

Intangibles do not usually use a contra asset account like the contra asset account Accumulated Depreciation used for plant assets. Instead, companies record amortization of intangibles as a direct decrease (credit) to the asset account.

Either within the balance sheet or in the notes, companies should disclose the balances of the major classes of assets, such as land, buildings, and equipment, and of accumulated depreciation by major classes or in total. In addition, they should describe the depreciation and amortization methods used and disclose the amount of depreciation and amortization expense for the period.

KEEPING AN EYE ON CASH

Depreciation and amortization expense are among the biggest causes of differences between accrual-accounting net income and net cash provided by operating activities. Depreciation and amortization reduce net income, but they do not use up any cash. Therefore, to determine net cash provided by operating activities, companies add depreciation and amortization back to net income. For example, if a company reported net income of \$175,000 during the year and had depreciation expense of \$40,000, net cash provided by operating activities would be \$215,000 (assuming no other accrual-accounting differences). The operating activities section of Coca-Cola's statement of cash flows reports the following adjustment for depreciation and amortization.



THE COCA-COLA COMPANY

Statement of Cash Flows (partial)

(in millions)

Cash flow from operating activities

Net income	\$6,906
Plus: Depreciation and amortization	1,236

The adjustment for depreciation and amortization was more than twice as big as any other adjustment required to convert net income to net cash provided by operating activities.

It is also interesting to examine the statement of cash flows to determine the amount of property, plant, and equipment a company purchased and the cash it received from property, plant, and equipment sold in a given year. For example, the investing activities section of Coca-Cola reports the following.



THE COCA-COLA COMPANY

Statement of Cash Flows (partial)

(in millions)

Cash flow from investing activities



THE COCA-COLA COMPANY
Statement of Cash Flows (partial)
(in millions)

Acquisitions and investments	\$(2,452)
Purchases of property, plant, and equipment	(1,993)
Proceeds from disposals of property, plant, and equipment	104
Other	192

As indicated, Coca-Cola made significant purchases and sales of property, plant, and equipment. The level of purchases suggests that Coca-Cola believes that it can earn a reasonable rate of return on these assets.



USING

THE DECISION TOOLKIT

Delta Air Lines, Inc., headquartered in Atlanta, Georgia, is one of the largest airlines in the world. It serves 342 destinations in 61 countries.

Instructions

1. What method does the company use to depreciate its aircraft? Over what period is the company depreciating these aircraft?

2.

What type of intangible assets does the company have, and how are they being accounted for?

3.

Compute the company's return on assets ratio, asset turnover ratio, and profit margin ratio for 2011 and 2010. Comment on your results.

(in millions)	<u>2011</u>	<u>2010</u>
Net income (loss)	\$ 854	\$ 593
Net sales	35,115	31,755
Beginning total assets	43,188	43,539
Ending total assets	43,499	43,188

DELTA AIR LINES, INC.

Notes to the Financial Statements (Partial)

Long-Lived Assets

The following table shows our property and equipment:

		<u>December 31,</u>	
(in millions, except for estimated useful life)	<u>Estimated Useful Life</u>	<u>2011</u>	<u>2010</u>
Flight equipment	21–30 years	\$21,001	\$20,312
Ground property and equipment	3–40 years	3,256	3,123

DELTA AIR LINES, INC.

Notes to the Financial Statements (Partial)

Flight and ground equipment under capital leases	Shorter of lease term or estimated useful life	1,127	988
Assets constructed for others	30 years	234	—
Advance payments for equipment		77	48
Less: accumulated depreciation and amortization		<u>(5,472)</u>	<u>(4,164)</u>
Total property and equipment, net		\$20,223	\$20,307

We record property and equipment at cost and depreciate or amortize these assets on a straight-line basis to their estimated residual values over their estimated useful lives.

Goodwill and Other Intangible Assets

Goodwill. As of December 31, 2011 and 2010, our goodwill balance was \$9.8 billion. In evaluating goodwill for impairment, we estimate the fair value of our reporting unit by considering market capitalization and other factors if it is more likely than not that the fair value of our reporting unit is less than its carrying value. If the reporting unit's fair value exceeds its carrying value, no further testing is required. If, however, the reporting unit's carrying value exceeds its fair value, we then determine the amount of the impairment charge, if any. We recognize an impairment charge if the carrying value of the reporting unit's goodwill exceeds its estimated fair value.

Identifiable Intangible Assets. Our identifiable intangible assets had a net carrying amount of \$4.8 billion at December 31, 2011. Indefinite-lived assets are not amortized and consist primarily of routes, slots, the Delta tradename, and assets related to SkyTeam. Definite-lived intangible assets consist primarily of marketing agreements and contracts and are amortized on a straight-line basis or under the undiscounted cash flows method over the estimated economic life of the respective agreements and contracts. Costs incurred to renew or extend the term of an intangible asset are expensed as incurred.

We perform the impairment test for indefinite-lived intangible assets by comparing the asset's fair value to its carrying value.... We recognize an impairment charge if the asset's carrying value exceeds its estimated fair value.

Solution

- 1. The company depreciates property and equipment using the straight-line approach. It depreciates aircraft over a 21–30-year life.
- 2. The company has a goodwill balance of \$9.8 billion which it tests for impairment. It also has other identifiable intangible assets with a carrying value of \$4.8 billion. These include indefinite-life assets such as routes, slots, the Delta tradename, and assets related to SkyTeam. Indefinite-life intangibles are tested for impairment. Definite-life intangibles, including marketing agreements and contracts, are amortized on a straight-line basis or using the undiscounted cash flows method.

$$\text{Return on assets} \quad \frac{\$854}{(\$43,188 + \$43,499) / 2} = 2.0\% \quad \frac{\$593}{(\$43,539 + \$43,188) / 2} = 1.4\%$$

$$\text{Asset turnover} \quad \frac{\$35,115}{(\$43,188 + \$43,499) / 2} = 0.81 \text{ times} \quad \frac{\$31,755}{(\$43,539 + \$43,188) / 2} = 0.73 \text{ times}$$

$$\text{Profit margin} \quad \frac{\$854}{\$35,115} = 2.4\% \quad \frac{\$593}{\$31,755} = 1.9\%$$

Delta's return on assets increased from 2011 to 2010. While its profit margin was low in both years, Delta was able to increase its asset turnover and profit margin. This suggests that its ability to generate sales from its planes and its ability to generate profits from sales both increased.



Summary of Learning Objectives

- **1 Describe how the historical cost principle applies to plant assets.** The cost of plant assets includes all expenditures necessary to acquire the asset and make it ready for its intended use. Once cost is established, a company uses that amount as the basis of accounting for the plant asset over its useful life.
- **2 Explain the concept of depreciation.** Depreciation is the process of allocating to expense the cost of a plant asset over its useful (service) life in a rational and systematic manner. Depreciation is not a process of valuation, and it is not a process that results in an accumulation of cash. Depreciation reflects an asset's decreasing usefulness and revenue-producing ability, resulting from wear and tear and from obsolescence.
- **3 Compute periodic depreciation using the straight-line method, and contrast its expense pattern with**

those of other methods. The formula for straight-line depreciation is: $\frac{\text{Cost} - \text{Salvage value}}{\text{Useful life (in years)}}$ The expense patterns of the three depreciation methods are as follows.

<u>Method</u>	<u>Annual Depreciation Pattern</u>
Straight-line	Constant amount
Declining-balance	Decreasing amount
Units-of-activity	Varying amount

- **4 Describe the procedure for revising periodic depreciation.** Companies make revisions of periodic depreciation in present and future periods, not retroactively.

PRINTED BY: jromer00950@email.pbrent.edu. Printing is for personal, private use only. No part of this book may be reproduced or transmitted without publisher's prior permission. Violators will be prosecuted.

• **5 Explain how to account for the disposal of plant assets.** The procedure for accounting for the disposal of a plant asset through sale or retirement is: (a) Eliminate the book value of the plant asset at the date of disposal. (b) Record cash proceeds, if any. (c) Account for the difference between the book value and the cash proceeds as a gain or a loss on disposal.

- **6 Describe methods for evaluating the use of plant assets.** Plant assets may be analyzed using return on assets and asset turnover. Return on assets consists of two components: asset turnover and profit margin.
- **7 Identify the basic issues related to reporting intangible assets.** Companies report intangible assets at their cost less any amounts amortized. If an intangible asset has a limited life, its cost should be allocated (amortized) over its useful life. Intangible assets with indefinite lives should not be amortized.
- **8 Indicate how long-lived assets are reported in the financial statements.** Companies usually show plant assets under "Property, plant, and equipment"; they show intangibles separately under "Intangible assets." Either within the balance sheet or in the notes, companies disclose the balances of the major classes of assets, such as land, buildings, and equipment, and accumulated depreciation by major classes or in total. They describe the depreciation and amortization methods used, and disclose the amount of depreciation and amortization expense for the period. In the statement of cash flows, depreciation and amortization expense are added back to net income to determine net cash provided by operating activities. The investing section reports cash paid or received to purchase or sell property, plant, and equipment.



DECISION TOOLKIT *A SUMMARY*

DECISION CHECKPOINTS	INFO NEEDED FOR DECISION	TOOL TO USE FOR DECISION	HOW TO EVALUATE RESULTS
-------------------------	-----------------------------	--------------------------	----------------------------

Is the company using its assets effectively?	Net income and average assets	$\text{Return on assets} = \frac{\text{Net income}}{\text{Average total assets}}$	Higher value suggests favorable efficiency (use of assets).
How effective is the company at generating sales from its assets?	Net sales and average total assets	$\text{Asset turnover} = \frac{\text{Net income}}{\text{Average total assets}}$	Indicates the sales dollars generated per dollar of assets. A high value suggests the company is effective in using its resources to generate sales.
Is the company's amortization of intangibles reasonable?	Estimated useful life of intangibles from notes to financial statements of this company and its competitors	If the company's estimated useful life significantly exceeds that of competitors or does not seem reasonable in light of the circumstances, the reason for the difference should be investigated.	Too high an estimated useful life will result in understating amortization expense and overstating net income.

Appendix 9A: Calculation of Depreciation Using Other Methods

LEARNING OBJECTIVE 9

Compute periodic depreciation using the declining-balance method and the units-of-activity method.

In this appendix, we show the calculations of the depreciation expense amounts that we used in the chapter for the declining-balance and units-of-activity methods.

DECLINING-BALANCE

The **declining-balance method** produces a decreasing annual depreciation expense over the useful life of the asset. The method is so named because the computation of periodic depreciation is based on a **declining book value** (cost less accumulated depreciation) of the asset. Annual depreciation expense is computed by multiplying the book value at the beginning of the year by the declining-balance depreciation rate. **The depreciation rate remains constant from year to year, but the book value to which the rate is applied declines each year.**

Book value for the first year is the cost of the asset because the balance in accumulated depreciation at the beginning of the asset's useful life is zero. In subsequent years, book value is the difference between cost and accumulated depreciation at the beginning of the year. **Unlike other depreciation methods, the declining-balance method ignores salvage value in determining the amount to which the declining-balance rate is applied.** Salvage value, however, does limit the total depreciation that can be taken. Depreciation stops when the asset's book value equals its expected salvage value.

Helpful Hint

The straight-line rate is approximated as $1 \div \text{Estimated life}$. In this case, it is $1 \div 5 = 20\%$.

As noted in the chapter, a common declining-balance rate is double the straight-line rate—the **double-declining-balance method**. If Bill's Pizzas uses the double-declining-balance method, the depreciation rate is 40% ($2 \times$ the

PRINTED BY: jromero00956@email.phoenix.edu. Printing is for personal, private use only. No part of this book may be reproduced or transmitted without publisher's prior permission. Violators will be prosecuted.

Illustration 9A-1: Formula for declining-balance method

$$\text{Book Value at Beginning of Year} \times \text{Declining-Balance Rate} = \text{Depreciation Expense}$$

$$\$13,000 \times 40\% = \$5,200$$

[Illustration 9A-2](#) presents the depreciation schedule under this method.

Illustration 9A-2: Double-declining-balance depreciation schedule

BILL'S PIZZAS

Computation					End of Year		
Year	Book Value Beginning of Year	×	Depreciation Rate	=	Annual Depreciation Expense	Accumulated Depreciation	Book Value
2014	\$13,000		40%		\$5,200	\$ 5,200	\$7,800*
2015	7,800		40		3,120	8,320	4,680
2016	4,680		40		1,872	10,192	2,808
2017	2,808		40		1,123	11,315	1,685
2018	1,685		40		685 **	12,000	1,000

*

$$\$13,000 - \$5,200$$

Computation of \$674 ($\$1,685 \times 40\%$) is adjusted to \$685 in order for book value to equal salvage value.

Helpful Hint

Depreciation stops when the asset's book value equals its expected salvage value.

PRINTED BY: jromero0956@gmail.com, phoenix.edu. Printing is for personal, private use only. No part of this book may be reproduced or transmitted without publisher's prior permission. Violators will be prosecuted.

The delivery equipment is 68% depreciated ($\$8,320 \div \$12,000$) at the end of the second year. Under the straight-line method, it would be depreciated 40% ($\$4,800 \div \$12,000$) at that time. Because the declining-balance method produces higher depreciation expense in the early years than in the later years, it is considered an **accelerated-depreciation method**.

The declining-balance method is compatible with the expense recognition principle. It matches the higher depreciation expense in early years with the higher benefits received in these years. Conversely, it recognizes lower depreciation expense in later years when the asset's contribution to revenue is less. Also, some assets lose their usefulness rapidly because of obsolescence. In these cases, the declining-balance method provides a more appropriate depreciation amount.

When an asset is purchased during the year, it is necessary to prorate the declining-balance depreciation in the first year on a time basis. For example, if Bill's Pizzas had purchased the delivery equipment on April 1, 2014,

depreciation for 2014 would be $\$3,900 (\$13,000 \times 40\% \times \frac{9}{12})$. The book value for computing depreciation in 2015 then becomes $\$9,100 (\$13,000 - \$3,900)$, and the 2015 depreciation is $\$3,640 (\$9,100 \times 40\%)$.

UNITS-OF-ACTIVITY

Under the **units-of-activity method**, useful life is expressed in terms of the total units of production or use expected from the asset. The units-of-activity method is ideally suited to equipment whose activity can be measured in units of output, miles driven, or hours in use. The units-of-activity method is generally not suitable for assets for which depreciation is a function more of time than of use.

Alternative Terminology

Another term often used is the *units-of-production method*.

To use this method, a company estimates the total units of activity for the entire useful life and divides that amount into the depreciable cost to determine the depreciation cost per unit. It then multiplies the depreciation cost per unit by the units of activity during the year to find the annual depreciation for that year.

To illustrate, assume that Bill's Pizzas estimates it will drive its new delivery truck 15,000 miles in the first year. [Illustration 9A-3](#) presents the formula and computation of depreciation expense in the first year.

Illustration 9A-3: Formula for units-of-activity method

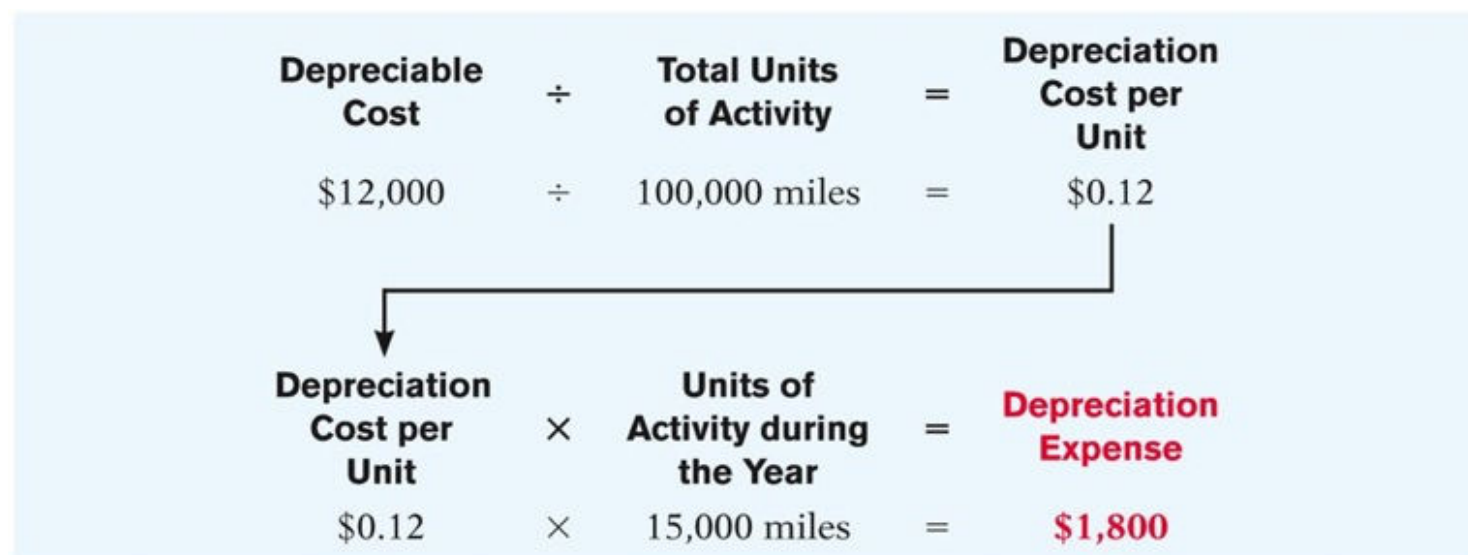


Illustration 9A-4: Units-of-activity depreciation schedule

BILL'S PIZZAS

Computation					End of Year		
Year	Units of Activity	×	Depreciation Cost/Unit	=	Annual Depreciation Expense	Accumulated Depreciation	Book Value
2014	15,000		\$0.12		\$1,800	\$ 1,800	\$11,200*
2015	30,000		0.12		3,600	5,400	7,600
2016	20,000		0.12		2,400	7,800	5,200
2017	25,000		0.12		3,000	10,800	2,200
2018	10,000		0.12		1,200	12,000	1,000

*

\$13,000 – \$1,800

Helpful Hint

Depreciation stops when the asset's book value equals its expected salvage value.

The units-of-activity method is not nearly as popular as the straight-line method, primarily because it is often difficult to make a reasonable estimate of total activity. However, this method is used by some very large companies, such as **Standard Oil Company of California** and **Boise Cascade Corporation**. When the productivity of the asset varies significantly from one period to another, the units-of-activity method results in the best matching of expenses with revenues.

This method is easy to apply when assets are purchased during the year. In such a case, companies use the productivity of the asset for the partial year in computing the depreciation.

Summary of Learning Objective for Appendix 9A

- **9 Compute periodic depreciation using the declining-balance method and the units-of-activity method.**

The depreciation expense calculation for each of these methods is:

- **Declining-balance:** $\text{Book value at beginning of year} \times \text{Declining-balance rate} = \text{Depreciation expense}$

PRINTED BY: jromero094 Depreciable cost $\div$ Total units of activity = Depreciation cost per unit
book may be reproduced or Depreciation cost per unit $\times$ Units of activity during year = Depreciation expense
o **Units-of-activity:**

Glossary

Accelerated-depreciation method

(p. 456) A depreciation method that produces higher depreciation expense in the early years than the straight-line approach.

Additions and improvements

(p. 460) Costs incurred to increase the operating efficiency, productive capacity, or expected useful life of a plant asset.

Amortization

(p. 468) The process of allocating to expense the cost of an intangible asset.

Asset turnover

(p. 465) Indicates how efficiently a company uses its assets to generate sales; calculated as net sales divided by average total assets.

Capital expenditures

(p. 449) Expenditures that increase the company's investment in plant assets.

Capital lease

(p. 452) A contractual agreement allowing one party (the lessee) to use another party's asset (the lessor); accounted for like a debt-financed purchase by the lessee.

Cash equivalent price

(p. 449) An amount equal to the fair value of the asset given up or the fair value of the asset received, whichever is more clearly determinable.

Copyright

(p. 470) An exclusive right granted by the federal government allowing the owner to reproduce and sell an artistic or published work.

Declining-balance method

(pp. 456, 476) A depreciation method that applies a constant rate to the declining book value of the asset and produces a decreasing annual depreciation expense over the asset's useful life.

Depreciable cost

(p. 455) The cost of a plant asset less its salvage value.

Depreciation

(p. 453) The process of allocating to expense the cost of a plant asset over its useful life in a rational and systematic manner.

PRINTED BY: jromero0950@email.phoenix.edu. Printing is for personal, private use only. No part of this book may be reproduced or transmitted without publisher's prior permission. Violators will be prosecuted.
(p. 470) A contractual arrangement under which the franchisor grants the franchisee the right to sell certain products, to perform specific services, or to use certain trademarks or trade names, usually within a designated geographic area.

Goodwill

(p. 471) The value of all favorable attributes that relate to a company that are not attributable to any other specific asset.

Impairment

(p. 461) A permanent decline in the fair value of an asset.

Intangible assets

(p. 467) Rights, privileges, and competitive advantages that result from the ownership of long-lived assets that do not possess physical substance.

Lessee

(p. 452) A party that has made contractual arrangements to use another party's asset for a period at an agreed price.

Lessor

(p. 452) A party that has agreed contractually to let another party use its asset for a period at an agreed price.

Operating lease

(p. 452) A contractual agreement allowing one party (the lessee) to use the asset of another party (the lessor); accounted for as a rental by the lessee.

Ordinary repairs

(p. 460) Expenditures to maintain the operating efficiency and expected productive life of the asset.

Patent

(p. 469) An exclusive right issued by the U.S. Patent Office that enables the recipient to manufacture, sell, or otherwise control an invention for a period of 20 years from the date of the grant.

Plant assets

(p. 448) Resources that have physical substance, are used in the operations of the business, and are not intended for sale to customers.

Research and development costs

(p. 469) Expenditures that may lead to patents, copyrights, new processes, and new products; must be expensed as incurred.

Return on assets

(p. 464) A profitability measure that indicates the amount of net income generated by each dollar of assets; computed as net income divided by average assets.

Revenue expenditures

Straight-line method

(p. 455) A method in which companies expense an equal amount of depreciation for each year of the asset's useful life.

Trademark (trade name)

(p. 470) A word, phrase, jingle, or symbol that distinguishes or identifies a particular enterprise or product.

Units-of-activity method

(pp. 456, 477) A depreciation method in which useful life is expressed in terms of the total units of production or use expected from the asset.

Comprehensive 1

DuPage Company purchased a factory machine at a cost of \$18,000 on January 1, 2014. DuPage expected the machine to have a salvage value of \$2,000 at the end of its 4-year useful life.

Instructions

Prepare a depreciation schedule using the straight-line method.

Action Plan

- Under the straight-line method, apply the depreciation rate to depreciable cost.

Solution to Comprehensive 1

DUPAGE COMPANY

Depreciation Schedule—Straight-Line Method

Computation				End of Year	
Year	Depreciable Cost (a)	Depreciation Rate (b)	Annual Depreciation Expense	Accumulated Depreciation	Book Value (c)
2014	\$16,000	25%	\$4,000	\$ 4,000	\$14,000
2015	16,000	25	4,000	8,000	10,000

DUPAGE COMPANY

Depreciation Schedule—Straight-Line Method

Computation				End of Year	
Year	Depreciable Cost (a)	× Depreciation Rate (b)	= Annual Depreciation Expense	Accumulated Depreciation	Book Value (c)
2016	16,000	25	4,000	12,000	6,000
2017	16,000	25	4,000	16,000	2,000

(a) $\$18,000 - \$2,000$ (b) $\frac{1}{4} = 25\%$ (c) Cost less accumulated depreciation.



Comprehensive **Do it!** 2

On January 1, 2011, Skyline Limousine Co. purchased a limousine at an acquisition cost of \$28,000. Skyline depreciated the vehicle by the straight-line method using a 4-year service life and a \$4,000 salvage value. The company's fiscal year ends on December 31.

Instructions

Prepare the journal entry or entries to record the disposal of the limousine, assuming that it was:

- (a) Retired and scrapped with no salvage value on January 1, 2015.
- (b) Sold for \$5,000 on July 1, 2014.

Action Plan

- Calculate accumulated depreciation (Depreciation expense per year × Years in use).
- At the time of disposal, determine the book value of the asset.
- Recognize any gain or loss from disposal of the asset.

Solution to Comprehensive **Do it!** 2

Jan. 1, Accumulated Depreciation—Equipment 24,000*

2015 Loss on Disposal of Plant Assets 4,000

Equipment 28,000

(To record retirement of limousine)

*

$$((\$28,000 - \$4,000) \div 4) \times 4$$

o (b)

July 1, Depreciation Expense 3,000*

2014 Accumulated Depreciation—Equipment 3,000

(To record depreciation to date of disposal)

*

$$((\$28,000 - \$4,000) \div 4) \times \frac{1}{2}$$

Cash 5,000

Accumulated Depreciation—Equipment 21,000*

Loss on Disposal of Plant Assets 2,000

Equipment 28,000

(To record sale of limousine)

*

$$((\$28,000 - \$4,000) \div 4) \times 3.5$$



ro0950@email.phoenix.edu. Printing is for personal, private use only. No part of this
ed or transmitted without publisher's prior permission. Violators will be prosecuted.



- Self-Test, Brief Exercises, Exercises, Problem Set A, and many more resources are available for practice in WileyPLUS.

Note: All Questions, Exercises, and Problems marked with an asterisk relate to material in the appendix to the chapter.

Self-Test Questions

Answers are on [page 500](#).

1.

Corrieten Company purchased equipment and incurred these costs:

(LO 1)

Cash price	\$24,000
Sales taxes	1,200
Insurance during transit	200
Installation and testing	<u>400</u>
Total costs	\$25,800

What amount should be recorded as the cost of the equipment?

- (a) \$24,000.
- (b) \$25,200.
- (c) \$25,400.
- (d) \$25,800.

2.



Harrington Corporation recently leased a number of trucks from Andre Corporation. In inspecting the books of Harrington Corporation, you notice that the trucks have not been recorded as assets on its balance sheet. From this, you can conclude that Harrington is accounting for this transaction as a/an:

(LO 1)

- (a) operating lease.
- (b) capital lease.
- (c) purchase.
- (d) None of the above.

3.

Depreciation is a process of:

(LO 2)

- (a) valuation.
- (b) cost allocation.
- (c) cash accumulation.
- (d) appraisal.

4.

Cuso Company purchased equipment on January 1, 2013, at a total invoice cost of \$400,000. The equipment has an estimated salvage value of \$10,000 and an estimated useful life of 5 years. What is the amount of accumulated depreciation at December 31, 2014, if the straight-line method of depreciation is used?

(LO 3)

- (a) \$80,000.
- (b) \$160,000.
- (c) \$78,000.
- (d) \$156,000.

5.



A company would minimize its depreciation expense in the first year of owning an asset if it used:

(LO 3)

- (a) a high estimated life, a high salvage value, and declining-balance depreciation.
- (b) a low estimated life, a high salvage value, and straight-line depreciation.
- (c) a high estimated life, a high salvage value, and straight-line depreciation.
- (d) a low estimated life, a low salvage value, and declining-balance depreciation.

6.

When there is a change in estimated depreciation:

(LO 4)

- (a) previous depreciation should be corrected.
- (b) current and future years' depreciation should be revised.
- (c) only future years' depreciation should be revised.
- (d) None of the above.

7.

Able Towing Company purchased a tow truck for \$60,000 on January 1, 2014. It was originally depreciated on a straight-line basis over 10 years with an assumed salvage value of \$12,000. On December 31, 2016, before adjusting entries had been made, the company decided to change the remaining estimated life to 4 years (including 2016) and the salvage value to \$2,000. What was the depreciation expense for 2016?

(LO 4)

PRINTED BY: jromero0950@email.phoenix.edu. Printing is for personal, private use only. No part of this book may be reproduced or transmitted without publisher's prior permission. Violators will be prosecuted.

- (a) \$6,000.
- (b) \$4,800.
- (c) \$15,000.
- (d) \$12,100.

8.

Additions to plant assets:

(LO 4)

- (a) decrease liabilities.
- (b) increase a repair expense account.
- (c) increase a purchases account.
- (d) are capital expenditures.

9.

Bennie Razor Company has decided to sell one of its old manufacturing machines on June 30, 2014. The machine was purchased for \$80,000 on January 1, 2010, and was depreciated on a straight-line basis for 10 years assuming no salvage value. If the machine was sold for \$26,000, what was the amount of the gain or loss recorded at the time of the sale?

(LO 5)

- (a) \$18,000 loss.
- (b) \$54,000 loss.
- (c) \$22,000 gain.
- (d) \$46,000 gain.

10.

Which of the following measures provides an indication of how efficient a company is in employing its assets?

(LO 6)

- (a) Current ratio.
- (b) Profit margin.
- (c) Debt to assets ratio.
- (d) Asset turnover.

11.

Lake Coffee Company reported net sales of \$180,000, net income of \$54,000, beginning total assets of \$200,000, and ending total assets of \$300,000. What was the company's asset turnover?

(LO 6)

- (a) 0.90
- (b) 0.20
- (c) 0.72
- (d) 1.39

12.

Pierce Company incurred \$150,000 of research and development costs in its laboratory to develop a new product. It spent \$20,000 in legal fees for a patent granted on January 2, 2014. On July 31, 2014, Pierce paid \$15,000 for legal fees in a successful defense of the patent. What is the total amount that should be debited to Patents through July 31, 2014?

(LO 7)

- (a) \$150,000.
- (b) \$35,000.
- (c) \$185,000.
- (d) Some other amount.

13.

Indicate which one of these statements is **true**.

(LO 7)

- (a) Since intangible assets lack physical substance, they need to be disclosed only in the notes to the financial statements.
- (b) Goodwill should be reported as a contra account in the stockholders' equity section.
- (c) Totals of major classes of assets can be shown in the balance sheet, with asset details disclosed in the notes to the financial statements.
- (d) Intangible assets are typically combined with plant assets and inventory and then shown in the property, plant, and equipment section.

14.

If a company reports goodwill as an intangible asset on its books, what is the one thing you know with certainty?

(LO 7)

- (a) The company is a valuable company worth investing in.
- (b) The company has a well-established brand name.
- (c) The company purchased another company.
- (d) The goodwill will generate a lot of positive business for the company for many years to come.

15.

Which of the following statements is **false**?

(LO 7)

- (a) If an intangible asset has a finite life, it should be amortized.
- (b) The amortization period of an intangible asset can exceed 20 years.
- (c) Goodwill is recorded only when a business is purchased.
- (d) Research and development costs are expensed when incurred, except when the research and development expenditures result in a successful patent.

*16.

Kant Enterprises purchased a truck for \$11,000 on January 1, 2013. The truck will have an estimated salvage value of \$1,000 at the end of 5 years. If you use the units-of-activity method, the balance in accumulated depreciation at December 31, 2014, can be computed by the following formula:

(LO 9)

- (a) $(\$11,000 \div \text{Total estimated activity}) \times \text{Units of activity for 2014}$.

Go to the book's companion website, www.wiley.com/college/kimmel, to access additional Self-Test Questions.



Questions

1.

Mrs. Betancourt is uncertain about how the historical cost principle applies to plant assets. Explain the principle to Mrs. Betancourt.

2.

How is the cost for a plant asset measured in a cash transaction? In a noncash transaction?

3.

Carington Company acquires the land and building owned by Ankiel Company. What types of costs may be incurred to make the asset ready for its intended use if Carington Company wants to use only the land? If it wants to use both the land and the building?

4.



Malor Inc. needs to upgrade its diagnostic equipment. At the time of purchase, Malor had expected the equipment to last 8 years. Unfortunately, it was obsolete after only 4 years. Ronald Nolan, CFO of Malor Inc., is considering leasing new equipment rather than buying it. What are the potential benefits of leasing?

5.

In a recent newspaper release, the president of Ferguson Company asserted that something has to be done about depreciation. The president said, "Depreciation does not come close to accumulating the cash needed to replace the asset at the end of its useful life." What is your response to the president?

6.

Adriana is studying for the next accounting examination. She asks your help on two questions: (a) What is salvage value? (b) How is salvage value used in determining depreciable cost under the straight-line method? Answer Adriana's questions.

7.



Contrast the straight-line method and the units-of-activity method in relation to (a) useful life and (b) the pattern of periodic depreciation over useful life.

8.



9.

In the fourth year of an asset's 5-year useful life, the company decides that the asset will have a 6-year service life. How should the revision of depreciation be recorded? Why?

10.

Distinguish between ordinary repairs and capital expenditures during an asset's useful life.

11.

How is a gain or a loss on the sale of a plant asset computed?

12.

Lakeland Corporation owns a machine that is fully depreciated but is still being used. How should Lakeland account for this asset and report it in the financial statements?

13.



What does Tootsie Roll use as the estimated useful life on its buildings? On its machinery and equipment?

14.

What are the similarities and differences between depreciation and amortization?

15.



During a recent management meeting, David Bryce, director of marketing, proposed that the company begin capitalizing its marketing expenditures as goodwill. In his words, "Marketing expenditures create goodwill for the company which benefits the company for multiple periods. Therefore it doesn't make good sense to have to expense it as it is incurred. Besides, if we capitalize it as goodwill, we won't have to amortize it, and this will boost reported income." Discuss the merits of David's proposal.

16.

Berwik Company hires an accounting intern who says that intangible assets should always be amortized over their legal lives. Is the intern correct? Explain.

17.

Goodwill has been defined as the value of all favorable attributes that relate to a business enterprise. What types of attributes could result in goodwill?

18.

Megan Keen, a business major, is working on a case problem for one of her classes. In this case problem, the company needs to raise cash to market a new product it developed. Jeff Denton, an engineering major, takes one look at the company's balance sheet and says, "This company has an awful lot of goodwill. Why don't you recommend that they sell some of it to raise cash?" How should Megan respond to Jeff?

Under what conditions is goodwill recorded? What is the proper accounting treatment for amortizing goodwill?

20.

Often research and development costs provide companies with benefits that last a number of years. (For example, these costs can lead to the development of a patent that will increase the company's income for many years.) However, generally accepted accounting principles require that such costs be recorded as an expense when incurred. Why?

21.

 Suppose in 2014, **Campbell Soup Company** reported average total assets of \$6,265 million, net sales of \$7,586 million, and net income of \$736 million. What was Campbell Soup's return on assets?

22.

 Diane Carey, a marketing executive for Fresh Views Inc., has proposed expanding its product line of framed graphic art by producing a line of lower-quality products. These would require less processing by the company and would provide a lower profit margin. Joe Moreb, the company's CFO, is concerned that this new product line would reduce the company's return on assets. Discuss the potential effect on return on assets that this product might have.

23.

  Give an example of an industry that would be characterized by (a) a high asset turnover and a low profit margin, and (b) a low asset turnover and a high profit margin.

24.

 Gooden Corporation and Perron Corporation operate in the same industry. Gooden uses the straight-line method to account for depreciation, whereas Perron uses an accelerated method. Explain what complications might arise in trying to compare the results of these two companies.

25.

  Garcia Corporation uses straight-line depreciation for financial reporting purposes but an accelerated method for tax purposes. Is it acceptable to use different methods for the two purposes? What is Garcia Corporation's motivation for doing this?

26.

 You are comparing two companies in the same industry. You have determined that Leslie Corp. depreciates its plant assets over a 40-year life, whereas Camby Corp. depreciates its plant assets over a 20-year life. Discuss the implications this has for comparing the results of the two companies.

27.

Brief Exercises

BE9-1 These expenditures were incurred by Dunston Company in purchasing land: cash price \$60,000; accrued taxes \$5,000; attorney's fees \$2,100; real estate broker's commission \$3,300; and clearing and grading \$3,500. What is the cost of the land?

Determine the cost of land.

(LO 1), AP

BE9-2 Tolbert Company incurs these expenditures in purchasing a truck: cash price \$24,000; accident insurance (during use) \$2,000; sales taxes \$1,080; motor vehicle license \$300; and painting and lettering \$1,700. What is the cost of the truck?

Determine the cost of a truck.

(LO 1), AP

BE9-3 Howe Chemicals Company acquires a delivery truck at a cost of \$31,000 on January 1, 2014. The truck is expected to have a salvage value of \$4,000 at the end of its 4-year useful life. Compute annual depreciation for the first and second years using the straight-line method.

Compute straight-line depreciation.

(LO 3), AP

BE9-4 Iris Company purchased land and a building on January 1, 2014. Management's best estimate of the value of the land was \$100,000 and of the building \$250,000. However, management told the accounting department to record the land at \$230,000 and the building at \$120,000. The building is being depreciated on a straight-line basis over 20 years with no salvage value. Why do you suppose management requested this accounting treatment? Is it ethical?

Compute depreciation and evaluate treatment.

(LO 3), AN

BE9-5 On January 1, 2014, the Ferman Company ledger shows Equipment \$36,000 and Accumulated Depreciation \$13,600. The depreciation resulted from using the straight-line method with a useful life of 10 years and a salvage value of \$2,000. On this date, the company concludes that the equipment has a remaining useful life of only 2 years with the same salvage value. Compute the revised annual depreciation.

Compute revised depreciation.

(LO 4), AP

BE9-6 Harmon Company had the following two transactions related to its delivery truck.

- 1. Paid \$38 for an oil change.
- 2. Paid \$400 to install special shelving units, which increase the operating efficiency of the truck.

Prepare entries for delivery truck costs.

(LO 4), AP

Prepare Harmon's journal entries to record these two transactions.

BE9-7 Prepare journal entries to record these transactions: (a) Rangel Company retires its delivery equipment, which cost \$41,000. Accumulated depreciation is also \$41,000 on this delivery equipment. No salvage value is received. (b) Assume the same information as in part (a), except that accumulated depreciation for the equipment is \$37,200 instead of \$41,000.

Journalize entries for disposal of plant assets.

(LO 5), AP

BE9-8 Quinn Company sells office equipment on July 31, 2014, for \$21,000 cash. The office equipment originally cost \$72,000 and as of January 1, 2014, had accumulated depreciation of \$42,000. Depreciation for the first 7 months of 2014 is \$4,600. Prepare the journal entries to (a) update depreciation to July 31, 2014, and (b) record the sale of the equipment.

Journalize entries for sale of plant assets.

(LO 5), AP

BE9-9 Suppose in its 2014 annual report, **McDonald's Corporation** reports beginning total assets of \$28.46 billion; ending total assets of \$30.22 billion; net sales of \$22.74 billion; and net income of \$4.55 billion.

Compute return on assets and asset turnover.

(LO 6), AP 

- (a) Compute McDonald's return on assets.
- (b) Compute McDonald's asset turnover.

BE9-10 Downs Company purchases a patent for \$156,000 on January 2, 2014. Its estimated useful life is 6 years.

Account for intangibles—patents.

(LO 7), AP

- (a) Prepare the journal entry to record amortization expense for the first year.
- (b) Show how this patent is reported on the balance sheet at the end of the first year.

BE9-11 Suppose **Nike, Inc.** reported the following plant assets and intangible assets for the year ended May 31, 2014 (in millions): other plant assets \$965.8; land \$221.6; patents and trademarks (at cost) \$515.1; machinery and equipment \$2,094.3; buildings \$974.0; goodwill (at cost) \$193.5; accumulated amortization \$47.7; and accumulated depreciation \$2,298.0. Prepare a partial balance sheet for Nike for these items.

Classification of long-lived assets on balance sheet.

(LO 8), AP

BE9-12 Gant Company reported net income of \$157,000. It reported depreciation expense of \$12,000 and accumulated depreciation of \$47,000. Amortization expense was \$8,000. Gant purchased new equipment during the year for \$50,000. Show how this information would be used to determine net cash provided by operating activities.

Determine net cash provided by operating activities.

(LO 8), AP

***BE9-13** Depreciation information for Howe Chemicals Company is given in BE9-3. Assuming the declining-balance depreciation rate is double the straight-line rate, compute annual depreciation for the first and second years under the declining-balance method.

Compute declining-balance depreciation.

PRINTED BY: jromero0950@email.phoenix.edu. Printing is for personal, private use only. No part of this book may be reproduced or transmitted without publisher's prior permission. Violators will be prosecuted.
(LO 9), AP

***BE9-14** Speedy Taxi Service uses the units-of-activity method in computing depreciation on its taxicabs. Each cab is expected to be driven 150,000 miles. Taxi 10 cost \$27,500 and is expected to have a salvage value of \$500. Taxi 10 was driven 32,000 miles in 2013 and 33,000 miles in 2014. Compute the depreciation for each year.

Compute depreciation using units-of-activity method.

(LO 9), AP

Do it! Review

Do it! **9-1** Shellhammer Company purchased a delivery truck. The total cash payment was \$30,020, including the following items.

Explain accounting for cost of plant assets

(LO 1), C

Negotiated purchase price	\$24,000
Installation of special shelving	1,100
Painting and lettering	900
Motor vehicle license	180
Annual insurance policy	2,400
Sales tax	<u>1,440</u>
Total paid	\$30,020

Explain how each of these costs would be accounted for.

Do it! **9-2** On January 1, 2014, Wolf Creek Country Club purchased a new riding mower for \$15,000. The mower is expected to have a 10-year life with a \$1,000 salvage value. What journal entry would Wolf Creek make on December 31, 2014, if it uses straight-line depreciation?

Calculate depreciation expense and make journal entry.

(LO 3), AP

Do it!

BY: jromero0950@email.phoenix.edu. Printing is for personal, private use only. No part of this document may be reproduced or transmitted without publisher's prior permission. Violators will be prosecuted.
E9-2 Produced Corporation purchased a piece of equipment for \$10,000. The equipment was depreciated over 10 years with a \$2,000 salvage value. At the end of year four (before the depreciation adjustment), it estimated the new total life to be 10 years and the new salvage value to be \$4,000. Compute the revised depreciation.

Calculated revised depreciation

(LO 4), AP

Do it!

9-4 Thornton Company has an old factory machine that cost \$50,000. The machine has accumulated depreciation of \$28,000. Thornton has decided to sell the machine.

Make journal entries to record plant asset disposal.

(LO 5), AP

- (a) What entry would Thornton make to record the sale of the machine for \$25,000 cash?
- (b) What entry would Thornton make to record the sale of the machine for \$15,000 cash?

Do it!

9-5 Match the statement with the term most directly associated with it.

Match intangible assets with concepts.

(LO 7), C

- Goodwill Intangible assets Research and development costs Amortization Franchise
- 1. _____ Rights, privileges, and competitive advantages that result from the ownership of long-lived assets that do not possess physical substance.
- 2. _____ The allocation of the cost of an intangible asset to expense in a rational and systematic manner.
- 3. _____ A right to sell certain products or services, or use certain trademarks or trade names within a designated geographic area.
- 4. _____ Costs incurred by a company that often lead to patents or new products. These costs must be expensed as incurred.
- 5. _____ The excess of the cost of a company over the fair value of the net assets required.

Exercises

E9-1 The following expenditures relating to plant assets were made by Watkins Company during the first 2 months of 2014.

Determine cost of plant acquisitions.

(LO 1), C

- 1. Paid \$7,000 of accrued taxes at the time the plant site was acquired.
- 2. Paid \$200 insurance to cover a possible accident loss on new factory machinery while the machinery was in transit.
- 3. Paid \$850 sales taxes on a new delivery truck.
- 4. Paid \$21,000 for parking lots and driveways on the new plant site.
- 5. Paid \$250 to have the company name and slogan painted on the new delivery truck.
- 6. Paid \$8,000 for installation of new factory machinery.
- 7. Paid \$900 for a 1-year accident insurance policy on the new delivery truck.

- (a)  Explain the application of the historical cost principle in determining the acquisition cost of plant assets.
- (b) List the numbers of the transactions, and opposite each indicate the account title to which each expenditure should be debited.

E9-2 Petrino Company incurred the following costs.

Determine property, plant, and equipment costs.

(LO 1), C

1. Sales tax on factory machinery purchased	\$ 5,000
2. Painting of and lettering on truck immediately upon purchase	700
3. Installation and testing of factory machinery	2,000
4. Real estate broker's commission on land purchased	3,500
5. Insurance premium paid for first year's insurance on new truck	880
6. Cost of landscaping on property purchased	7,200
7. Cost of paving parking lot for new building constructed	17,900
8. Cost of clearing, draining, and filling land	13,300
9. Architect's fees on self-constructed building	10,000

Instructions

Indicate to which account Petrino would debit each of the costs.

E9-3 On March 1, 2014, Zobrist Company acquired real estate, on which it planned to construct a small office building, by paying \$80,000 in cash. An old warehouse on the property was demolished at a cost of \$8,200; the salvaged materials were sold for \$1,700. Additional expenditures before construction began included \$1,900 attorney's fee for work concerning the land purchase, \$5,200 real estate broker's fee, \$9,100 architect's fee, and \$14,000 to put in driveways and a parking lot.

Determine acquisition costs of land.

(LO 1), AP

- (a) Determine the amount to be reported as the cost of the land.
- (b) For each cost not used in part (a), indicate the account to be debited.

E9-4 Melissa Adduci has prepared the following list of statements about depreciation.

Understand depreciation concepts.

(LO 2), C

- 1. Depreciation is a process of asset valuation, not cost allocation.
- 2. Depreciation provides for the proper matching of expenses with revenues.
- 3. The book value of a plant asset should approximate its fair value.
- 4. Depreciation applies to three classes of plant assets: land, buildings, and equipment.
- 5. Depreciation does not apply to a building because its usefulness and revenue-producing ability generally remain intact over time.
- 6. The revenue-producing ability of a depreciable asset will decline due to wear and tear and to obsolescence.
- 7. Recognizing depreciation on an asset results in an accumulation of cash for replacement of the asset.
- 8. The balance in accumulated depreciation represents the total cost that has been charged to expense since placing the asset in service.
- 9. Depreciation expense and accumulated depreciation are reported on the income statement.
- 10. Four factors affect the computation of depreciation: cost, useful life, salvage value, and residual value.

Instructions

Identify each statement as true or false. If false, indicate how to correct the statement.

E9-5 Hinshaw Company purchased a new machine on October 1, 2014, at a cost of \$90,000. The company estimated that the machine has a salvage value of \$8,000. The machine is expected to be used for 70,000 working hours during its 8-year life.

Determine straight-line depreciation for partial period.

(LO 3), AP



Instructions

Compute the depreciation expense under the straight-line method for 2014 and 2015, assuming a December 31 year-end.

E9-6 Danny Venable, the new controller of Seratelli Company, has reviewed the expected useful lives and salvage values of selected depreciable assets at the beginning of 2014. Here are his findings:

Compute revised annual depreciation.

(LO 3, 4), AN

Type of Asset	Date Acquired	Cost	Accumulated Depreciation, Jan. 1, 2014	Useful Life (in years)		Salvage Value	
				Old	Proposed	Old	Proposed
Building	Jan. 1, 2006	\$700,000	\$130,000	40	48	\$50,000	\$35,000
Warehouse	Jan. 1, 2009	120,000	23,000	25	20	5,000	3,600

All assets are depreciated by the straight-line method. Seratelli Company uses a calendar year in preparing annual financial statements. After discussion, management has agreed to accept Danny's proposed changes. (The "Proposed" useful life is total life, not remaining life.)

Instructions

- (a) Compute the revised annual depreciation on each asset in 2014. (Show computations.)
- (b) Prepare the entry (or entries) to record depreciation on the building in 2014.

E9-7 Wang Co. has delivery equipment that cost \$50,000 and has been depreciated \$24,000.

Journalize transactions related to disposals of plant assets.

(LO 5), AP



Instructions

Record entries for the disposal under the following assumptions.

- (a) It was scrapped as having no value.
- (b) It was sold for \$37,000.
- (c) It was sold for \$20,000.

E9-8 Here are selected 2014 transactions of Cleland Corporation.

Record disposal of equipment.

(LO 5), AP

Jan. 1 Retired a piece of machinery that was purchased on January 1, 2004. The machine cost \$62,000 and had a useful life of 10 years with no salvage value.

Dec. 31 Sold a delivery truck for \$9,000 cash. The truck cost \$25,000 when it was purchased on January 1, 2011, and was depreciated based on a 5-year useful life with a \$4,000 salvage value.

Instructions

Journalize all entries required on the above dates, including entries to update depreciation on assets disposed of, where applicable. Cleland Corporation uses straight-line depreciation.

E9-9 The following situations are independent of one another.

Apply accounting concepts.

(LO 1, 2, 6, 7), C



- 1. An accounting student recently employed by a small company doesn't understand why the company is only depreciating its buildings and equipment, but not its land. The student prepared journal entries to depreciate all the company's property, plant, and equipment for the current year-end.
- 2. The same student also thinks the company's amortization policy on its intangible assets is wrong. The company is currently amortizing its patents but not its goodwill. As a result, the student added goodwill to her adjusting entry for amortization at the end of the current year. She told a fellow employee that she felt she had improved the consistency of the company's accounting policies by making these changes.
- 3. The same company has a building still in use that has a zero book value but a substantial fair value. The student felt that this practice didn't benefit the company's users—especially the bank—and wrote the building up to its fair value. After all, she reasoned, you can write down assets if fair values are lower. Writing them up if fair value is higher is yet another example of the improved consistency that she has brought to the company's accounting practices.

Instructions

Explain whether or not the accounting treatment in each of the above situations is in accordance with generally accepted accounting principles. Explain what accounting principle or assumption, if any, has been violated and what the appropriate accounting treatment should be.

E9-10 Suppose during 2014 that **Federal Express** reported the following information (in millions): net sales of \$35,497 and net income of \$98. Its balance sheet also showed total assets at the beginning of the year of \$25,633 and total assets at the end of the year of \$24,244.

Calculate asset turnover and return on assets.

(LO 6), AP



Instructions

Calculate the (a) asset turnover and (b) return on assets.

E9-11 Showrock International is considering a significant expansion to its product line. The sales force is excited about the opportunities that the new products will bring. The new products are a significant step up in quality above the company's current offerings, but offer a complementary fit to its existing product line. Richard Farley, senior production department manager, is very excited about the high-tech new equipment that will have to be acquired to produce the new products. Donna Beson, the company's CFO, has provided the following projections based on results with and without the new products.

Calculate and interpret ratios.

(LO 6), AP



	<u>Without New Products</u>	<u>With New Products</u>
Sales revenue	\$10,000,000	\$16,000,000
Net income	\$500,000	\$960,000
Average total assets	\$5,000,000	\$12,000,000

Instructions

- (a) Compute the company's return on assets, profit margin, and asset turnover, both with and without the new product line.
- (b) Discuss the implications that your findings in part (a) have for the company's decision.

E9-12 Bakely Company reports the following information (in millions) during a recent year: net sales, \$11,408.5; net earnings, \$264.8; total assets, ending, \$4,312.6; and total assets, beginning, \$4,254.3.

Calculate and interpret ratios.

(LO 6), AP



Instructions

- (a) Calculate the (1) return on assets, (2) asset turnover, and (3) profit margin.
- (b) Prove mathematically how the profit margin and asset turnover work together to explain return on assets, by showing the appropriate calculation.
- (c) Bakely Company owns Villas (grocery), Bakely Theaters, Kurt Drugstores, and Derosa (heavy equipment), and manages commercial real estate, among other activities. Does this diversity of activities affect your ability to interpret the ratios you calculated in (a)? Explain.

E9-13 These are selected 2014 transactions for Amarista Corporation:

Jan. 1 Purchased a copyright for \$120,000. The copyright has a useful life of 6 years and a remaining legal life of 30 years.

Mar. 1 Purchased a patent with an estimated useful life of 4 years and a legal life of 20 years for \$54,000.

Sept. 1 Purchased a small company and recorded goodwill of \$150,000. Its useful life is indefinite.

Instructions

Prepare all adjusting entries at December 31 to record amortization required by the events.

E9-14 Haley Company, organized in 2014, has these transactions related to intangible assets in that year:

Prepare entries to set up appropriate accounts for different intangibles; calculate amortization.

(LO 7), AN

Jan. 2 Purchased a patent (5-year life) \$280,000.

Apr. 1 Goodwill acquired as a result of purchased business (indefinite life) \$360,000.

July 1 Acquired a 9-year franchise; expiration date July 1, 2023, \$540,000.

Sept. 1 Research and development costs \$185,000.

Instructions

- (a) Prepare the necessary entries to record these transactions related to intangibles. All costs incurred were for cash.
- (b) Make the entries as of December 31, 2014, recording any necessary amortization.
- (c) Indicate what the intangible asset account balances should be on December 31, 2014.

E9-15 Alliance Atlantis Communications Inc. changed its accounting policy to amortize broadcast rights over the contracted exhibition period, which is based on the estimated useful life of the program. Previously, the company amortized broadcast rights over the lesser of 2 years or the contracted exhibition period.

Discuss implications of amortization period.

(LO 7), C

Instructions

 Write a short memo to your client explaining the implications this has for the analysis of Alliance Atlantis's results.

E9-16 The questions listed below are independent of one another.

PRINTED BY: jromero0950@email.phoenix.edu. Printing is for personal, private use only. No part of this book may be reproduced or transmitted without publisher's prior permission. Violators will be prosecuted. Answer questions on depreciation and intangibles.

(LO 2, 7), C



Instructions

Provide a brief answer to each question.

- (a) Why should a company depreciate its buildings?
- (b) How can a company have a building that has a zero reported book value but substantial fair value?
- (c) What are some examples of intangibles that you might find on your college campus?
- (d) Give some examples of company or product trademarks or trade names. Are trade names and trademarks reported on a company's balance sheet?

E9-17 Gonzalez Corporation reported net income of \$58,000. Depreciation expense for the year was \$132,000. The company calculates depreciation expense using the straight-line method, with a useful life of 10 years. Top management would like to switch to a 15-year useful life because depreciation expense would be reduced to \$88,000. The CEO says, "Increasing the useful life would increase net income and net cash provided by operating activities."

Determine net cash provided by operating activities.

(LO 8), AN

Instructions

Provide a comparative analysis showing net income and net cash provided by operating activities (ignoring other accrual adjustments) using a 10-year and a 15-year useful life. (Ignore income taxes.) Evaluate the CEO's suggestion.

***E9-18** Jayhawk Bus Lines uses the units-of-activity method in depreciating its buses. One bus was purchased on January 1, 2014, at a cost of \$100,000. Over its 4-year useful life, the bus is expected to be driven 160,000 miles. Salvage value is expected to be \$8,000.

Compute depreciation under units-of-activity method.

(LO 9), AP

Instructions

- (a) Compute the depreciation cost per unit.
- (b) Prepare a depreciation schedule assuming actual mileage was: 2014, 40,000; 2015, 52,000; 2016, 41,000; and 2017, 27,000.

***E9-19** Basic information relating to a new machine purchased by Hinshaw Company is presented in E9-5.

Compute declining-balance and units-of-activity depreciation.

(LO 9), AP

Instructions

Using the facts presented in E9-5, compute depreciation using the following methods in the year indicated.

- (a) Declining-balance using double the straight-line rate for 2014 and 2015.

Exercises: Set B and Challenge Exercises

Visit the book's companion website, at www.wiley.com/college/kimmel, and choose the Student Companion site to access Exercise Set B and Challenge Exercises.

Problems: Set A

P9-1A Seger Company was organized on January 1. During the first year of operations, the following plant asset expenditures and receipts were recorded in random order.

Determine acquisition costs of land and building.

(LO 1), C

Debit

1. Cost of real estate purchased as a plant site (land \$255,000 and building \$25,000)	\$ 280,000
2. Installation cost of fences around property	6,800
3. Cost of demolishing building to make land suitable for construction of new building	31,000
4. Excavation costs for new building	23,000
5. Accrued real estate taxes paid at time of purchase of real estate	3,170
6. Cost of parking lots and driveways	29,000
7. Architect's fees on building plans	33,000
8. Real estate taxes paid for the current year on land	6,400
9. Full payment to building contractor	<u>640,000</u>
	\$1,052,370

Credit

10. Proceeds from salvage of demolished building	\$ 12,000
--	-----------

Analyze the transactions using the following table column headings. Enter the number of each transaction in the Item column, and enter the amounts in the appropriate columns. For amounts in the Other Accounts column, also indicate the account title.

Item Land Buildings Other Accounts

Land \$302,170

P9-2A At December 31, 2014, Navaro Corporation reported the following plant assets.

Journalize equipment transactions related to purchase, sale, retirement, and depreciation.

(LO 3, 5, 8), AP



Land		\$ 3,000,000
------	--	--------------

Buildings	\$26,500,000	
-----------	--------------	--

Less: Accumulated depreciation—buildings	<u>11,925,000</u>	14,575,000
--	-------------------	------------

Equipment	40,000,000	
-----------	------------	--

Less: Accumulated depreciation—equipment	<u>5,000,000</u>	<u>35,000,000</u>
--	------------------	-------------------

Total plant assets		\$52,575,000
--------------------	--	--------------

During 2015, the following selected cash transactions occurred.

Apr. 1 Purchased land for \$2,200,000.

May 1 Sold equipment that cost \$600,000 when purchased on January 1, 2008. The equipment was sold for

June 1 Sold land for \$1,600,000. The land cost \$1,000,000.

July 1 Purchased equipment for \$1,100,000.

Dec. 31 Retired equipment that cost \$700,000 when purchased on December 31, 2005. No salvage value was received.

Instructions

- (a) Journalize the transactions. (*Hint:* You may wish to set up T-accounts, post beginning balances, and then post 2015 transactions.) Navaro uses straight-line depreciation for buildings and equipment. The buildings are estimated to have a 40-year useful life and no salvage value; the equipment is estimated to have a 10-year useful life and no salvage value. Update depreciation on assets disposed of at the time of sale or retirement.
- (b) Record adjusting entries for depreciation for 2015.
- (c) Prepare the plant assets section of Navaro's balance sheet at December 31, 2015.

(c) Tot. plant assets \$50,037,500

P9-3A Presented here are selected transactions for Pine Company for 2014.

Journalize entries for disposal of plant assets.

(LO 5), AP

Jan. 1 Retired a piece of machinery that was purchased on January 1, 2004. The machine cost \$71,000 on that date and had a useful life of 10 years with no salvage value.

June 30 Sold a computer that was purchased on January 1, 2011. The computer cost \$30,000 and had a useful life of 5 years with no salvage value. The computer was sold for \$12,000.

Dec. 31 Discarded a delivery truck that was purchased on January 1, 2009. The truck cost \$33,400 and was depreciated based on an 8-year useful life with a \$3,000 salvage value.

Instructions

Journalize all entries required on the above dates, including entries to update depreciation, where applicable, on assets disposed of. Pine Company uses straight-line depreciation. (Assume depreciation is up to date as of December 31, 2013.)

P9-4A The intangible assets section of Cedeno Corporation's balance sheet at December 31, 2014, is presented here.

Prepare entries to record transactions related to acquisition and amortization of intangibles; prepare the intangible assets section and note.

(LO 7, 8), AP

Copyrights (\$36,000 cost less \$25,200 amortization) 10,800

Total \$64,800

The patent was acquired in January 2014 and has a useful life of 10 years. The copyright was acquired in January 2008 and also has a useful life of 10 years. The following cash transactions may have affected intangible assets during 2015.

Jan. 2 Paid \$46,800 legal costs to successfully defend the patent against infringement by another company.

Jan.– Developed a new product, incurring \$230,000 in research and development costs. A patent was granted for
 June the product on July 1, and its useful life is equal to its legal life. Legal and other costs for the patent were \$20,000.

Sept. 1 Paid \$40,000 to a quarterback to appear in commercials advertising the company's products. The commercials will air in September and October.

Oct. 1 Acquired a copyright for \$200,000. The copyright has a useful life and legal life of 50 years.

Instructions

- (a) Prepare journal entries to record the transactions.
- (b) Prepare journal entries to record the 2015 amortization expense for intangible assets.
- (c) Prepare the intangible assets section of the balance sheet at December 31, 2015.

(c) Tot. intangibles \$315,300

- (d) Prepare the note to the financial statements on Cedeno Corporation's intangible assets as of December 31, 2015.

P9-5A Due to rapid employee turnover in the accounting department, the following transactions involving intangible assets were improperly recorded by Eveland Corporation in 2014.

Prepare entries to correct errors in recording and amortizing intangible assets.

(LO 7), AP

- 1. Eveland developed a new manufacturing process, incurring research and development costs of \$160,000. The company also purchased a patent for \$40,000. In early January, Eveland capitalized \$200,000 as the cost of the patents. Patent amortization expense of \$10,000 was recorded based on a 20-year useful life.
- 2. On July 1, 2014, Eveland purchased a small company and as a result acquired goodwill of \$80,000. Eveland recorded a half-year's amortization in 2014, based on a 20-year life (\$2,000 amortization). The goodwill has an indefinite life.

Instructions

P9-6A Danner Corporation and London Corporation, two companies of roughly the same size, are both involved in the manufacture of shoe-tracing devices. Each company depreciates its plant assets using the straight-line approach. An investigation of their financial statements reveals the information shown below.

Calculate and comment on return on assets, profit margin, and asset turnover.

(LO 6), AN



	<u>Danner Corp.</u>	<u>London Corp.</u>
Net income	\$ 240,000	\$ 300,000
Sales revenue	1,150,000	1,200,000
	<u>Danner Corp.</u>	<u>London Corp.</u>
Total assets (average)	3,200,000	3,000,000
Plant assets (average)	2,400,000	1,800,000
Intangible assets (goodwill)	300,000	0

Instructions

- (a) For each company, calculate these values:
 - (1) Return on assets.
 - (2) Profit margin.
 - (3) Asset turnover.
- (b) Based on your calculations in part (a), comment on the relative effectiveness of the two companies in using their assets to generate sales. What factors complicate your ability to compare the two companies?

***P9-7A** In recent years, Farr Company has purchased three machines. Because of frequent employee turnover in the accounting department, a different accountant was in charge of selecting the depreciation method for each machine, and various methods have been used. Information concerning the machines is summarized in the table below.

Compute depreciation under different methods.

(LO 3, 9), AP

Machine	Acquired	Cost	Salvage Value	Useful Life (in years)	Depreciation Method
1	Jan. 1, 2012	\$96,000	\$12,000	8	Straight-line

Machine	Acquired	Cost	Salvage Value	Useful Life (in years)	Depreciation Method
2	July 1, 2013	85,000	10,000	5	Declining-balance
3	Nov. 1, 2013	66,000	6,000	6	Units-of-activity

For the declining-balance method, Farr Company uses the double-declining rate. For the units-of-activity method, total machine hours are expected to be 30,000. Actual hours of use in the first 3 years were: 2013, 800; 2014, 4,500; and 2015, 6,000.

Instructions

- (a) Compute the amount of accumulated depreciation on each machine at December 31, 2015.

(a) Machine 2 \$60,520

- (b) If machine 2 was purchased on April 1 instead of July 1, what would be the depreciation expense for this machine in 2013? In 2014?

***P9-8A** Boscan Corporation purchased machinery on January 1, 2014, at a cost of \$250,000. The estimated useful life of the machinery is 4 years, with an estimated salvage value at the end of that period of \$30,000. The company is considering different depreciation methods that could be used for financial reporting purposes.

Compute depreciation under different methods.

(LO 3, 9), AP

Instructions

- (a) Prepare separate depreciation schedules for the machinery using the straight-line method, and the declining-balance method using double the straight-line rate. (Round to the nearest dollar.)

(a) Double-declining-balance expense 2016 \$31,250

- (b) Which method would result in the higher reported 2014 income? In the highest total reported income over the 4-year period?
- (c) Which method would result in the lower reported 2014 income? In the lowest total reported income over the 4-year period?

Problems: Set B

P9-1B Derose Company was organized on January 1. During the first year of operations, the following plant asset expenditures and receipts were recorded in random order.

Determine acquisition costs of land and building.

(LO 1), C

Debit

1. Cost of real estate purchased as a plant site (land \$200,000 and building \$70,000)	\$ 270,000
2. Accrued real estate taxes paid at time of purchase of real estate	6,000
3. Cost of demolishing building to make land suitable for construction of new building	31,000
4. Cost of filling and grading the land	7,700
5. Excavation costs for new building	21,900
6. Architect's fees on building plans	44,000
7. Full payment to building contractor	629,500
8. Cost of parking lots and driveways	36,000
9. Real estate taxes paid for the current year on land	<u>7,300</u>
	\$1,053,400

Credit

10. Proceeds for salvage of demolished building	\$ 12,700
---	-----------

Instructions

Analyze the transactions using the table column headings provided here. Enter the number of each transaction in the Item column, and enter the amounts in the appropriate columns. For amounts in the Other Accounts column, also indicate the account titles.

Item Land Buildings Other Accounts

P9-2B At December 31, 2013, Tong Corporation reported these plant assets.

Journalize equipment transactions related to purchase, sale, retirement, and depreciation.

(LO 3, 5, 8), AP

Land		\$ 4,000,000
Buildings	\$28,800,000	
Less: Accumulated depreciation—buildings	<u>11,520,000</u>	17,280,000
Equipment	48,000,000	
Less: Accumulated depreciation—equipment	<u>5,000,000</u>	<u>43,000,000</u>
Total plant assets		\$64,280,000

During 2014, the following selected cash transactions occurred.

Apr. 1 Purchased land for \$2,600,000.

May 1 Sold equipment that cost \$750,000 when purchased on January 1, 2009. The equipment was sold for \$367,000.

June 1 Sold land purchased on June 1, 2002, for \$2,000,000. The land cost \$800,000.

Sept. 1 Purchased equipment for \$840,000.

Dec. 31 Retired equipment that cost \$470,000 when purchased on December 31, 2004. No salvage value was received.

Instructions

- (a) Journalize the transactions. (*Hint:* You may wish to set up T-accounts, post beginning balances, and then post 2014 transactions.) Tong uses straight-line depreciation for buildings and equipment. The buildings are estimated to have a 40-year life and no salvage value; the equipment is estimated to have a 10-year useful life and no salvage value. Update depreciation on assets disposed of at the time of sale or retirement.
- (b) Record adjusting entries for depreciation for 2014.
- (c) Prepare the plant assets section of Tong's balance sheet at December 31, 2014.

P9-3B Here are selected transactions for Evan's Corporation for 2014.

Journalize entries for disposal of plant assets.

(LO 5), AP

- Jan. 1 Retired a piece of machinery that was purchased on January 1, 2004. The machine cost \$47,000 and had a useful life of 10 years with no salvage value.
- Mar. 31 Sold a computer that was purchased on January 1, 2011. The computer cost \$43,400 and had a useful life of 7 years with no salvage value. The computer was sold for \$25,000.
- Dec. 31 Discarded a delivery truck that was purchased on January 1, 2011. The truck cost \$30,000 and was depreciated based on a 6-year useful life with a \$3,000 salvage value.

Instructions

Journalize all entries required on the above dates, including entries to update depreciation on assets disposed of, where applicable. Evan's Corporation uses straight-line depreciation.

P9-4B The intangible assets section of the balance sheet for Venable Company at December 31, 2014, is presented here.

Prepare entries to record transactions related to acquisition and amortization of intangibles; prepare the intangible assets section and note.

(LO 7, 8), AP

Patents (\$70,000 cost less \$7,000 amortization)	\$63,000
Copyrights (\$48,000 cost less \$18,000 amortization)	<u>30,000</u>
Total	\$93,000

The patent was acquired in January 2014 and has a useful life of 10 years. The copyright was acquired in January 2012 and also has a useful life of 8 years. The following cash transactions may have affected intangible assets during 2015.

- Jan. 2 Paid \$45,000 legal costs to successfully defend the patent against infringement by another company.
- Jan.– June Developed a new product, incurring \$220,000 in research and development costs. A patent was granted for the product on July 1, and its useful life is equal to its legal life. Legal and other costs for the patent were \$22,000.

Oct. 1 Acquired a copyright for \$120,000. The copyright has a useful life and legal life of 50 years.

Instructions

- (a) Prepare journal entries to record the transactions.
- (b) Prepare journal entries to record the 2015 amortization expense.
- (c) Prepare the intangible assets section of the balance sheet at December 31, 2015.

(c) Tot. intangibles \$260,850

- (d) Prepare the note to the financial statements on Venable Company's intangible assets as of December 31, 2015.

P9-5B Due to rapid employee turnover in the accounting department, the following transactions involving intangible assets were improperly recorded by Maxwell Corporation in 2014.

Prepare entries to correct errors in recording and amortizing intangible assets.

(LO 7), AP

- 1. Maxwell developed a new manufacturing process, incurring research and development costs of \$225,000. The company also purchased a patent for \$48,000. In early January, Maxwell capitalized \$273,000 as the cost of the patents. Patent amortization expense of \$13,650 was recorded based on a 20-year useful life.
- 2. On July 1, 2014, Maxwell purchased a small company and as a result acquired goodwill of \$40,000. Maxwell recorded a half-year's amortization in 2014, based on a 10-year life (\$2,000 amortization). The goodwill has an indefinite life.

Instructions

Prepare all journal entries necessary to correct any errors made during 2014. Assume the books have not yet been closed for 2014.

P9-6B Quiver Corporation and Swaze Corporation, two corporations of roughly the same size, are both involved in the manufacture of umbrellas. Each company depreciates its plant assets using the straight-line approach. An investigation of their financial statements reveals the following information.

Calculate and comment on return on assets, profit margin, and asset turnover.

(LO 6), AN



	<u>Quiver Corp.</u>	<u>Swaze Corp.</u>
Net income	\$ 800,000	\$ 920,000
Sales revenue	2,400,000	2,500,000

Quiver Corp. Swaze Corp.

Total assets (average)	3,000,000	2,700,000
Plant assets (average)	1,400,000	1,200,000
Intangible assets (goodwill)	480,000	0

Instructions

- (a) For each company, calculate these values:
 - (1) Return on assets.
 - (2) Profit margin.
 - (3) Asset turnover.
- (b)  Based on your calculations in part (a), comment on the relative effectiveness of the two companies in using their assets to generate sales. What factors complicate your ability to compare the two companies?

***P9-7B** In recent years Howard Company has purchased three machines. Because of frequent employee turnover in the accounting department, a different accountant was in charge of selecting the depreciation method for each machine, and various methods have been used. Information concerning the machines is summarized in the table below.

Compute depreciation under different methods.

(LO 3, 9), AP

Machine	Acquired	Cost	Salvage Value	Useful Life (in years)	Depreciation Method
1	July 1, 2012	\$68,000	\$5,000	7	Straight-line
2	Apr. 1, 2013	64,000	6,000	4	Declining-balance
3	Sept. 1, 2013	84,000	4,000	8	Units-of-activity

For the declining-balance method, Howard Company uses the double-declining rate. For the units-of-activity method, total machine hours are expected to be 40,000. Actual hours of use in the first 3 years were: 2013, 1,200; 2014, 6,400; and 2015, 7,000.

Instructions

- (a) Compute the amount of accumulated depreciation on each machine at December 31, 2015.

PRINTED BY: jromero0950@email.phoenix.edu. Printing is for personal, private use only. No part of this book may be reproduced or transmitted without publisher's prior permission. Violators will be prosecuted.

- (b) If machine 2 was purchased on November 1 instead of April 1, what would be the depreciation expense for this machine in 2013? In 2014? (Round to the nearest dollar.)

***P9-8B** Miriam Corporation purchased machinery on January 1, 2014, at a cost of \$380,000. The estimated useful life of the machinery is 5 years, with an estimated salvage value at the end of that period of \$20,000. The company is considering different depreciation methods that could be used for financial reporting purposes.

Compute depreciation under different methods.

(LO 3, 9), AP

Instructions

- (a) Prepare separate depreciation schedules for the machinery using the straight-line method, and the declining-balance method using double the straight-line rate.

(a) Double-declining-balance exp. 2015 \$91,200

- (b) Which method would result in the higher reported 2014 income? In the higher total reported income over the 5-year period?
- (c) Which method would result in the lower reported 2014 income? In the lower total reported income over the 5-year period?

Problems: Set C

Visit the book's companion website, at www.wiley.com/college/kimmel, and choose the Student Companion site to access Problem Set C.

Comprehensive Problem

CP9 Kenseth Corporation's unadjusted trial balance at December 1, 2014, is presented below.

	<u>Debit</u>	<u>Credit</u>
Cash	\$ 22,000	
Accounts Receivable	36,800	
Notes Receivable	10,000	
Interest Receivable	—0—	
Inventory	36,200	
Prepaid Insurance	3,600	

	<u>Debit</u>	<u>Credit</u>
Land	20,000	
Buildings	150,000	
Equipment	60,000	
Patent	9,000	
Allowance for Doubtful Accounts		\$ 500
Accumulated Depreciation—Buildings		50,000
Accumulated Depreciation—Equipment		24,000
Accounts Payable		27,300
Salaries and Wages Payable		—0—
Notes Payable (due April 30, 2015)		11,000
Income Taxes Payable		—0—
Interest Payable		—0—
Notes Payable (due in 2020)		35,000
Common Stock		50,000
Retained Earnings		63,600
Dividends	12,000	

	<u>Debit</u>	<u>Credit</u>
Sales Revenue		900,000
Interest Revenue		—0—
Gain on Disposal of Plant Assets		—0—
Bad Debt Expense	—0—	
Cost of Goods Sold	630,000	
Depreciation Expense	—0—	
Income Tax Expense	—0—	
Insurance Expense	—0—	
Interest Expense	—0—	
Other Operating Expenses	61,800	
Amortization Expense	—0—	
Salaries and Wages Expense	<u>110,000</u>	<u> </u>
Total	\$1,161,400	\$1,161,400

The following transactions occurred during December.

Dec. 2 Purchased equipment for \$16,000, plus sales taxes of \$800 (paid in cash).

2 Kenseth sold for \$3,500 equipment which originally cost \$5,000. Accumulated depreciation on this equipment at January 1, 2014, was \$1,800; 2014 depreciation prior to the sale of equipment was \$825.

23 Salaries and wages of \$6,600 were paid.

Adjustment data:

- 1. Kenseth estimates that uncollectible accounts receivable at year-end are \$4,000.
- 2. The note receivable is a one-year, 8% note dated April 1, 2014. No interest has been recorded.
- 3. The balance in prepaid insurance represents payment of a \$3,600, 6-month premium on September 1, 2014.
- 4. The building is being depreciated using the straight-line method over 30 years. The salvage value is \$30,000.
- 5. The equipment owned prior to this year is being depreciated using the straight-line method over 5 years. The salvage value is 10% of cost.
- 6. The equipment purchased on December 2, 2014, is being depreciated using the straight-line method over 5 years, with a salvage value of \$1,800.
- 7. The patent was acquired on January 1, 2014, and has a useful life of 9 years from that date.
- 8. Unpaid salaries at December 31, 2014, total \$2,200.
- 9. Both the short-term and long-term notes payable are dated January 1, 2014, and carry a 10% interest rate. All interest is payable in the next 12 months.
- 10. Income tax expense was \$15,000. It was unpaid at December 31.

Instructions

- (a) Prepare journal entries for the transactions listed above and adjusting entries.
- (b) Prepare an adjusted trial balance at December 31, 2014.

(b) Totals \$1,205,775

- (c) Prepare a 2014 income statement and a 2014 retained earnings statement.

(c) Net income \$50,775

- (d) Prepare a December 31, 2014, balance sheet.

(d) Total assets \$247,475

Continuing Cookie Chronicle

(Note: This is a continuation of the Cookie Chronicle from [Chapters 1](#) through [8](#).)

CCC9 Part 1 Now that she is selling mixers and her customers can use credit cards to pay for them, Natalie is thinking of upgrading her website so that she can sell mixers online, to broaden her range of customers. She will need to know how to account for the costs of upgrading the site.

Part 2 Natalie is also thinking of buying a van that will be used only for business. Natalie is concerned about the impact of the van's cost on her income statement and balance sheet. She has come to you for advice on calculating the van's depreciation.

Go to the book's companion website, at www.wiley.com/college/kimmel, to see the completion of this problem.

Broadening Your Perspective

Financial Reporting and Analysis



Instructions

Answer the following questions.

- (a) What were the total cost and book value of property, plant, and equipment at December 31, 2011?
- (b) What method or methods of depreciation are used by Tootsie Roll for financial reporting purposes?
- (c) What was the amount of depreciation expense for each of the 3 years 2009–2011? (*Hint: Use the statement of cash flows.*)
- (d) Using the statement of cash flows, what are the amounts of property, plant, and equipment purchased (capital expenditures) in 2011 and 2010?
- (e) Explain how Tootsie Roll accounted for its intangible assets in 2011.

COMPARATIVE ANALYSIS PROBLEM: *Tootsie Roll vs. Hershey*

BYP9-2 The financial statements of The **Hershey Company** are presented in [Appendix B](#), following the financial statements for **Tootsie Roll Industries** in [Appendix A](#).



Instructions

- (a) Based on the information in these financial statements and the accompanying notes and schedules, compute the following values for each company in 2011.
 - (1) Return on assets.
 - (2) Profit margin (use “Total Revenue”).
 - (3) Asset turnover.
- (b) What conclusions concerning the management of plant assets can be drawn from these data?

RESEARCH CASE

BYP9-3 The November 16, 2011, edition of the *Wall Street Journal Online* contains an article by Maxwell Murphy entitled “The Big Number: 51.”

Instructions

Read the article and answer the following questions.

- (a) What do the 51 companies referred to in the title have in common? What implications does this have regarding the fair value of a company’s assets?
- (b) What significance does the common trait referred to in part (a) have for a company’s goodwill?
- (c) How does a company get to record goodwill on its books—that is, what must have occurred for goodwill to show up on a company’s books?
- (d) If these companies write down their goodwill, will this reduce their cash?

INTERPRETING FINANCIAL STATEMENTS

BYP9-4 The March 29, 2012, edition of the *Wall Street Journal Online* contains an article by Miguel Bustillo entitled, “Best Buy Forced to Rethink Big Box.” The article explains how the 1,100 giant stores, which enabled **Best Buy** to obtain its position as the largest retailer of electronics, are now reducing the company’s profitability and even threatening its survival. The problem is that many customers go to Best Buy stores to see items but then buy them for

The following data were extracted from the 2011 and 2006 annual reports of Best Buy. (All amounts are in millions.)

	<u>2011</u>	<u>2010</u>	<u>2006</u>	<u>2005</u>
Total assets at year-end	\$17,849	\$18,302	\$11,864	\$10,294
Net sales	50,272		30,848	
Net income	1,277		1,140	

Instructions

Using the data above, answer the following questions.

- (a) How might the return on assets and asset turnover of Best Buy differ from an online retailer?
- (b) Compute the profit margin, asset turnover, and return on assets for 2011 and 2006.
- (c) Present the ratios calculated in part (b) in the equation format shown in [Illustration 9-21 \(page 466\)](#).
- (d) Discuss the implications of the ratios calculated in parts (b) and (c).

REAL-WORLD FOCUS

BYP9-5 Purpose: Use an annual report to identify a company's plant assets and the depreciation method used.

Address: www.annualreports.com, or go to www.wiley.com/college/kimmel

Steps

- 1. Select a particular company.
- 2. Search by company name.
- 3. Follow instructions below.

Instructions

Answer the following questions.

- (a) What is the name of the company?
- (b) What is the Internet address of the annual report?
- (c) At fiscal year-end, what is the net amount of its plant assets?
- (d) What is the accumulated depreciation?
- (e) Which method of depreciation does the company use?

Critical Thinking

DECISION-MAKING ACROSS THE ORGANIZATION

BYP9-6 Payton Furniture Corp. is nationally recognized for making high-quality products. Management is concerned that it is not fully exploiting its brand power. Payton's production managers are also concerned because their plants are not operating at anywhere near full capacity. Management is currently considering a proposal to offer a new line of affordable furniture.

These in favor of the proposal (including the vice president of production) believe that, by offering these new products, the company could attract a clientele that it is not currently servicing. Also, it could operate its plants at full capacity, thus taking better advantage of its assets.

The vice president of marketing, however, believes that the lower-priced (and lower-margin) product would have a negative impact on the sales of existing products. The vice president believes that \$10,000,000 of the sales of the new product will be from customers that would have purchased the more expensive product but switched to the lower-margin product because it was available. (This is often referred to as cannibalization of existing sales.) Top management feels, however, that even with cannibalization, the company's sales will increase and the company will be better off.

The following data are available.

(in thousands)	Current Results	Proposed Results without Cannibalization	Proposed Results with Cannibalization
Sales revenue	\$45,000	\$60,000	\$50,000
Net income	\$12,000	\$13,500	\$12,000
Average total assets	\$100,000	\$100,000	\$100,000

Instructions

- (a) Compute Payton's return on assets, profit margin, and asset turnover, both with and without the new product line.
- (b) Discuss the implications that your findings in part (a) have for Payton's decision.
- (c) Are there any other options that Payton should consider? What impact would each of these have on the above ratios?

COMMUNICATION ACTIVITY

BYP9-7 The chapter presented some concerns regarding the current accounting standards for research and development expenditures.

Instructions

Assume that you are either (a) the president of a company that is very dependent on ongoing research and development, writing a memo to the FASB complaining about the current accounting standards regarding research and development, or (b) the FASB member defending the current standards regarding research and development. Your memo should address the following questions.

1. By requiring expensing of R&D, do you think companies will spend less on R&D? Why or why not? What are the possible implications for the competitiveness of U.S. companies?
2. If a company makes a commitment to spend money for R&D, it must believe it has future benefits. Shouldn't these costs therefore be capitalized just like the purchase of any long-lived asset that you believe will have future benefits?

ETHICS CASE

BYP9-8 Fresh Air Anti-Pollution Company is suffering declining sales of its principal product, nonbiodegradable plastic cartons. The president, Tyler Weber, instructs his controller, Robin Cain, to lengthen asset lives to reduce depreciation expense. A processing line of automated plastic extruding equipment, purchased for \$3.5 million in January 2014, was originally estimated to have a useful life of 8 years and a salvage value of \$400,000. Depreciation has been recorded for 2 years on that basis. Tyler wants the estimated life changed to 12 years total and the straight-line method continued. Robin is hesitant to make the change, believing it is unethical to increase net income in this manner. Tyler says, "Hey, the life is only an estimate, and I've heard that our competition uses a 12-year life on their production equipment."

Instructions

- (a) Who are the stakeholders in this situation?
- (b) Is the proposed change in asset life unethical, or is it simply a good business practice by an astute president?
- (c) What is the effect of Tyler's proposed change on income before taxes in the year of change?

ALL ABOUT YOU

BYP9-9 A company's tradename is a very important asset to the company, as it creates immediate product identification. Companies invest substantial sums to ensure that their product is well-known to the consumer. Test your knowledge of who owns some famous brands and their impact on the financial statements.

Instructions

- (a) Provide an answer to the five multiple-choice questions below.
 - (1) Which company owns both Taco Bell and Pizza Hut?
 - (a) McDonald's.
 - (b) CKE.
 - (c) Yum Brands.
 - (d) Wendy's.
 - (2) Dairy Queen belongs to:
 - (a) Breyer.
 - (b) Berkshire Hathaway.
 - (c) GE.
 - (d) The Coca-Cola Company.
 - (3) Phillip Morris, the cigarette maker, is owned by:
 - (a) Altria.
 - (b) GE.
 - (c) Boeing.
 - (d) ExxonMobil.
 - (4) AOL, a major Internet provider, belongs to:
 - (a) Microsoft.
 - (b) Cisco.
 - (c) NBC.
 - (d) Time Warner.
 - (5) ESPN, the sports broadcasting network, is owned by:
 - (a) Procter & Gamble.
 - (b) Altria.
 - (c) Walt Disney.
 - (d) The Coca-Cola Company.
- (b) How do you think the value of these brands is reported on the appropriate company's balance sheet?

FASB CODIFICATION ACTIVITY

BYP9-10 If your school has a subscription to the FASB Codification, go to <http://aaahq.org/ascLogin.cfm> to log in and prepare responses to the following.

- (a) What does it mean to capitalize an item?

PRINTED BY: fromer00950@email.phoenix.edu. Printing is for personal, private use only. No part of this book may be reproduced or transmitted without publisher's prior permission. Violators will be prosecuted.

(b) What is the definition provided for an intangible asset?
 (c) Your great-uncle, who is a CPA, is impressed that you are taking an accounting class. Based on his experience, he believes that depreciation is something that companies do based on past practice, not on the basis of authoritative guidance. Provide the authoritative literature to support the practice of fixed-asset depreciation.

CONSIDERING PEOPLE, PLANET, AND PROFIT

BYP9-11 The March 6, 2012, edition of the *Wall Street Journal Online* contains an article by David Kesmodel entitled “Air War: ‘Winglet’ Versus ‘Sharklet’.” This article demonstrates how a company focused on green technology has also been profitable.

Instructions

Read the article and answer the following questions.

- (a) Why did Airbus file a lawsuit against Aviation Partners?
- (b) What are the percentage fuel savings provided by Aviation Partners’ Winglets on Boeing jetliners? How much total jet fuel did Aviation Partners say that its Winglets have provided at the time the article was written?
- (c) Describe the history of the relationship between Aviation Partners and Airbus, and the development of the Airbus Sharklet.
- (d) What would be the likely accounting implications if Aviation Partners were to lose the lawsuit?

Answers to Insight and Accounting Across the Organization Questions

p. 452 Many U.S. Firms Use Leases Q: Why might airline managers choose to lease rather than purchase their planes? **A:** The reasons for leasing include favorable tax treatment, better financing options, increased flexibility, reduced risk of obsolescence, and often less debt shown on the balance sheet.

p. 465 Marketing ROI as Profit Indicator Q: How does measuring marketing ROI support the overall efforts of the organization? **A:** Top management is ultimately concerned about maximizing the company’s return on assets. Holding marketing managers accountable for the marketing ROI will contribute to the company’s overall goal of maximizing return on assets.

p. 467 Sustainability Report Please Q: Why do you believe companies issue sustainability reports? **A:** It is important that companies clearly describe the things they value in addition to overall profitability. Most companies recognize that the health, safety, and environmental protections of their workforce and community are important components in developing strategies for continued growth and longevity. Without a strong commitment to the principles of corporate social responsibility, it is unlikely that a company will be able to maintain long-term stability and profitability. The development of a sustainability report helps companies to consider these issues and develop measures to assess whether they are meeting their goals in this area.

p. 471 Should Companies Write Up Goodwill? Q: Do you think that this treatment would be allowed under U.S. GAAP? **A:** The write-down of assets would have been allowed if it could be shown that the assets had declined in value (an impairment). However, the creation of goodwill to offset the write-down would not have been allowed. Goodwill can be recorded only when it results from the acquisition of a business. It cannot be recorded as the result of being created internally.

Answers to Self-Test Questions

1. d $(\$24,000 + \$1,200 + \$200 + \$400)$ 2. a 3. b 4. d $((\$400,000 - \$10,000) \div 5) \times 2$ 5. c 6. b 7. d $((\$60,000 - \$12,000) \div 10) \times 2 = \$9,600$; $(\$60,000 - \$9,600 - \$2,000) \div 4$ 8. d 9. a $((\$80,000 - 0) \div 10) \times 4.5 = \$36,000$; $(\$26,000 - (\$80,000 - \$36,000))$ 10. d 11. c $\$180,000 \div ((\$200,000 + \$300,000) \div 2)$ 12. b $(\$20,000 + \$15,000)$ 13. c 14. c 15. d *16. d



A Look at IFRS

LEARNING OBJECTIVE 10

Compare the accounting procedures for long-lived assets under GAAP and IFRS.

IFRS related to property, plant, and equipment is found in *IAS 16* (“Property, Plant and Equipment”) and *IAS 23* (“Borrowing Costs”). IFRS follows most of the same principles as GAAP in the accounting for property, plant, and equipment. There are, however, some significant differences in the implementation. IFRS allows the use of revaluation of property, plant, and equipment, and it also requires the use of component depreciation. In addition, there are some significant differences in the accounting for both intangible assets and impairments. IFRS related to intangible assets is presented in *IAS 38* (“Intangible Assets”). IFRS related to impairments is found in *IAS 36* (“Impairment of Assets”).

KEY POINTS

- The definition for plant assets for both IFRS and GAAP is essentially the same.
- Both IFRS and GAAP follow the historical cost principle when accounting for property, plant, and equipment at date of acquisition. Cost consists of all expenditures necessary to acquire the asset and make it ready for its intended use.
- Under both IFRS and GAAP, interest costs incurred during construction are capitalized. Recently, IFRS converged to GAAP requirements in this area.
- IFRS, like GAAP, capitalizes all direct costs in self-constructed assets such as raw materials and labor. IFRS does not address the capitalization of fixed overhead, although in practice these costs are generally capitalized.
- IFRS also views depreciation as an allocation of cost over an asset’s useful life. IFRS permits the same depreciation methods (e.g., straight-line, accelerated, and units-of-activity) as GAAP. However, a major difference is that IFRS requires component depreciation. **Component depreciation** specifies that any significant parts of a depreciable asset that have different estimated useful lives should be separately depreciated. Component depreciation is allowed under GAAP but is seldom used. To illustrate, assume that Lexure Construction builds an office building for \$4,000,000, not including the cost of the land. If the \$4,000,000 is allocated over the 40-year useful life of the building, Lexure reports \$100,000 of depreciation per year, assuming straight-line depreciation and no disposal value. However, assume that \$320,000 of the cost of the building relates to personal property and \$600,000 relates to land improvements. The personal property has

PRINTED BY: jromero0950@email.phoenix.edu. Printing is for personal, private use only. No part of this book may be reproduced or transmitted without publisher's prior permission. Violators will be prosecuted.

a depreciable life of 5 years, and the land improvements have a depreciable life of 10 years. In accordance with IFRS, Lexure must use component depreciation. It must reclassify \$320,000 of the cost of the building to personal property and \$600,000 to the cost of land improvements. Assuming that Lexure uses straight-line depreciation, component depreciation for the first year of the office building is computed as follows.

Building cost adjusted (\$4,000,000 – \$320,000 – \$600,000)	<u>\$3,080,000</u>
--	--------------------

Building cost depreciation per year (\$3,080,000/40)	\$ 77,000
--	-----------

Personal property depreciation (\$320,000/5)	64,000
--	--------

Land improvements depreciation (\$600,000/10)	<u>60,000</u>
---	---------------

Total component depreciation in first year	\$ 201,000
--	------------

- IFRS uses the term **residual value**, rather than salvage value, to refer to an owner's estimate of an asset's value at the end of its useful life for that owner.
- IFRS allows companies to revalue plant assets to fair value at the reporting date. Companies that choose to use the revaluation framework must follow revaluation procedures. If revaluation is used, it must be applied to all assets within the same class. Assets that are experiencing rapid price changes must be revalued on an annual basis. Otherwise, less frequent revaluation is acceptable. To illustrate asset revaluation accounting, assume that Pernice Company applies revaluation to plant assets with a carrying value of \$1,000,000, a useful life of 5 years, and no residual value. Pernice makes the following journal entries in year 1, assuming straight-line depreciation.

Depreciation Expense	200,000
----------------------	---------

Accumulated Depreciation—Plant Assets	200,000
---------------------------------------	---------

(To record depreciation expense in year 1)

After this entry, Pernice's plant assets have a carrying amount of \$800,000 (\$1,000,000 – \$200,000). At the end of year 1, independent appraisers determine that the assets have a fair value of \$850,000. To report the plant assets at fair value, or \$850,000, Pernice eliminates the Accumulated Depreciation—Plant Assets account, reduces Plant Assets to its fair value of \$850,000, and records Revaluation Surplus of \$50,000. The entry to record the revaluation is as follows.

Accumulated Depreciation—Plant Assets	200,000
---------------------------------------	---------

Plant Assets	150,000
--------------	---------

Revaluation Surplus	50,000
---------------------	--------

(To record adjusting the plant assets to fair value)

Thus, Pernice follows a two-step process. First, Pernice records depreciation based on the cost basis of \$1,000,000. As a result, it reports depreciation expense of \$200,000 on the income statement. Second, it records

the revaluation. It does this by eliminating any accumulated depreciation, adjusting the recorded value of the plant assets to fair value, and debiting or crediting the Revaluation Surplus account. In this example, the revaluation surplus is \$50,000, which is the difference between the fair value of \$850,000 and the book value of \$800,000. Revaluation surplus is an example of an item reported as other comprehensive income, as discussed in the *A Look at IFRS* section of [Chapter 5](#). Pernice now reports the following information in its statement of financial position at the end of year 1.

Plant assets (\$1,000,000 – \$150,000)	\$850,000
--	-----------

Accumulated depreciation—plant assets	<u>0</u>
---------------------------------------	----------

\$850,000

Revaluation surplus (equity)	\$ 50,000
------------------------------	-----------

As indicated, \$850,000 is the new basis of the assets. Pernice reports depreciation expense of \$200,000 in the income statement and \$50,000 in other comprehensive income. Assuming no change in the total useful life, depreciation in year 2 will be \$212,500 ($\$850,000 \div 4$).

- Under both IFRS and GAAP, changes in the depreciation method used and changes in useful life are handled in current and future periods. Prior periods are not affected. GAAP recently conformed to IFRS in the accounting for changes in depreciation methods.
- The accounting for subsequent expenditures, such as ordinary repairs and additions, are essentially the same under IFRS and GAAP.
- The accounting for plant asset disposals is essentially the same under IFRS and GAAP.
- Initial costs to acquire natural resources are essentially the same under IFRS and GAAP.
- The definition of intangible assets is essentially the same under IFRS and GAAP.
- Intangibles generally arise when a company buys another company. In this case, specific criteria are needed to separate goodwill from other intangibles. Both IFRS and GAAP follow the same approach to make this separation; that is, companies recognize an intangible asset separately from goodwill if the intangible represents contractual or legal rights or is capable of being separated or divided and sold, transferred, licensed, rented, or exchanged. In addition, under both IFRS and GAAP, companies recognize acquired in-process research and development (IPR&D) as a separate intangible asset if it meets the definition of an intangible asset and its fair value can be measured reliably.
- As in GAAP, under IFRS the costs associated with research and development are segregated into the two components. Costs in the research phase are always expensed under both IFRS and GAAP. Under IFRS, however, costs in the development phase are capitalized as Development Costs once technological feasibility is achieved. To illustrate, assume that Laser Scanner Company spent \$1 million on research and \$2 million on development of new products. Of the \$2 million in development costs, \$500,000 was incurred prior to technological feasibility and \$1,500,000 was incurred after technological feasibility had been demonstrated. The company would record these costs as follows.

Research Expense	1,000,000
------------------	-----------

Development Expense	500,000
---------------------	---------

Development Costs	1,500,000
-------------------	-----------

Cash	3,000,000
------	-----------

- IFRS permits revaluation of intangible assets (except for goodwill). GAAP prohibits revaluation of intangible assets.
- IFRS requires an impairment test at each reporting date for plant assets and intangibles and records an impairment if the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of the asset's fair value less costs to sell or its value-in-use. **Value-in-use** is the future cash flows to be derived from the particular asset, discounted to present value. Under GAAP, impairment loss is measured as the excess of the carrying amount over the asset's fair value.
- IFRS allows reversal of impairment losses when there has been a change in economic conditions or in the expected use of the asset. Under GAAP, impairment losses cannot be reversed for assets to be held and used; the impairment loss results in a new cost basis for the asset. IFRS and GAAP are similar in the accounting for impairments of assets held for disposal.
- The accounting for exchanges of nonmonetary assets has recently converged between IFRS and GAAP. GAAP now requires that gains on exchanges of nonmonetary assets be recognized if the exchange has commercial substance. This is the same framework used in IFRS.

LOOKING TO THE FUTURE

With respect to revaluations, as part of the conceptual framework project, the Boards will examine the measurement bases used in accounting. It is too early to say whether a converged conceptual framework will recommend fair value measurement (and revaluation accounting) for plant assets and intangibles. However, this is likely to be one of the more contentious issues, given the long-standing use of historical cost as a measurement basis in GAAP.

The IASB and FASB have identified a project that would consider expanded recognition of internally generated intangible assets. IFRS permits more recognition of intangibles compared to GAAP. Thus, it will be challenging to develop converged standards for intangible assets, given the long-standing prohibition on capitalizing internally generated intangible assets and research and development costs in GAAP.

IFRS PRACTICE

IFRS SELF-TEST QUESTIONS

1.

Which of the following statements is **correct**?

- (a) Both IFRS and GAAP permit revaluation of property, plant, and equipment and intangible assets (except for goodwill).
- (b) IFRS permits revaluation of property, plant, and equipment and intangible assets (except for goodwill).
- (c) Both IFRS and GAAP permit revaluation of property, plant, and equipment but not intangible assets.
- (d) GAAP permits revaluation of property, plant, and equipment but not intangible assets.

2.

International Company has land that cost \$450,000 but now has a fair value of \$600,000. International Company decides to use the revaluation method specified in IFRS to account for the land. Which of the following statements is **correct**?

- (a) International Company must continue to report the land at \$450,000.
- (b) International Company would report a net income increase of \$150,000 due to an increase in the value of the land.
- (c) International Company would debit Revaluation Surplus for \$150,000.
- (d) International Company would credit Revaluation Surplus by \$150,000.

3. **PRINTED BY: jromero0950@email.phoenix.edu. Printing is for personal, private use only. No part of this book may be reproduced or transmitted without publisher's prior permission. Violators will be prosecuted.** Francisco Corporation is constructing a new building at a total initial cost of \$10,000,000. The building is expected to have a useful life of 50 years with no residual value. The building's finished surfaces (e.g., roof cover and floor cover) are 5% of this cost and have a useful life of 20 years. Building services systems (e.g., electric, heating, and plumbing) are 20% of the cost and have a useful life of 25 years. The depreciation in the first year using component depreciation, assuming straight-line depreciation with no residual value, is:

- (a) \$200,000.
- (b) \$215,000.
- (c) \$255,000.
- (d) None of the above.

4.

Research and development costs are:

- (a) expensed under GAAP.
- (b) expensed under IFRS.
- (c) expensed under both GAAP and IFRS.
- (d) None of the above.

5.

Under IFRS, value-in-use is defined as:

- (a) net realizable value.
- (b) fair value.
- (c) future cash flows discounted to present value.
- (d) total future undiscounted cash flows.

IFRS CONCEPTS AND APPLICATION

IFRS9-1 What is component depreciation, and when must it be used?

IFRS9-2 What is revaluation of plant assets? When should revaluation be applied?

IFRS9-3 Some product development expenditures are recorded as development expenses and others as development costs. Explain the difference between these accounts and how a company decides which classification is appropriate.

IFRS9-4 Holland Company constructed a warehouse for \$280,000. Holland estimates that the warehouse has a useful life of 20 years and no residual value. Construction records indicate that \$40,000 of the cost of the warehouse relates to its heating, ventilation, and air conditioning (HVAC) system, which has an estimated useful life of only 10 years. Compute the first year of depreciation expense using straight-line component depreciation.

IFRS9-5 At the end of its first year of operations, Mordica Company chose to use the revaluation framework allowed under IFRS. Mordica's ledger shows Plant Assets \$480,000 and Accumulated Depreciation—Plant Assets \$60,000. Prepare journal entries to record the following.

- (a) Independent appraisers determine that the plant assets have a fair value of \$460,000.
- (b) Independent appraisers determine that the plant assets have a fair value of \$400,000.

IFRS9-6 Parman Industries spent \$300,000 on research and \$600,000 on development of a new product. Of the \$600,000 in development costs, \$400,000 was incurred prior to technological feasibility and \$200,000 after technological feasibility had been demonstrated. Prepare the journal entry to record research and development costs.

Use the company's annual report, available in the Investors section at www.zetarplc.com, to answer the following questions.

- (a) According to the notes to the financial statements, what method or methods does the company use to depreciate "plant and equipment?" What rate does it use to depreciate plant and equipment?
- (b) According to the notes to the financial statements, how often is goodwill tested for impairment?
- (c) Using the notes to the financial statements, as well as information from the statement of cash flows, prepare the journal entry to record the disposal of property, plant and equipment during 2011. (Round your amounts to the nearest thousand.)

Answers to IFRS Self-Test Questions

1. b 2. d 3. c $((\$10,000,000 \times .05)/20) + ((\$10,000,000 \times .20)/25) + ((\$10,000,000 \times .75)/50)$ 4. a 5. c



Remember



Remember to go back to The Navigator box on the chapter opening page and check off your completed work.

More advanced courses discuss the accounting for exchanges, the third method of plant asset disposal.

PRINTED BY: jromero0950@email.phoenix.edu. Printing is for personal, private use only. No part of this book may be reproduced or transmitted without publisher's prior permission. Violators will be prosecuted.