

# Plant Assets and Depreciation

BEFORE  
You

READ

## What You'll Learn

1. Identify plant assets.
2. Explain the need to depreciate plant assets.
3. Calculate annual depreciation of plant assets.
4. Calculate partial-year depreciation of plant assets.
5. Determine the book value of a plant asset.
6. Record depreciation of plant assets.
7. Prepare depreciation schedules.
8. Define the accounting terms introduced in this chapter.

## Why It's Important

- The matching principle requires expenses to be matched with revenues.



## Predict

1. What does the chapter title tell you?
2. What do you already know about this subject from personal experience?
3. What have you learned about this in the earlier chapters?
4. What gaps exist in your knowledge of this subject?

## Exploring the *Real World* of Business

### DEPRECIATING ASSETS

#### Rush Trucking

If you owned a trucking company, would you get up at 3 a.m. to deliver shipments yourself? Andra Rush did when she started **Rush Trucking** in 1984. She also worked the phones as dispatcher, made sales calls, and repaired trucks.

Rush started her company with only three trucks purchased with her savings. "I believed that if we could get the business, we would do a good job and that would lead to repeat business and bigger contracts," Rush said about her business strategy.

**Rush Trucking** now earns over \$125 million annually and operates 2,000 tractors and 3,900 trailers.

Companies like **Rush Trucking** generate revenue with long-term assets. Depreciation allows them to match the cost of assets to revenue over several accounting periods.

#### What Do You Think?

What do you think **Rush Trucking** considers when it matches truck costs to revenue?



## Working in the *Real World*

### APPLYING YOUR ACCOUNTING KNOWLEDGE

All businesses have assets. Some of those assets become less useful because over time they wear out or become obsolete. Examples of these *depreciable* assets are company trucks and computers. You will learn how to identify depreciable assets, how to set up depreciation schedules, and how to make the adjusting entry for depreciation expense in this chapter.

### Personal Connection

In your workplace are there assets that are wearing out or need to be replaced? What are they?

### Online Connection

Go to [glencoeaccounting.glencoe.com](http://glencoeaccounting.glencoe.com) and click on **Student Center**. Click on **Working in the Real World** and select **Chapter 23**.





## SECTION I

# Plant Assets and Equipment

### BEFORE YOU READ

#### Main Idea

A business uses plant assets for more than one accounting period, so it spreads the cost of these assets over a number of years.

#### Read to Learn...

- the difference between current assets and plant assets. (p. 670)
- four factors used to estimate the depreciation of plant assets. (p. 671)

#### Key Terms

plant assets  
depreciation  
disposal value  
straight-line depreciation

### As You READ

#### Key Point

##### Plant and Current

**Assets** Current assets will be consumed or converted to cash in one accounting period. Plant assets will be used for more than one accounting period.

Businesses own many different types of assets. One category of asset requires special treatment in the accounting records. These assets, such as office equipment and buildings, have two things in common:

- They are expected to produce benefits for the business for more than one year.
- They are purchased for use in operating the business, not for resale.

Rush Trucking owns many assets in this category, including computer equipment, office equipment, and trucks. Let's explore how businesses account for these types of assets.

## Current and Plant Assets

### *How Do You Match the Cost of Assets to the Revenue They Help Generate?*

Throughout this textbook you have learned about various assets that a business uses in its operation. These assets can be classified as current assets or *plant assets*.

Current Assets	Plant Assets
Assets that are either consumed or converted to cash during the normal operating cycle of the business, usually one year. Examples are: <ul style="list-style-type: none"><li>• cash</li><li>• accounts receivable (cash to be collected from customers within a short period of time)</li><li>• merchandise (sold within a short period of time)</li></ul>	Long-lived assets that are used in the production or sale of other assets or services over several accounting periods. Examples are: <ul style="list-style-type: none"><li>• land</li><li>• buildings</li><li>• delivery equipment</li><li>• store equipment</li><li>• office equipment</li></ul>

In Chapter 18 you learned about assets such as supplies and prepaid insurance. As these assets are used, their costs are converted to expenses. This conforms to the *matching principle* of accounting, which states that during an accounting period, expenses must be matched with the revenue earned. Since current assets are consumed within one accounting period, the costs of current assets can be easily matched to the revenue for the period.



# Estimating Depreciation of a Plant Asset

## What Four Factors Are Used to Estimate Depreciation?

Plant assets are used over a number of accounting periods. To follow the matching principle, the cost of a plant asset is spread over, or allocated to, the periods in which the asset will be used to produce revenue.

Allocating, or spreading the cost of a plant asset over that asset's useful life is called **depreciation**. For accounting purposes businesses depreciate all plant assets except land. The cost of land is not depreciated because land is considered to have an unlimited useful life. In this chapter you will learn how to calculate and record the depreciation of plant assets.

For example, suppose that a plant asset costs \$40,000 and has a useful life of 10 years. The cost of the asset is depreciated over 10 years. A portion of the \$40,000 is transferred to an expense account each year. At the end of 10 years, the cost of this plant asset will have been recognized as an expense.

It is important to remember that depreciation is an *estimate*. No one can predict with certainty the useful life or the disposal value of an asset.

Four factors are used to calculate depreciation of a plant asset:

- its cost
- its estimated useful life
- its estimated disposal value
- the depreciation method used

## Plant Asset Cost

The cost of a plant asset is the price the business paid to purchase it plus any sales taxes, delivery charges, and installation charges. The total cost is the amount debited to the plant asset account (for example, **Delivery Equipment**) at the time of purchase.

## Estimated Useful Life of a Plant Asset

The *estimated useful life* of a plant asset is the number of years it is expected to be used before it wears out, becomes outdated, or is no longer needed by the business. The number of years a plant asset can be used varies from one asset to another. A delivery truck might have a useful life of six years. A building, on the other hand, might have a useful life of 30 years.

**As You READ**

**Compare and Contrast**

**Current and Plant Assets** How are current assets and plant assets similar and different?



**As You READ**

**In Your Experience**

What personal assets do individuals use for more than one year?

## **+/-** MATH HINTS

### **Rounding Cents**

- Look at the digit to the *right* of the hundredths digit.
- If it is 5 or more, round up.
- If it is less than 5, do not change the hundredths digit.

#### **Correct:**

$8.0347 \approx 8.03$  4 is less than 5 so the hundredths digit does not change.

#### **Incorrect:**

$8.0347 \approx 8.035 \approx 8.04$

In estimating useful life, the accountant considers past experiences with the same type of asset. The Internal Revenue Service (IRS) also publishes guidelines on the estimated useful lives for many types of assets.

## **Estimated Disposal Value of a Plant Asset**

At some point a plant asset will be replaced or discarded. Usually this occurs while the asset still has some monetary value. For example, if a business buys a new delivery truck, the old delivery truck can often be traded in to reduce the price of the new truck.

The estimated amount that a plant asset will be worth at the time of its replacement is called the **disposal value**. The disposal value assigned to a plant asset is an estimate that is based on previous experience. The IRS also publishes guidelines on disposal values.

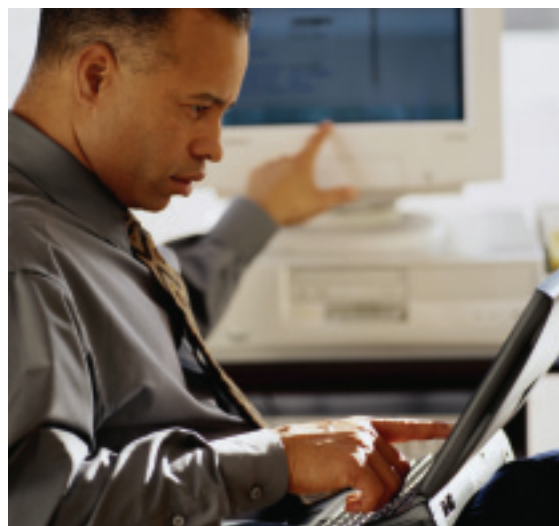
## **Depreciation Methods**

Several methods for computing depreciation expense are acceptable. In this course you will learn a simple, widely used depreciation method called the *straight-line method*. **Straight-line depreciation** equally distributes the depreciation expense over the asset's estimated useful life. Other methods of computing depreciation include units-of-production and accelerated methods.

- *Units-of-production method* estimates useful life measured in units of *use* rather than units of *time*.
- *Accelerated depreciation methods* are based on the theory that an asset loses more value in the early years of its useful life than in the later years. Two types of accelerated depreciation are the *sum-of-the-years'-digits* method and the *declining-balance* method.

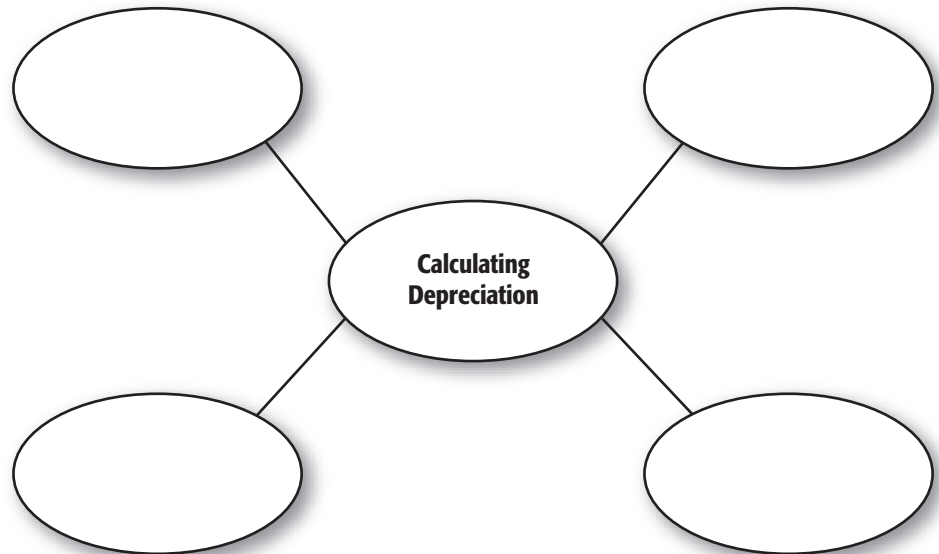
## **Depreciation for Tax Reporting**

The federal income tax law has rules for depreciating assets. These rules include the accelerated cost recovery system (ACRS). It is called *accelerated* because it allows the business to recognize depreciation expense over a shorter period of time. The ACRS method does not take disposal value into consideration. Congress modified ACRS in 1986 resulting in *MACRS* (pronounced makers), the *modified accelerated cost recovery system*. This system is used for tax accounting purposes only. It is not used for business financial reports. It is intended to be an incentive for businesses to invest in plant assets. The higher depreciation expense results in a lower income tax liability.



AFTER  
You READ**Reinforce the Main Idea**

Use a diagram like this one to show the four factors that are used to calculate a plant asset's depreciation.

**Do the Math**

You work for Island Tropics, a trendy clothing store. It recently purchased a computer system for \$20,000. The computers have an estimated useful life of five years. The \$20,000 cost can be depreciated over the useful life of the asset as an expense on the tax return of the business. What is the amount that can be deducted each year as an expense if the computer's estimated disposal value is \$1,000 and the straight-line depreciation method is used?

**Problem 23-1 Classifying Asset Accounts**

Listed here are the assets of New England Sports Equipment Inc.

Accounts Receivable	Office Equipment
Building	Office Furniture
Cash in Bank	Petty Cash Fund
Change Fund	Prepaid Insurance
Delivery Equipment	Store Equipment
Land	Supplies
Merchandise Inventory	

**Instructions** In your working papers, indicate whether each asset listed is a current asset or a plant asset by placing a check mark in the correct column. The first account is completed as an example.

Asset	Current Asset	Plant Asset
Accounts Receivable	✓	

## SECTION 2

# Calculating Depreciation

**BEFORE  
YOU**

**READ**

### Main Idea

Businesses maintain a record of each plant asset and its related depreciation.

### Read to Learn...

- how to calculate depreciation. (p. 674)
- how to determine book value. (p. 675)

### Key Terms

accumulated depreciation  
book value

On Your Mark Athletic Wear purchased a delivery truck on January 5 for \$16,500 cash. The truck has an estimated disposal value of \$1,500 and an estimated useful life of five years.

## Calculating Depreciation

### How Do You Calculate Plant Asset Depreciation?

To calculate depreciation you need to know the cost of the truck, its estimated useful life, and its estimated disposal value.

First calculate the amount to be depreciated:

$$\begin{array}{rcccl} \text{Original} & - & \text{Estimated} & = & \text{Amount} \\ \text{Cost} & & \text{Disposal Value} & & \text{to Be Depreciated} \\ \hline \$16,500 & - & \$1,500 & = & \$15,000 \end{array}$$

The estimated disposal value represents the part of the asset's cost that the business expects to recover. Therefore, the estimated disposal value should not be treated as an expense.

## Straight-Line Depreciation

Calculate the annual depreciation expense using the straight-line method:

$$\begin{array}{rcccl} \text{Amount} & \div & \text{Estimated} & = & \text{Annual} \\ \text{to Be Depreciated} & & \text{Useful Life} & & \text{Depreciation Expense} \\ \hline \$15,000 & \div & 5 & = & \$3,000 \end{array}$$

The annual depreciation expense for the delivery truck is \$3,000.

For straight-line depreciation, the depreciation rate is 1 divided by the years of useful life. In this example the depreciation rate is 20% per year (1 ÷ 5 years).

Note that the \$3,000 depreciation expense is for a full year. Suppose that On Your Mark purchased the delivery truck on April 5 instead of January 5. During the first year, the delivery truck will be used for only nine months. Therefore, the depreciation expense is calculated for nine months.

$$\begin{array}{rcccl} \text{Annual} & \times & \text{Fraction} & = & \text{Partial Year} \\ \text{Depreciation Expense} & & \text{of Year} & & \text{Depreciation Expense} \\ \hline \$3,000 & \times & 9/12 & = & \$2,250 \end{array}$$

## Declining-Balance Depreciation

With the declining-balance method, the annual depreciation expense is the asset's book value multiplied by the declining-balance rate. The declining-balance rate can vary, but it is usually double the straight-line rate. For a five-year asset, the rate is 40% ( $2 \times [1 \div 5]$ ).

Disposal value is not used in the computation. However, after the last year of depreciation, the total depreciation expense "stops" at the asset's disposal value. The annual depreciation expense for the truck's first year is \$6,600 ( $\$16,500 \times 40\%$ ).

**As You READ**

### Key Point

Original Cost  
– Accumulated  
Depreciation  
—————  
Book Value

## Plant Asset Records

### Where Do You Record Plant Asset Values?

Businesses maintain records for each plant asset and the depreciation taken for that asset. The record in **Figure 23–1** provides detailed information about the delivery truck, including:

1. the date of purchase
2. the original cost
3. the estimated useful life
4. annual depreciation
5. accumulated depreciation
6. book value at the end of each year

The lower part of the plant asset record contains the depreciation schedule. The amount of depreciation expense accumulates from one year to the next. **Accumulated depreciation** is the total amount of depreciation for a plant asset that has been recorded up to a specific point in time. The accumulated depreciation at the end of the third year is \$9,000.

The far right column of the depreciation schedule shows the **book value** of the plant asset, the original cost less accumulated depreciation.

At the end of the third year, the book value of the delivery truck is \$7,500 ( $\$16,500 - \$9,000$ ). Note that the delivery truck's book value at the end of five years is \$1,500. This is the truck's estimated disposal value. Under the straight-line method, it cannot be depreciated below its estimated disposal value.

PLANT ASSET RECORD

ITEM Delivery Truck

SERIAL NUMBER 2911-50041

PURCHASED FROM Winding Creek Auto

ESTIMATED LIFE 5 years 3

DEPRECIATION METHOD Straight-line

GENERAL LEDGER ACCOUNT Delivery Equipment

MANUFACTURER VanPower

EST. DISPOSAL VALUE \$1,500.00

LOCATION Company Garage

DEPRECIATION PER YEAR \$3,000.00 4

5

DATE	EXPLANATION	ASSET			ACCUMULATED DEPRECIATION			BOOK VALUE
		DEBIT	CREDIT	BALANCE	DEBIT	CREDIT	BALANCE	
1 1/5/2008	Purchased	16,500 2		16,500				6 16,500
12/31/2008						3,000	3,000	13,500
12/31/2009						3,000	6,000	10,500
12/31/2010						3,000	9,000	7,500
12/31/2011						3,000	12,000	4,500
12/31/2012						3,000	15,000	1,500

**Figure 23–1** Plant Asset Record



AFTER  
You

READ

**Reinforce the Main Idea**

Using a diagram like this one, show the step-by-step procedure to record the first year's depreciation using the straight-line method.

**Steps to Record Depreciation**

↓
↓
↓

**Do the Math**

Office furniture for Teen Counseling Center is estimated at a total value of \$45,000 with a 10% disposal value. The estimated useful life is four years. Calculate the annual depreciation expense for the office furniture using the straight-line method.

**Problem 23-2 Calculating Depreciation Expense****Instructions**

For each of the following plant assets:

1. calculate the amount to be depreciated,
2. calculate the annual depreciation expense using the straight-line method,
3. calculate the depreciation expense for the first year.

Use the form provided in your working papers.

<u>Plant Asset</u>	<u>Months Owned First Year</u>	<u>Original Cost</u>	<u>Estimated Disposal Value</u>	<u>Estimated Useful Life</u>
1. Cash register	8	\$ 450	\$ 30	7 years
2. Computer	2	6,500	1,500	5 years
3. Conference table	6	1,900	100	25 years
4. Delivery truck	3	36,400	6,400	5 years
5. Desk	11	3,180	300	20 years

**Problem 23-3 Completing a Plant Asset Record**

Use the following information to complete the blank asset record found in your working papers. The company uses the straight-line method for depreciating all plant assets. Item Purchased: Xerox Copier—Serial No. X42599757, \$12,500, from K&C Office Equipment.

Purchased: 10/1/2011

Estimated Life: 5 years

Location: Executive Offices

Estimated Disposal Value: \$1,700

## SECTION 3

# Accounting for Depreciation Expense at the End of a Year

After depreciation on plant assets has been calculated, adjustments are made to record depreciation for the period. These adjustments bring the general ledger into agreement with the plant asset records.

## Adjusting for Depreciation Expense

### *How Do You Adjust for Depreciation Expense?*

When a plant asset is purchased, the accountant sets up a depreciation schedule for the asset like the one in **Figure 23-1** on page 675. The amount of depreciation expense for each plant asset is recorded in the accounting records at the end of the year. The information to record the adjustments for depreciation comes from the plant asset records.

Many businesses prepare a summary of depreciation expense for each type of plant asset. For example, a business may have 10 delivery trucks. Each truck has its own plant asset record. At the end of the year, the depreciation expense for all 10 trucks is totaled. This total is entered on a summary form under the name of the asset account, in this case, **Delivery Equipment**. **Figure 23-2** shows On Your Mark's depreciation summary form for its plant assets.

On Your Mark's total depreciation expense for the year is \$33,000. This amount includes the depreciation expense for all plant assets. The accumulated depreciation for all of On Your Mark's plant assets is \$100,250.

## Making the Depreciation Expense Adjustment

The adjustment for depreciation affects two accounts: **Depreciation Expense** and **Accumulated Depreciation**.

**The Depreciation Expense Account.** Depreciation Expense is an expense account. During the year the account has a zero balance because

### BEFORE YOU READ

#### Main Idea

An end-of-period adjusting entry is made for depreciation expense.

#### Read to Learn...

- the accounts used to record depreciation. (p. 677)
- how to journalize adjusting and closing entries for depreciation expense. (p. 681)

2008 SUMMARY OF DEPRECIATION EXPENSE  
December 31, 2008

Asset	Cost	Depreciation Expense	Depreciation to Date
Building	50,000	2,500	8,125
Delivery Equipment	16,500	3,000	9,000
Office Equipment	50,000	2,500	8,125
Store Equipment	250,000	25,000	75,000
Totals	366,500	33,000	100,250

**Figure 23-2** Depreciation Summary Form

**Instant Recall**

**Adjusting Entries** An adjusting entry affects one permanent account and one temporary account.

the adjustment for depreciation is recorded at the end of the period. **Depreciation Expense** is reported on the income statement. At the end of the year, **Depreciation Expense** is closed to **Income Summary**.

Businesses have a depreciation expense account for each type of plant asset. Some examples are:

- **Depreciation Expense—Delivery Equipment** (trucks, vans, automobiles)
- **Depreciation Expense—Office Furniture** (desks, chairs, filing cabinets)

**The Accumulated Depreciation Account.** The balance of **Accumulated Depreciation** represents the total amount of depreciation expensed since the business purchased the asset. Each type of plant asset has an accumulated depreciation account. Typical account names are:

- **Accumulated Depreciation—Delivery Equipment**
- **Accumulated Depreciation—Building**

**Accumulated Depreciation** is classified as a contra asset account. Recall that the balance of a contra account reduces the balance of its related account. In the case of an accumulated depreciation account, the related account is a plant asset account. For example, if the asset account is **Delivery Equipment**, the contra asset account is **Accumulated Depreciation—Delivery Equipment**.

The debit and credit rules for an accumulated depreciation account are opposite those for an asset account. The balance of an accumulated depreciation account is reported on the balance sheet as a decrease to its related plant asset account.

Accumulated Depreciation	
Debit — Decrease Side	Credit + Increase Side Normal Balance Side

Account Name		
Asset	Expense	Contra Asset
Del. Equip.	Depr. Exp.—Del. Equip.	Accum. Depr.—Del. Equip.
Office Equip.	Depr. Exp.—Office Equip.	Accum. Depr.—Office Equip.
Store Equip.	Depr. Exp.—Store Equip.	Accum. Depr.—Store Equip.

**The Adjustment.** Let's learn how to record depreciation of plant assets. Look at On Your Mark's depreciation schedule in **Figure 23–1** on page 675. The delivery truck annual depreciation expense is \$3,000.

## Adjustment

*On December 31 the accounting clerk for On Your Mark records the depreciation for the delivery truck.*

ANALYSIS	Identify	<ol style="list-style-type: none"> <li>1. The accounts affected are <b>Depreciation Expense—Delivery Equipment</b> and <b>Accumulated Depreciation—Delivery Equipment</b>.</li> <li>2. <b>Depreciation Expense—Delivery Equipment</b> is an expense account. <b>Accumulated Depreciation—Delivery Equipment</b> is a contra asset account.</li> <li>3. Both <b>Depreciation Expense—Delivery Equipment</b> and <b>Accumulated Depreciation—Delivery Equipment</b> are increased by \$3,000.</li> </ol>
	Classify	
	+ / –	



**DEBIT-CREDIT RULE**

4. Increases to expense accounts are recorded as debits. Debit **Depreciation Expense—Delivery Equipment** for \$3,000.
5. Increases to contra asset accounts are recorded as credits. Credit **Accumulated Depreciation—Delivery Equipment** for \$3,000.

**T ACCOUNTS**

6. Depreciation Expense— Delivery Equipment		Accumulated Depreciation— Delivery Equipment	
Debit + 3,000	Credit —	Debit —	Credit + 3,000

Accountants make similar adjustments to record depreciation for other plant assets, such as buildings and office equipment.

**Analysis of the Accumulated Depreciation Account.** Suppose this is the end of the third year of the estimated useful life of On Your Mark's delivery truck. For each year the same adjustment was made to record the depreciation of the delivery truck:

- a debit to **Depreciation Expense—Delivery Equipment**
- a credit to **Accumulated Depreciation—Delivery Equipment**

After the books have been closed each year, the **Depreciation Expense—Delivery Equipment** account has a zero balance. (Remember that expense accounts are closed at the end of each year.) In contrast the **Accumulated Depreciation—Delivery Equipment** account shows the total amount of depreciation expensed since the asset was purchased. At the end of the third year, the total is \$9,000.

Accumulated Depreciation— Delivery Equipment	
Debit —	Credit + 3,000 3,000 3,000 Bal. 9,000

(first year depreciation)  
(second year depreciation)  
(third year depreciation)

## Recording Depreciation Adjustments on a Work Sheet

After preparing the adjustment for depreciation, the accountant enters it in the Adjustments section of the work sheet.

Refer to **Figure 23–3** on pages 680 and 681. Locate the accumulated depreciation accounts in the Trial Balance Credit column (\$6,000 and \$5,625). Note that the depreciation expense accounts do not have balances in the Trial Balance section. Adjustments (e) and (f) are entered in the Adjustments section to show the depreciation adjustments for the year. Note that the depreciation expense accounts are debited and the accumulated depreciation accounts are credited. Also note that no adjustments are made to the asset accounts.

**As You READ**
**In Your Own Words**
**Recording Depreciation**

On December 31 the accounting clerk records the depreciation for a plant asset. What does this mean?



**Figure 23–3** Work Sheet with Depreciation Adjustments

On Your Mark Work For the Year Ended									
	ACCT. NO.	ACCOUNT NAME	TRIAL BALANCE		ADJUSTMENTS				
			DEBIT	CREDIT	DEBIT	CREDIT			
8	140	Delivery Equipment	16 500 00						
9	142	Accum. Depr.—Delivery Equip.		6 000 00		(e) 3 000 00			
10	145	Office Equipment	50 000 00						
11	147	Accum. Depr.—Office Equipment		5 625 00		(f) 2 500 00			
23	615	Depr. Expense—Delivery Equip.			(e) 3 000 00				
24	620	Depr. Expense—Office Equip.			(f) 2 500 00				
25									

Each amount is extended to the other work sheet columns.

Account	Column Extended to	
	Adjusted Trial Balance	Financial Statement
Del. Equip.	Debit (unchanged)	Balance Sheet
Accum. Depr.—Del. Equip.	Credit (increased)	Balance Sheet
Office Equip.	Debit (unchanged)	Balance Sheet
Accum. Depr.—Office Equip.	Credit (increased)	Balance Sheet
Depr. Exp.—Del. Equip.	Debit (increased)	Income Statement
Depr. Exp.—Office Equip.	Debit (increased)	Income Statement

## Reporting Depreciation Expense and Accumulated Depreciation on Financial Statements

Figure 23–4 shows placement of the depreciation expense accounts on the partial income statement of On Your Mark.

On Your Mark Athletic Wear Income Statement For the Year Ended December 31, 20--									
Operating Expenses									
Depreciation Expense—Delivery Equip.					3 000 00				
Depreciation Expense—Office Equip.					2 500 00				
Total Operating Expenses							94 351 00		
Operating Income							51 342 00		

**Figure 23–4** Income Statement

Figure 23–5 shows placement of the plant asset and related accumulated depreciation accounts. Both types of accounts appear in the Assets section of the balance sheet. Notice that the accumulated depreciation account is listed immediately below the related plant asset account.

Athletic Wear											
Sheet											
December 31, 20--											
ADJUSTED TRIAL BALANCE				INCOME STATEMENT				BALANCE SHEET			
DEBIT		CREDIT		DEBIT		CREDIT		DEBIT		CREDIT	
16 500 00								16 500 00			8
		9 000 00								9 000 00	9
50 000 00								50 000 00			10
		8 125 00								8 125 00	11
3 000 00				3 000 00							23
2 500 00				2 500 00							24
											25

**Figure 23-3** Work Sheet with Depreciation Adjustments (continued)

#### For Delivery Equipment:

- The original cost is entered in the first amount column on the first line (\$16,500).
- The accumulated depreciation is entered in the first amount column on the second line (\$9,000).
- The difference between cost and accumulated depreciation is entered in the second amount column on the second line (\$7,500).

The book value of the delivery equipment is \$7,500. The book value of each plant asset reported on the balance sheet should be the same as that shown on the plant asset record.

On Your Mark Athletic Wear											
Balance Sheet											
December 31, 20--											
Assets											
Delivery Equipment						16 500 00					
Less: Accum. Depr.—Delivery Equip.						9 000 00		7 500 00			
Office Equipment						50 000 00					
Less: Accum. Depr.—Office Equip.						8 125 00		41 875 00			

**Figure 23-5** Balance Sheet

## Adjusting and Closing Entries for Depreciation Expense

### What Are the Adjusting and Closing Entries for Depreciation?

After the accountant has completed the work sheet and prepared the financial statements, the adjustments for depreciation expense are recorded in the general journal. The information for the journal entries is taken directly from the Adjustments section of the work sheet.

## Adjustment

Record the December 31 adjusting journal entries for depreciation.

### ANALYSIS Identify

### Classify

+/-

- The accounts affected are **Depreciation Expense—Delivery Equipment**, **Depreciation Expense—Office Equipment**, **Accumulated Depreciation—Delivery Equipment**, and **Accumulated Depreciation—Office Equipment**.
- Depreciation Expense—Delivery Equipment** and **Depreciation Expense—Office Equipment** are expense accounts. **Accumulated Depreciation—Delivery Equipment** and **Accumulated Depreciation—Office Equipment** are contra asset accounts.
- Depreciation Expense—Delivery Equipment** is increased by \$3,000. **Depreciation Expense—Office Equipment** is increased by \$2,500. **Accumulated Depreciation—Delivery Equipment** is increased by \$3,000. **Accumulated Depreciation—Office Equipment** is increased by \$2,500.

### DEBIT-CREDIT RULE

- Increases in expense accounts are recorded as debits. Debit **Depreciation Expense—Delivery Equipment** for \$3,000 and **Depreciation Expense—Office Equipment** for \$2,500.
- Increases in contra asset accounts are recorded as credits. Credit **Accumulated Depreciation—Delivery Equipment** for \$3,000 and **Accumulated Depreciation—Office Equipment** for \$2,500.

### T ACCOUNTS

Depreciation Expense— Delivery Equipment		Accumulated Depreciation— Delivery Equipment	
Debit + 3,000	Credit —	Debit —	Credit + 3,000
Depreciation Expense— Office Equipment		Accumulated Depreciation— Office Equipment	
Debit + 2,500	Credit —	Debit —	Credit + 2,500

### JOURNAL ENTRY

GENERAL JOURNAL						PAGE 21
	DATE	DESCRIPTION	POST. REF.	DEBIT	CREDIT	
1	20--					1
2	Dec. 31	Depr. Exp.—Del. Equip.		3 000 00		2
3		Accum. Depr.—Del. Equip.			3 000 00	3
4	31	Depr. Exp.—Office Equip.		2 500 00		4
5		Accum. Depr.—Office Equip.			2 500 00	5
6						6

After adjusting entries have been journalized and posted, the next step in the accounting cycle is to close the ledger. In the second closing entry, you'll remember, accounts with debit balances in the Income Statement Debit column of the work sheet are closed to **Income Summary**. This closing entry includes the depreciation expense accounts.

After this closing entry has been posted to the general ledger, the balances of the depreciation expense accounts are reduced to zero.

## Closing

*Second Closing Entry—Depreciation accounts only.*

**ON YOUR MARK**  
**ATHLETIC WEAR**

595 Leslie Street, Dallas, TX 75207



### ANALYSIS Identify

### Classify

+/-

1. The accounts affected are **Depreciation Expense—Delivery Equipment**, **Depreciation Expense—Office Equipment**, and **Income Summary**.
2. **Depreciation Expense—Delivery Equipment** and **Depreciation Expense—Office Equipment** are expense accounts. **Income Summary** is a temporary capital account.
3. **Depreciation Expense—Delivery Equipment** is decreased by \$3,000 and **Depreciation Expense—Office Equipment** is decreased by \$2,500; the total decrease is \$5,500. The \$5,500 is transferred to the **Income Summary** account.

### DEBIT-CREDIT RULE

4. To transfer the expenses to the **Income Summary** account, debit **Income Summary** for \$5,500.
5. Decreases in expense accounts are recorded as credits. Credit **Depreciation Expense—Delivery Equipment** for \$3,000 and **Depreciation Expense—Office Equipment** for \$2,500.

### T ACCOUNTS

6.

Income Summary	
Debit	Credit
5,500	

Depreciation Expense—Delivery Equipment	
Debit	Credit
+ 3,000	- Clos. 3,000

Depreciation Expense—Office Equipment	
Debit	Credit
+ 2,500	- Clos. 2,500

### JOURNAL ENTRY

7.

GENERAL JOURNAL						PAGE 22
	DATE	DESCRIPTION	POST. REF.	DEBIT	CREDIT	
1	20--					1
2	Dec. 31	Income Summary		5 500 00		2
3		Depr. Exp.—Del. Equip.			3 000 00	3
4		Depr. Exp.—Office Equip.			2 500 00	4
5						5





AFTER  
You

READ

**Reinforce the Main Idea**

Use a diagram like this one to show the last five steps of the accounting cycle as they relate to depreciation.

End-of-Period Accounting Cycle Steps	Step Number	How This Step Relates to Depreciation

**Do the Math**

You are preparing a depreciation schedule for a new piece of equipment you purchased for your business, Supreme T-Shirt Outfitters, for \$5,000. It has a five-year estimated useful life and a \$500 estimated disposal value. Calculate its annual depreciation using the straight-line method. Next calculate the accumulated depreciation and the equipment's book value at the end of each of the five years. Use a table like this one. Add rows for years 2 through 5.

End of	Purchase Price	Depreciation Expense	Accumulated Depreciation	Book Value
1 <sup>st</sup> Year	5,000			

**Problem 23-4 Analyzing a Source Document**

**Instructions** In your working papers:

- Record the purchase in the general journal, page 4.
- Record the partial depreciation expense for the first year in the general journal, page 7.
  - Disposal value—\$200
  - Estimated useful life—5 years
  - Fiscal year end—December 31.
  - Method—straight-line
- Record the annual depreciation, one year later, in the general journal, page 13.

<b>All Purpose Office Equipment</b> 996 Lake Drive, Sacramento, CA 94203		<b>INVOICE NO. 14492</b>  DATE: June 4, 20-- ORDER NO.: 22688 SHIPPED BY: UPS TERMS: Cash	
TO	Universal Auto Supply 1422 Central Blvd. Sacramento, CA 94203		
QTY.	ITEM	UNIT PRICE	TOTAL
1	Xerox Copy Machine Serial Number 24X612987	\$ 3,200.00	\$ 3,200.00
	Sales Tax		256.00
	Total		\$ 3,456.00


**Problem 23-5 Preparing a Depreciation Schedule and Journalizing the Depreciation Adjusting Entry**

Quade Corporation bought a copy machine on January 7 of the current year for \$2,360. It has an estimated useful life of five years and an estimated disposal value of \$100.

**Instructions** In your working papers:

- Prepare a depreciation schedule for the copy machine using the straight-line method of depreciation. (Use the form provided in your working papers.)
- Journalize the adjustment for the copy machine's depreciation at the end of the first year.
- Journalize the closing entry for the expense account affected by the adjusting entry.
- What is the book value of the asset after five years? Is this the same as the disposal value?

# Accounting Careers in Focus

## U.S. OPERATIONS CONTROLLER

*Viasystems, Mishawaka, Indiana*

*Brenda Engel*

### Q: What does Viasystems do?

**A:** We provide firms in a variety of industries with components for their manufacturing processes.

### Q: How did you get into accounting?

**A:** I became interested in accounting at a young age when my mom let me help her with the bookkeeping for the family business.

### Q: What is most challenging about your job?

**A:** Managing my time and attending to a variety of tasks. I'm responsible for overseeing the company's assets, as well as advising and training others in accounting software systems and overall business philosophy.

### Q: What skills are needed for your job?

**A:** Strong analytical skills and patience are critical. It's equally important to have good communication and people skills. Being able to apply what you've learned in school to a work setting is also vital if you want to succeed in your job.

### Q: What advice do you have for accounting students just beginning their careers?

**A:** Work in as many different settings and with as many different people as possible while you're in high school and college. You'll not only gain experience in different areas, but also meet other professionals who can guide you on an appropriate and exciting career path. In addition, make sure you learn and master software such as Microsoft Office. Computer skills are indispensable.

### Tips from . . .

 Robert Half International Inc.

Learn to manage your time by planning ahead. Each morning, draft a quick "to do" list that includes all your short- and long-term projects. This document will help you determine the resources you need and allow you to prioritize your tasks.

## CAREER FACTS

- ▶ **Nature of the Work:** Prepare and consolidate financial statements; manage all aspects of the general ledger; in some cases, supervise the accounts receivable, accounts payable, and general accounting departments.
- ▶ **Training or Education Needed:** A bachelor's degree in accounting or finance; a master's degree in business administration; CPA or CMA designation is preferred; at least five years of experience.
- ▶ **Aptitudes, Abilities, and Skills:** Strong analytical skills, technology skills, communication skills, and organizational skills.
- ▶ **Salary Range:** \$45,000 to \$115,000 depending on location, level of responsibility, and company revenues.
- ▶ **Career Path:** Start by working for a small company to learn a variety of skills, then gradually move into a management position.

### Thinking Critically

Why is it important for accounting professionals to have strong communication skills?

## Key Concepts

1. The assets of a business can be classified as *current assets* or *plant assets*. Recall that current assets are either consumed or converted to cash during the normal operating cycle, usually one year. Examples are

- cash
- merchandise that will be sold shortly
- supplies such as paper, pencils, and printer toner

Plant assets are long-lived assets used in the production or sale of other assets or services over several accounting periods. Examples are

- computers
- copiers
- cash registers
- manufacturing equipment
- office furniture
- telephone systems
- vehicles used in the business
- the buildings that house the business

2. A plant asset is depreciated so that its cost is spread over its useful life. This spreads the cost over the periods that the asset will be used to generate revenue. This allows the business to conform to the matching principle of accounting, which requires that expenses be matched with the revenues the expenses helped to earn.

Four factors used to calculate the depreciation of an asset are

- its cost
- its estimated useful life
- its estimated disposal value
- the depreciation method used

The estimated useful life of a plant asset is the number of years it is expected to be used before it wears out. Depreciation is an estimate because no one can be certain how long an asset will last.

3. To match the cost of an asset with the revenue it is used to generate during a year, annual straight-line depreciation is calculated:

$$\begin{array}{rcccl}
 \text{Original} & & & & \\
 \text{Cost} & - & \text{Estimated} & = & \text{Amount to} \\
 & & \text{Disposal Value} & & \text{Be Depreciated} \\
 & & & & \downarrow \\
 \text{Amount to} & \div & \text{Estimated} & = & \text{Annual} \\
 \text{Be Depreciated} & & \text{Useful Life} & & \text{Depreciation Expense}
 \end{array}$$

4. To calculate depreciation for part of a year:

$$\text{Annual Depreciation Expense} \times \text{Fraction of Year} = \text{Partial Year Depreciation Expense}$$

5. An asset's book value is its original cost less its accumulated depreciation. To calculate book value:

$$\text{Original Cost} - \text{Accumulated Depreciation} = \text{Book Value}$$

6. To record depreciation:

Depreciation Expense— Description of Asset		Accumulated Depreciation— Description of Asset	
Debit + xx	Credit —	Debit —	Credit + xx

7. When a business purchases a plant asset, it sets up a depreciation schedule for the asset. The amount of depreciation expense for each plant asset is recorded at the end of the year. The schedule typically has a column for each of the following:

- the date
- the asset's cost
- annual depreciation expense
- accumulated depreciation
- book value at the end of each year

## Key Terms

accumulated depreciation	(p. 675)
book value	(p. 675)
depreciation	(p. 671)
disposal value	(p. 672)
plant assets	(p. 670)
straight-line depreciation	(p. 672)



## Check Your Understanding

### 1. Plant Assets

- Explain the meaning of the term *plant asset*.
- Give four examples of plant assets.

### 2. Plant Asset Depreciation

- Depreciation is an application of what accounting principle?
- What distinguishes a plant asset from a current asset?

### 3. Annual Depreciation

- What four factors affect the depreciation calculation?
- How is the annual depreciation expense for a plant asset calculated under the straight-line method?

### 4. Partial-Year Depreciation

- Explain how depreciation for part of a year is calculated.
- What is meant by “allocating the cost” of a plant asset?

### 5. Book Value of Plant Assets

- What is accumulated depreciation?
- How is book value calculated?

### 6. Record Depreciation

- What is the classification of the **Accumulated Depreciation** account?
- Which two accounts are affected by an adjusting entry for depreciation?

### 7. Prepare Depreciation Schedule

- What is the purpose of a depreciation schedule?
- When is the depreciation of a plant asset recorded?

## Apply Key Terms

You have just been hired as the plant accountant for Fast Runner, a large manufacturer of inline skates and skateboards. To do your job well, you must be able to understand and apply accounting procedures for plant assets and depreciation. Your immediate boss is the CEO for Fast Runner, Rob Myers. Rob wants you to define the following terms and give him some examples related to Fast Runner. Pair up with a colleague to discuss each term and find an example. Then write your ideas on a note pad for quick reference during your meeting with Rob. Good luck!

accumulated  
depreciation  
book value

depreciation  
disposal value  
plant assets

straight-line  
depreciation



## Recording Depreciation

### Making the Transition from a Manual to a Computerized System

Task	Manual Methods	Computerized Methods
Recording depreciation	<ul style="list-style-type: none"> <li>Estimated annual depreciation is calculated when a fixed asset is purchased.</li> <li>Each accounting period, an adjusting entry is journalized and posted for each plant asset account in the general ledger.</li> <li>Recording depreciation affects two accounts, <b>Accumulated Depreciation</b> and <b>Depreciation Expense</b>.</li> <li>The <b>Depreciation Expense</b> account is closed at the end of the fiscal year.</li> </ul>	<ul style="list-style-type: none"> <li>Estimated annual depreciation is calculated when a fixed asset is purchased.</li> <li>A depreciation journal entry is recorded for the month's amount. The journal entry can be automatically posted each month as a recurring entry.</li> <li>Amounts are posted to the <b>Depreciation Expense</b> and <b>Accumulated Depreciation</b> accounts. Their balances are automatically updated.</li> </ul>



### Peachtree® Q & A

Peachtree Question	Answer
How do I record depreciation for fixed assets in Peachtree?	<ol style="list-style-type: none"> <li>From the <b>Tasks</b> menu, select <b>General Journal Entry</b>.</li> <li>Enter the transaction to record the depreciation expense for the current period.</li> <li>Select the <b>Recur</b> icon.</li> <li>Select the number of times and how often you want this transaction to recur. (Each month? Each quarter? Each year?)</li> <li>Click <b>OK</b>.</li> </ol>



### QuickBooks Q & A

QuickBooks Question	Answer
How do I record depreciation for fixed assets in QuickBooks?	<ol style="list-style-type: none"> <li>From the <b>Company</b> menu, select <b>Make General Journal Entries</b>.</li> <li>Enter the transaction to record the depreciation expense for the current period.</li> <li>Memorize the recurring entry using <b>Memorize General Journal</b> from the <b>Edit</b> menu.</li> <li>Set the number of times you want the entry to occur and click <b>OK</b>.</li> <li>Click <b>Save &amp; Close</b>.</li> </ol>

For detailed instructions, see your Glencoe Accounting Chapter Study Guides and Working Papers.

# CHAPTER 23

# Problems

Complete problems using:

**Manual** Glencoe  
Working Papers

OR

**Peachtree Complete**  
Accounting Software

OR

**QuickBooks**  
Templates

## Peachtree®

### SMART GUIDE

#### Step-by-Step Instructions: Problem 23-7

1. Select the problem set for InBeat CD Shop (Prob. 23-7).
2. Rename the company and set the system date.
3. Record the depreciation adjusting entries.
4. Print a General Journal report and proof your work.
5. Complete the Analyze activity.
6. End the session.

**TIP:** Use the **General Journal Entry** option to record adjusting entries.

## Peachtree®

### SMART GUIDE

#### Step-by-Step Instructions: Problem 23-8

1. Select the problem set for Shutterbug Cameras (Prob. 23-8).
2. Rename the company and set the system date.
3. Record the adjustments for depreciation using the **General Journal Entry** option.
4. Print a General Journal report and proof your work.
5. Print an Income Statement, a Statement of Retained Earnings, and a Balance Sheet.
6. Complete the Analyze activity.
7. End the session.

## Problem 23-6 Opening a Plant Asset Record

On July 10 Sunset Surfwear purchased a scanner from Taunton Equipment for \$1,500. Taunton Equipment charged Sunset Surfwear \$200 to install the scanner. The scanner has an estimated useful life of four years and an estimated disposal value of \$260.

**Instructions** Prepare a plant asset record, including the depreciation schedule for the new scanner. Use the form provided in your working papers.

Serial number: TMC46312

General ledger account: Office Equipment

Location: Main Street store

Depreciation method: Straight-line

Manufacturer: Brothers Company

### Analyze

Describe how you determined the book value at the end of each period.

## Problem 23-7 Recording Adjusting Entries for Depreciation

The following adjustments for depreciation were entered on the work sheet for InBeat CD Shop for the year ended December 31.

	Adjustments	
	Debit	Credit
Store Equipment		
Accumulated Depreciation—Store Equipment		(e) 3,800
Office Equipment		
Accumulated Depreciation—Office Equipment		(f) 1,400
Depreciation Expense—Store Equipment	(e) 3,800	
Depreciation Expense—Office Equipment	(f) 1,400	

**Instructions** Record the adjusting entries on general journal page 11.

### Analyze

Explain how the adjustment affects the book value of the store equipment.

## Problem 23–8 Reporting Depreciation Expense on the Work Sheet and Financial Statements

The trial balance of Shutterbug Cameras appears on the work sheet included in your working papers. All adjustments, except those for depreciation, are already recorded on the work sheet.

### Instructions

- Record the following adjustments for depreciation expense on the work sheet.
  - Depreciation for office equipment is \$2,500.
  - Depreciation for store equipment is \$1,200.
- Complete the work sheet.
- Prepare an income statement, statement of retained earnings, and balance sheet for Shutterbug Cameras for the year ended December 31.

**Analyze** Calculate the total current assets.

## Problem 23–9 Calculating and Recording Depreciation Expense

Cycle Tech Bicycles purchased manufacturing equipment on August 1 for \$410,000. The equipment has an estimated useful life of 25 years and an estimated disposal value of \$20,000. Cycle Tech uses the straight-line method of depreciation. The partial depreciation schedule found in your working papers is set up for the equipment.

### Instructions

- Calculate annual depreciation, accumulated depreciation, and book value for each of the first two years. The fiscal year ends December 31. Use the form provided in your working papers.
- Calculate the depreciation adjustment to be entered on the work sheet at the end of the first year. Use T accounts to show the accounts debited and credited.
- Journalize the adjustment for depreciation at the end of the first year, general journal page 21.

**Analyze** Determine the balance of the accumulated depreciation account at the end of the first and second years.

## QuickBooks

### PROBLEM GUIDE

#### Step-by-Step Instructions: Problem 23–8

- Restore the Problem 23-8.QBB file.
- Record the adjustments for depreciation using the **Make General Journal Entries** option.
- Print a Journal report and proof your work.
- Print a Profit & Loss report and Balance Sheet.
- Complete the Analyze activity.
- Back up your work.

## Peachtree®

### SMART GUIDE

#### Step-by-Step Instructions: Problem 23–9

- Select the problem set for Cycle Tech Bicycles (Prob. 23–9).
- Rename the company and set the system date.
- Calculate the depreciation for the first two years.
- Record the depreciation adjustment for the first year using the **General Journal Entry** option.
- Print a General Journal report and a General Ledger report for the manufacturing equipment accounts and proof your work.
- Complete the Analyze activity.
- End the session.



## Peachtree®

### SMART GUIDE

#### Step-by-Step Instructions: Problem 23-10

1. Select the problem set for River's Edge Canoe & Kayak (Prob. 23-10).
2. Rename the company and set the system date.
3. Calculate and record the end-of-period adjustments.
4. Print a General Journal report and proof your work.
5. Print an Income Statement and a Balance Sheet.
6. Close the fiscal year.
7. Print a Post-Closing Trial Balance.
8. Complete the Analyze activity.
9. End the session.

### QuickBooks

### PROBLEM GUIDE

#### Step-by-Step Instructions: Problem 23-10

1. Restore the Problem 23-10.QBB file.
2. Calculate and record the end-of-period adjustments.
3. Print a Journal report and proof your work.
4. Print a Profit & Loss report and Balance Sheet.
5. Enter the closing entries and print a Journal report.
6. Print a Post-Closing Trial Balance.
7. Complete the Analyze activity.

## Problem 23-10 Calculating and Recording Adjustments

The December 31 trial balance of Rivers Edge Canoe & Kayak is included in your working papers.

### Instructions

1. Calculate and record end-of-period adjustments on the work sheet.
  - a. Ending **Merchandise Inventory** is \$15,000.
  - b. Supplies on hand total \$1,450.
  - c. The amount of the expired insurance premium is \$5,000.
  - d. Use the following information to calculate the estimated annual depreciation expense using the straight-line method.

Plant Asset	Cost	Estimated Disposal Value	Estimated Useful Life
Store Equipment	\$ 13,000	\$ 1,000	10 years
Delivery Truck	32,000	2,000	10 years
Building	160,000	10,000	25 years

- e. The total federal income tax expense for the year is \$4,250.
2. Complete the work sheet.
  3. Journalize and post the adjusting entries on page 16 of the general journal.
  4. Journalize and post the closing entries on page 16 of the general journal.

### Analyze

Calculate the total depreciation expense for the year.



## Problem 23-11 Examining Depreciation Adjustments

On May 2 Buzz Newsstand purchased a new machine for \$2,700. It has an estimated disposal value of \$100 and an estimated useful life of eight years. Buzz uses the straight-line method.

On December 31 the adjustment for depreciation for the first year was entered: **Accumulated Depreciation—Store Equipment** was credited for \$325, and **Depreciation Expense—Store Equipment** was debited for \$325.

### Instructions

Answer the following questions regarding this adjustment:

1. What is wrong with the adjustment for depreciation made on December 31? What is the correct entry?
2. One year from now, another adjustment for this machine will be entered on the work sheet. Assume the error from the previous year is not corrected. What amount should be entered in the Adjustments section for annual depreciation expense?

### Analyze

Determine whether the current period net income will be too high or too low if the original error is not corrected.

Practice your test-taking skills! The questions on this page are reprinted with permission from national organizations:

- Future Business Leaders of America
- Business Professionals of America

Use a separate sheet of paper to record your answers.



## Future Business Leaders of America

### MULTIPLE CHOICE

1. A truck used in daily operations of a corporation would be considered a(n)
  - a. long-term asset.
  - b. plant asset.
  - c. intangible asset.
  - d. either A or B.
  - e. none of these answers
2. A method that allocates an equal portion of the total depreciation for a plant asset (cost minus salvage) to each accounting period in its service life is
  - a. accelerated depreciation.
  - b. units-of-production.
  - c. straight-line depreciation.
  - d. sum-of-the-years'-digits depreciation.
  - e. declining-balance depreciation.
3. The Crimson Cartage Company purchased a new truck at a cost of \$42,000 on July 1. The truck is estimated to have a useful life of 6 years and a salvage value of \$6,000. Using the straight-line method, how much depreciation expense will be recorded for the truck during the first year ended December 31?
  - a. \$3,000
  - b. \$3,500
  - c. \$4,000
  - d. \$6,000
  - e. \$7,000
4. The adjusting entry for the depreciation of a plant asset such as equipment involves a credit to
  - a. equipment expense.
  - b. accumulated equipment.
  - c. depreciation expense.
  - d. accumulated depreciation.



## Business Professionals of America

### MULTIPLE CHOICE

5. The entry to record depreciation for the fax machine at the end of the fiscal period
  - a. Debit Accumulated Depreciation—Maintenance Equipment, credit Depreciation Expense—Maintenance Equipment
  - b. Debit Depreciation Expense—Maintenance Equipment, credit Accumulated Depreciation—Maintenance Equipment
  - c. Debit Accumulated Depreciation—Office Equipment, credit Depreciation Expense—Office Equipment
  - d. Debit Depreciation Expense—Office Equipment, credit Accumulated Depreciation—Office Equipment

### Need More Help?

Go to [glencoeaccounting.glencoe.com](http://glencoeaccounting.glencoe.com) and click on **Student Center**. Click on **Winning Competitive Events** and select **Chapter 23**.

- Practice Questions and Test-Taking Tips
- Concept Capsules and Terminology



## CRITICAL Thinking

### Plant Assets

1. Name several plant assets that a business might use to sell merchandise.
2. Explain how current assets and plant assets differ.
3. A company purchased plant assets for \$100,000. It expects to sell them in 4 years for 20 percent of the cost. What is the depreciation expense?
4. Classify these assets: land, building, cash, accounts receivable, computer equipment, merchandise inventory, supplies, and prepaid insurance into (a) plant assets or (b) current assets. Identify the assets to be depreciated.
5. Set up the formulas for calculating the amount to be depreciated, the annual depreciation expense, the accumulated depreciation, and book value.
6. Justify crediting the **Accumulated Depreciation** account rather than the **Plant Asset** account when recording depreciation expense.

## CASE STUDY

### Merchandising Business: Photography Studio

Karina Ludmiko is turning her photography hobby into a business called The Photo Studio. She asked you to set up the company's asset records.

#### INSTRUCTIONS

1. Assume that The Photo Studio's photography equipment cost \$25,000, has a 10-year useful life, and no salvage value. Set up a depreciation schedule.
2. Explain to Karina how depreciation appears on the financial statements.

## matter of ETHICS

### Whom Will They Believe?

After working for a year as payroll clerk for a small publishing company, you believe you have evidence of embezzlement—and suspect the department manager or senior accountant. Whom can you tell? Who would believe you?

#### ETHICAL DECISION MAKING

1. What are the ethical issues?
2. What are the alternatives?
3. Who are the affected parties?
4. How do the alternatives affect the parties?
5. What would you do?

## COMMUNICATING ACCOUNTING

### Promoting Technology

As accountant for Playtime Preschool, you want to convince the owner to purchase computers for the children to use. Explain that the company can depreciate the \$10,000 investment and deduct the depreciation on its tax return. With a classmate, brainstorm the four factors affecting the depreciation estimate. List your recommendations and practice presenting them to the owner.

## SKILLS BEYOND NUMBERS

### Acquiring and Evaluating Information

As Westside Wholesale's newly hired manager, you plan for and control its plant assets. One standard you will be measured by is your budget and the controls you use to stay within that budget. Describe the information you will need to prepare a budget for equipment purchases and maintenance. List internal control procedures to help prevent asset loss and theft. Explain how the budget can be used to evaluate your performance.



## Plant Assets

Global companies may use the *revaluation model* allowed by International Accounting Standard 16 to record plant assets. After initially recording an asset at cost, this model revalues an asset at its fair market value less subsequent depreciation, if fair market value can be measured reliably.

**INSTRUCTIONS** Define *fair market value*. How would revaluation affect the income statement?



## Your Vehicle

A vehicle is a valuable asset. The vehicle declines in value each year, but if you keep it properly maintained, it will have a higher resale value when you sell it.

**PERSONAL FINANCE ACTIVITY** Determine the book value of your vehicle. It cost \$20,000. Its value declined \$6,000 in the first year, \$4,000 in the second year, and \$2,500 in the third year.

**PERSONAL FINANCE ONLINE** Log on to [glencoeaccounting.glencoe.com](http://glencoeaccounting.glencoe.com) and click on **Student Center**. Click on **Making It Personal** and select **Chapter 23**.



## Vertical Analysis

Vertical analysis makes it easy to compare financial statements with industry standards, which are average percentages for companies in the same industry. Assume these partial vertical analyses of an income statement and balance sheet are for the pet food and pet supply industry.

### Income Statement Vertical Analysis

Net sales	100.0%
Cost of sales	68.9
Gross profit	31.1%

### Balance Sheet Vertical Analysis

Current assets	34.3%
Property & equipment	49.3
All other assets	16.4
Total assets	100.0%

**INSTRUCTIONS** Use PETsMART's financial statements in Appendix F for these tasks.

1. Complete a vertical analysis of PETsMART's cost of sales and gross profit for the year ended February 1, 2004. Compare them to the industry standards above.
2. Complete a vertical analysis of PETsMART's assets using the classifications above, as of February 1, 2004. Compare PETsMART's asset mix with the industry standard.



## Depreciation

Proper procedures can save time in calculating depreciation. Visit [glencoeaccounting.glencoe.com](http://glencoeaccounting.glencoe.com) and click on **Student Center**. Click on **WebQuest** and select **Unit 5** to continue your Internet project.

