage Value
Building . . . . .	30 years	\$86,000
Equipment . . . . .	10 years	70,000
Trucks . . . . .	4 years	13,000

**Required**

- Calculate the amounts allocated to the various types of plant assets acquired on April 1.
- Prepare the April 1 journal entries to record the purchase of the assets and the payment of the consultant.
- Prepare the December 31 journal entries to record the depreciation expense on the building, equipment, and trucks for the year.

**LO2**

**P9-3B. Depreciation Methods** On January 2, 2018, Javier Company purchased an electroplating machine to help manufacture a part for one of its key products. The machine cost **\$437,400** and was estimated to have a useful life of six years or 781,200 platings, after which it could be sold for \$46,800.

**Required**

- Calculate each year's depreciation expense for the period 2018–2023 under each of the following depreciation methods:
  - Straight-line.
  - Double-declining balance.
  - Units-of-production. (Assume annual production in platings of 140,000; 180,000; 150,000; 125,000; 95,000; and 91,200.)
- Assume that the machine was purchased on September 1, 2018. Calculate each year's depreciation expense for the period 2018–2024 under each of the following depreciation methods:
  - Straight-line.
  - Double-declining balance.

**LO1, 2, 3**

**P9-4B. Journal Entries for Plant Assets** Ediza Delivery Service had the following transactions related to its delivery truck:

**Year 1**

- Mar. 1 Purchased for \$32,500 cash a new delivery truck with an estimated useful life of five years and a \$6,850 salvage value.
- 2 Paid \$750 for painting the company name and logo on the truck.
- Dec. 31 Recorded depreciation on the truck for the year.

**Year 2**

- July 1 Installed air conditioning in the truck at a cost of \$1,808 cash. Although the truck's estimated useful life was unaffected, its estimated salvage value was increased by \$400.
- Sept. 7 Paid \$600 for truck tune-up and safety inspection.
- Dec. 31 Recorded depreciation on the truck for the year.

**Year 3**

- Sept. 3 Installed a set of front and rear bumper guards at a cost of \$125 cash.
- Dec. 31 Recorded depreciation on the truck for the year.

**Year 4**

- Dec. 31 Recorded depreciation on the truck for the year.

Ediza's depreciation policies include (1) using straight-line depreciation, (2) recording depreciation to the nearest whole month, and (3) expensing all truck expenditures of \$150 or less.

**Required**

Prepare journal entries to record these transactions and adjustments.

**LO4**

**P9-5B. Disposal of Plant Asset** Crystal Company has a used delivery truck that originally cost \$24,200. Straight-line depreciation on the truck has been recorded for three years, with a \$3,500 expected salvage value at the end of its estimated six-year useful life. The last depreciation entry was made at the end of the third year. Four months into the fourth year, Crystal disposes of the truck.

**Required**

Prepare journal entries to record:

### Effective Interest Method of Premium Amortization

The **effective interest method** of amortizing a bond premium is handled the same way as a bond discount amortization. Each interest period, a constant percentage of the bonds' book value as of the beginning of the period is recognized as interest expense; the difference between the interest expense and the semiannual interest payment is the amount of the premium amortization.

**Exhibit 10A-5** shows the amortization schedule for the four-year life of the Reid, Inc., bonds that were issued at a premium. The coupon rate of four percent in column A and the effective interest rate of three percent in column B are one-half the annual rates because the calculations are for six-month periods.

Exhibit 10A-5		Bonds Sold at a Premium: Effective Interest Method				
\$100,000 of 8%, four-year bonds with interest payable semiannually issued on December 31, 2018, at \$107,020 to yield 6%						
		A	B	C	D	E
		Interest Paid (4% of face value)	Interest Expense (3% of bond book value)	Periodic Amortization (A – B)	Balance of Unamortized Premium (D – C)	Book Value of Bonds, End of Period (\$100,000 + D)
Date	Interest Period					
Dec. 31, 2018. . .	At issue				\$7,020	\$ 7,020
June 30, 2019 . . .	1 . . . . .	\$4,000	\$3,211	\$789	6,231	6,231
Dec. 31, 2019. . .	2 . . . . .	4,000	3,187	813	5,418	5,418
June 30, 2020 . . .	3 . . . . .	4,000	3,163	837	4,580	4,580
Dec. 31, 2020. . .	4 . . . . .	4,000	3,137	863	3,717	3,717
June 30, 2021 . . .	5 . . . . .	4,000	3,112	888	2,829	2,829
Dec. 31, 2021. . .	6 . . . . .	4,000	3,085	915	1,914	1,914
June 30, 2022 . . .	7 . . . . .	4,000	3,057	943	971	971
Dec. 31, 2022. . .	8 . . . . .	4,000	3,029	971	0	100,000

The journal entries for each interest payment are taken directly from the amortization schedule. The entries for the first two interest payments follow. Note that the periodic interest expense is less than the semiannual interest payment.

		<b>2019</b>			
A	=	L	+	SE	
-4,000		-789		-3,211	
				Exp	
		June 30		Bond interest expense (+E, -SE)	3,211
				Premium on bonds payable (-XL, -L)	789
				Cash (-A)	4,000
				To record semiannual interest payment and amortization.	
A	=	L	+	SE	
-4,000		-813		-3,187	
				Exp	
		Dec. 31		Bond interest expense (+E, -SE)	3,187
				Premium on bonds payable (-XL, -L)	813
				Cash (-A)	4,000
				To record semiannual interest payment and amortization.	

After amortizing the bond premium over the four-year life of the bonds, the balance in the Premium on Bonds Payable account is zero. When the bonds are retired at the end of four years, the journal entry to record the retirement debits Bonds Payable and credits Cash for the \$100,000 face value of the bonds.

**Exhibit 10A-6** shows the book value of the Reid, Inc. bonds from issuance to maturity. The bond issued at face value has a reported book value of \$100,000 over its entire life. The book value of the bond sold at a premium is greater than the face value at issuance. As the premium is amortized over the life of the bond, the book value declines until it is equal to the face value. The book value of the bond sold at a discount behaves in the opposite fashion; it is less than the face value at issuance, and increases over time as the discount is amortized. At maturity, the book value of all three bonds is equal to the \$100,000 face value.

**LO2, 5****(Appendix 10A)**

**E10-18A. Bonds Payable Journal Entries; Effective Interest Amortization** On December 31, 2017, Phillip Company issued \$600,000 of ten-year, nine percent bonds payable for \$496,771, yielding an effective interest rate of twelve percent. Interest is payable semiannually on June 30 and December 31. Prepare journal entries to reflect (a) the issuance of the bonds, (b) the semiannual interest payment and discount amortization (effective interest method) on June 30, 2018, and (c) the semiannual interest payment and discount amortization on December 31, 2018. Round amounts to the nearest dollar.

**LO2, 5****(Appendix 10A)**

**E10-19A. Bonds Payable Journal Entries; Effective Interest Amortization** On December 31, 2017, Karen Company issued \$400,000 of 10-year, ten percent bonds payable for \$454,361, yielding an effective interest rate of eight percent. Interest is payable semiannually on June 30 and December 31. Prepare journal entries to reflect (a) the issuance of the bonds, (b) the semiannual interest payment and premium amortization (effective interest method) on June 30, 2018, and (c) the semiannual interest payment and premium amortization on December 31, 2018. Round amounts to the nearest dollar.

**LO6****(Appendix 10B)**

**E10-20A. Leases** On January 1, Lorraine, Inc., entered into a lease contract. The lease contract was a ten-year lease for a computer with \$15,000 annual lease payments due at the end of each year. Lorraine took possession of the computer on January 1. The present value of the lease payments under the lease contract is \$108,703.

The lease contract is a finance lease. Prepare the journal entry for this lease on January 1.

**LO2**

**E10-21A. Coupon Rates, Yield Rates, and Bond Issuance Prices** The relation between a bond's coupon rate and yield rate is known to influence a bond's issuance price. Presented below are coupon rates and yield rates for a selection of corporate bonds. **Identify** whether each bond was sold at a discount, at its par value, or at a premium, and explain why.

Bond	Coupon Rate	Yield Rate
A.....	7.5%	7.55%
B.....	8.1	8.00
C.....	6.0	6.00
D.....	4.5	4.40
E.....	9.0	9.15

## EXERCISES—SET B

**LO1**

**E10-1B. Liabilities on the Balance Sheet** For each of the following situations, indicate the amount shown as a liability on the balance sheet of **Javier,** Inc., at December 31:

- Javier's general ledger shows a credit balance of \$130,000 in Long-Term Notes Payable. Of this amount, a \$30,000 installment becomes due on June 30 of the following year.
- Javier estimates its unpaid income tax liability for the current year is \$34,000; it plans to pay this amount in March of the following year.
- On December 31, Javier received a \$30,000 invoice for merchandise shipped on December 28. The merchandise has not yet been received. The merchandise was shipped F.O.B. shipping point.
- During the year, Javier collected \$10,500 of state sales tax. At year-end, it has not yet remitted \$1,400 of these taxes to the state department of revenue.
- On December 31, Javier's bank approved a \$10,000, 90-day loan. Javier plans to sign the note and receive the money on January 2 of the following year.

**LO1**

**E10-2B. Maturity Dates of Notes Payable** Determine the maturity date and compute the interest for each of the following notes payable written in 2018:

	Date of Note	Principal	Interest Rate (%)	Term
a.	July 10 .....	\$ 8,400	9	90 days
b.	April 4 .....	6,000	8	120 days
c.	May 19 .....	5,600	7 ½	180 days
d.	June 10 .....	6,500	8	45 days
e.	October 29 .....	10,000	3	60 days

**E10-15B. Issue Price of a Bond** Atlantic, Inc., plans to issue \$700,000 of nine percent bonds that will pay interest semiannually and mature in ten years. Assume that the effective interest is eight percent per year compounded semiannually. Calculate the selling price of the bonds.

**LO2, 5**  
(Appendix 10A)

**E10-16B. Bonds Payable Journal Entries; Straight-Line Interest Amortization** On December 31, 2017, Green Company issued \$600,000 of 15-year, ten percent bonds payable for \$517,411, yielding an effective interest rate of 12 percent. Interest is payable semiannually on June 30 and December 31. Prepare journal entries to reflect (a) the issuance of the bonds, (b) the semiannual interest payment and discount amortization (straight-line interest method) on June 30, 2018, and (c) the semiannual interest payment and discount amortization on December 31, 2018. Round amounts to the nearest dollar.

**LO2, 5**  
(Appendix 10A)

**E10-17B. Bonds Payable Journal Entries; Straight-Line Interest Amortization** On December 31, 2017, Tan Company issued \$400,000 of ten-year, 12 percent bonds payable for \$449,849, yielding an effective interest rate of ten percent. Interest is payable semiannually on June 30 and December 31. Prepare journal entries to reflect (a) the issuance of the bonds, (b) the semiannual interest payment and premium amortization (straight-line interest method) on June 30, 2018, and (c) the semiannual interest payment and premium amortization on December 31, 2018. Round amounts to the nearest dollar.

**LO2, 5**  
(Appendix 10A)

**E10-18B. Bonds Payable Journal Entries; Effective Interest Amortization** On December 31, 2017, Blair Company issued \$600,000 of 20-year, 11 percent bonds payable for \$554,861, yielding an effective interest rate of 12 percent. Interest is payable semiannually on June 30 and December 31. Prepare journal entries to reflect (a) the issuance of the bonds, (b) the semiannual interest payment and discount amortization (effective interest method) on June 30, 2018, and (c) the semiannual interest payment and discount amortization on December 31, 2018. Round amounts to the nearest dollar.

**LO2, 5**  
(Appendix 10A)

**E10-19B. Bonds Payable Journal Entries; Effective Interest Amortization** On December 31, 2017, Kim Company issued \$500,000 of five-year, 12 percent bonds payable for \$538,609, yielding an effective interest rate of ten percent. Interest is payable semiannually on June 30 and December 31. Prepare journal entries to reflect (a) the issuance of the bonds, (b) the semiannual interest payment and premium amortization (effective interest method) on June 30, 2018, and (c) the semiannual interest payment and premium amortization on December 31, 2018. Round amounts to the nearest dollar.

**LO2, 5**  
(Appendix 10A)

**E10-20B. Leases** On January 1, Cheryl, Inc., entered into a lease contract. The lease contract was an eight-year lease for a sound system with \$28,000 annual lease payments due at the end of each year. Cheryl took possession of the sound system on January 1. The present value of the lease payments under the lease contract is \$173,778.

**LO6**  
(Appendix 10B)

The lease contract is a finance lease. Prepare the journal entry for this lease on January 1.

**E10-21B. Coupon Rates, Yield Rates, and Bond Issuance Prices** The relation between a bond's coupon rate and yield rate is known to influence a bond's issuance price. Presented below are coupon rates and yield rates for a selection of corporate bonds. **Identify** whether each bond was sold at a discount, at its par value, or at a premium, and explain why.

**LO2**

Bond	Coupon Rate	Yield Rate
A. ....	7.5%	7.45%
B. ....	8.1	8.40
C. ....	6.0	5.80
D. ....	4.4	4.40
E. ....	8.9	9.10

## PROBLEMS—SET A

**P10-1A. Journal Entries for Accounts and Notes Payable** Lyon Company had the following transactions:

**LO1**

- Apr. 8 Issued a 6,000, 60-day, six percent note payable in payment of an account with Bennett Company.
- May 15 Borrowed \$40,000 from Lincoln Bank, signing a 60-day note at nine percent.
- June 7 Paid Bennett Company the principal and interest due on the April 8 note payable.
- July 6 Purchased \$14,000 of merchandise from Bolton Company; signed a 90-day note with ten percent interest.
- July 14 Paid the May 15 note due Lincoln Bank.



TERRY COMPANY	
Statement of Cash Flows	
For the Year Ended December 31, 2019	
<b>Cash Flow from Operating Activities</b>	
Net income . . . . .	\$ 36,000
Add (deduct) items to convert net income to cash basis	
Depreciation . . . . .	11,000
Loss on sale of investments . . . . .	1,000
Accounts receivable decrease . . . . .	6,000
Inventory increase . . . . .	(28,000)
Prepaid advertising increase . . . . .	(3,000)
Accounts payable increase . . . . .	13,000
Wages payable increase . . . . .	3,500
Income tax payable decrease . . . . .	(1,500)
Cash provided by operating activities . . . . .	\$38,000
<b>Cash Flow from Investing Activities</b>	
Sale of investments . . . . .	9,000
Purchase of plant assets . . . . .	(48,000)
Cash used by investing activities . . . . .	(39,000)
<b>Cash Flow from Financing Activities</b>	
Issuance of common stock . . . . .	14,000
Payment of dividends . . . . .	(17,000)
Cash used by financing activities . . . . .	(3,000)
Net decrease in cash . . . . .	(4,000)
Cash at beginning of year . . . . .	12,000
Cash at end of year . . . . .	\$ 8,000

## APPENDIX 12A: Preparing the Statement of Cash Flows Under the Direct Method



**LO4** Explain the preparation of a statement of cash flows using the direct method.

Although it is quite straightforward to create a direct method statement of cash flows given access to a company's internal accounting records, such access is rarely available to anyone except a company's management team. All that is necessary is to pull the numbers directly off the Cash general ledger account and place them in the appropriate section of the statement of cash flows. This is why the direct method is referred to as "direct." The cash flow from operations is taken directly from the company's general ledger, rather than being indirectly computed from net income. Unfortunately, investment professionals, lenders, and stockholders rarely have access to such proprietary internal data. Thus, it is necessary to be able to create direct method cash flow information using only such publicly available data as the indirect method statement of cash flows.

The process to convert an indirect method statement of cash flows to the direct method requires two steps. First, replace net income (the first line item under the operating activities section of the indirect method statement format) with the line items appearing on a firm's income statement. For instance, Bennett Company's income statement in **Exhibit 12-2** contains the following line items:

Sales revenue . . . . .	\$250,000
Cost of goods sold . . . . .	(148,000)
Wages expense . . . . .	(52,000)
Insurance expense . . . . .	(5,000)
Depreciation expense . . . . .	(10,000)
Income tax expense . . . . .	(11,000)
Gain on sale of plant assets . . . . .	8,000
Net income . . . . .	\$ 32,000

Thus, for the Bennett Company, we begin by replacing the net income of \$32,000 under the operating activities section in **Exhibit 12-5** with the seven income statement line items shown above, which aggregate to \$32,000.

The second step involves adjusting the income statement line items identified in Step One with the remaining line items from the operating activities section of the indirect method statement of cash flows. **Exhibit**



- L04 E13-2A. Earnings per Share** Myrtle Corporation began the year with a simple capital structure consisting of 480,000 shares of outstanding common stock. On April 1, 10,000 additional common shares were issued, and another 60,000 common shares were issued on August 1. The company had net income for the year of \$589,375. Calculate the earnings per share of common stock.



- L02 E13-3A. Comparative Income Statements** Consider the following income statement data from the Mono Company:

	2019	2018
Sales revenue . . . . .	\$600,000	\$450,000
Cost of goods sold . . . . .	336,000	279,000
Selling expenses . . . . .	105,000	99,000
Administrative expenses . . . . .	60,000	50,000
Income tax expense . . . . .	4,000	3,000

- Prepare a comparative income statement, showing increases and decreases in dollars and in percentages.
- Comment briefly on the changes between the two years.



- L03 E13-4A. Common-Size Income Statements** Refer to the income statement data given in Exercise E13-3A.

- Prepare common-size income statements for each year.
- Compare the common-size income statements and comment briefly.



- L04 E13-5A. Ratios Analyzing Firm Profitability** The following information is available for Jay Company:

Annual Data	2019	2018
Net sales . . . . .	\$9,000,000	\$8,200,000
Gross profit on sales . . . . .	3,050,000	2,736,000
Net income . . . . .	567,600	500,000

  

Year-End Data	Dec. 31, 2019	Dec. 31, 2018
Total assets . . . . .	\$6,500,000	\$6,000,000
Stockholders' equity . . . . .	5,000,000	3,200,000

Calculate the following ratios for 2019:

- Gross profit percentage
- Return on sales
- Asset turnover
- Return on assets
- Return on common stockholders' equity (Jay Company has no preferred stock.)



- L04 E13-6A. Working Capital and Short-Term Liquidity Ratios** Ritter Company has a current ratio of 3.00 on December 31. On that date the company's current assets are as follows:

Cash . . . . .	\$ 32,000
Short-term investments . . . . .	49,300
Accounts receivable (net) . . . . .	170,000
Inventory . . . . .	200,000
Prepaid expenses . . . . .	11,600
Current assets . . . . .	<u>\$462,900</u>

Ritter Company's current liabilities at the beginning of the year were \$150,000 and during the year its operating activities provided a cash flow of \$60,000.

- What are the firm's current liabilities on December 31?
- What is the firm's working capital on December 31?
- What is the quick ratio on December 31?
- What is Ritter's operating-cash-flow-to-current-liabilities ratio?

### Solution 16.5

	Service Depts.		Production Depts.		Allocation Basis
	S1	S2	P1	P2	
Directly identifiable overhead . . . . .	\$50,000	\$40,000	\$ 75,000	\$ 65,000	
Allocated overhead. . . . .	<u>10,000</u>	<u>5,000</u>	<u>25,000</u>	<u>20,000</u>	
Total overhead cost to be allocated . . . . .	\$60,000	\$45,000	\$100,000	\$85,000	
Allocation of service departments					
S1 . . . . .	(60,000)		40,000	20,000	Square feet
S2 . . . . .		(45,000)	15,000	30,000	Machine hours
Totals . . . . .	<u>—</u>	<u>—</u>	<u>\$155,000</u>	<u>\$135,000</u>	

### Solution 16.6

Molding (20 hours × \$10) . . . . .	\$200
Machining (10 hours × \$8) . . . . .	80
Painting (5 hours × \$4) . . . . .	<u>20</u>
Total . . . . .	<u>\$300</u>

**YOUR TURN! D-3**

The solution is on  
page D-26.



On January 1 Tara Company invests in three equity securities (A, B, and C). Tara purchases a five percent stake in Company A for \$10,000 and is not able to exercise any significant control of the company. Tara purchases a 25 percent stake in Company B for \$50,000 and can exert significant influence, but not control. Tara purchases a 70 percent controlling stake in Company C for \$120,000.

At year-end, the fair value of Tara's stake in each of the companies, the dividends received from each of the companies, and the net income reported by each of the companies are as follows:

Company	Fair Value	Dividends Received	Reported Net Income
A .....	\$ 12,000	\$ 1,000	\$70,000
B .....	47,000	2,000	80,000
C .....	130,000	10,000	(10,000)

- Record the purchase of the three equity securities on January 1.
- Record any other adjustments necessary.



## PARENT-SUBSIDIARY RELATIONSHIP

**LO4** Define parent-subsidiary relationships and discuss how their balance sheet data are consolidated.

A corporation that controls another corporation through ownership of that company's voting stock is known as a **holding company**. Control over another corporation is ensured through ownership of all or a majority of the investee's voting stock. Another name for a holding company is **parent company**, and the wholly owned or majority-held investees are called **subsidiaries**. The parent company and each subsidiary company are separate legal entities.

## Consolidated Financial Statements

As separate legal entities, a parent company and its subsidiaries maintain their own accounting records and prepare separate financial statements primarily for internal purposes. In the parent company's separate financial statements, the ownership of a subsidiary's stock is reported as a stock investment accounted for by the equity method. When the parent company prepares financial statements for its stockholders and creditors, however, the financial statements of the parent company and its subsidiaries are combined and reported as a single set of **consolidated financial statements**.

Under consolidated accounting, the individual line item (stock investment – controlling) used to account for an investment in a subsidiary under the equity method is replaced by all the individual asset and liability accounts of the consolidated subsidiary. In other words, the cash account of the subsidiary is combined with the cash account of the parent, the accounts receivable of the subsidiary is combined with the accounts receivable of the parent, the accounts payable of the subsidiary is combined with the accounts payable of the parent, and so on. The financial statements of a parent company and its various subsidiaries are combined using what is known as the acquisition method. When the financial data of these legal entities are consolidated, the resulting statements represent the group as an economic entity, as shown in **Exhibit D-12**.

Consolidated financial statements are prepared to avoid the problem of information overload in which investors and investment professionals receive more financial data than can be reasonably processed. For example, the **General Electric Company** is made up of over 2,000 companies worldwide. A shareholder of General Electric would be overwhelmed to receive 2,000 individual company balance sheets, 2,000 individual company income statements, and 2,000 individual company statements of cash flows. Consolidated financial statements avoid this data problem for financial statement users by providing a single set of financial data for the economic entity.

2019

- Jan. 1 Purchased \$250,000 face value of Lowe, Inc.'s six percent bonds at 98 plus a brokerage commission of \$800. The bonds pay interest on June 30 and December 31 and mature in 15 years. Sheppard expects to hold the bonds to maturity.
- June 30 Received the semiannual interest payment on the Lowe bonds and amortized the bond discount for six months. Sheppard uses the straight-line method to amortize bond discounts and premiums.

2033

- Dec. 31 Received the semiannual interest payment on the Lowe bonds and amortized the bond discount for six months.
- 31 Received the principal amount in cash on maturity date of the Lowe bonds.

Record the transactions and adjustments of the Sheppard Company using journal entries.

- L03 ED-4B. Accounting for Equity Securities—Noninfluential** The Dole Company had the following transactions and adjustment related to a stock investment:

2019

- Nov. 15 Purchased 5,000 shares of Lake, Inc.'s common stock at \$16 per share plus a brokerage commission of \$900. Dole Company expects to sell the stock in the near future. Dole is unable to exercise any significant control over Lake.
- Dec. 22 Received a cash dividend of \$1.25 per share of common stock from Lake.
- 31 Made the adjusting entry to reflect year-end fair value of the stock investment in Lake. The year-end market price of the Lake common stock is \$17.50 per share.

2020

- Jan. 20 Sold all 5,000 shares of the Lake common stock for \$84,500.

Record the transactions and adjustment of the Dole Company using journal entries.

- L03 ED-5B. Accounting for Equity Securities—Noninfluential** Refer to the data for Dole Company in ED-4B. Assume that the cash dividend was \$1.20 per share and the year-end market price of the Lake common stock was \$17.00. Record the transactions and adjustment of the Dole Company using journal entries.

- L03 ED-6B. Accounting for Equity Securities—Influential** The Duke Company had the following transactions and adjustment related to a stock investment:

2019

- Jan. 15 Purchased 15,000 shares of Park, Inc.'s common stock at \$8 per share plus a brokerage commission of \$1,000. These shares represent a 25 percent ownership of the Park common stock.
- Dec. 31 Received a cash dividend of \$1.00 per share of common stock from Park.
- 31 Made the adjusting entry to reflect income from the Park stock investment. Park's 2019 net income is \$140,000.

2020

- Jan. 20 Sold all 15,000 shares of the Park common stock for \$132,000.

Record the above transactions for the Duke Company using journal entries.

- L03 ED-7B. Accounting for Equity Securities** On March 15, Morris Corp. purchased 400 shares of common stock of Murat Company for \$25 per share. Morris Corp. is not able to exercise significant influence over Murat. On December 31, the market value of the Murat stock was \$29.00 per share. Morris Corp. plans to sell the stock soon.

- Upon the purchase of the Murat stock, how should Morris Corp. classify the shares on its balance sheet? Justify your answer.
- Record all transactions necessary for Morris.

- L03 ED-8B. Recording Influential Securities** On January 3, Leslie Farm purchased 30 percent of the outstanding stock of Philip Company for \$90,000. The purchase gave Leslie the ability to exercise significant influence over Philip. During the year, Philip paid cash dividends totaling \$80,000 and reported net income for the year of \$100,000.

Record all transactions necessary for Leslie Farm.

