CHAPTER 10

Plant Assets, Natural Resources, and Intangible Assets

ASSIGNMENT CLASSIFICATION TABLE

Learning Objectives	Questions	Brief Exercises	Do It!	Exercises	A Problems	B Problems
1. Describe how the historical cost principle applies to plant assets.	1, 2, 3	1, 2	1	1, 2, 3	1A	1B
2. Explain the concept of depreciation and how to compute it.	4, 5, 6, 7, 8, 21, 22, 23	3, 4, 5, 6 ,7	2, 3	4, 5, 6, 7, 8	2A, 3A, 4A, 5A	2B, 3B, 4B, 5B
3. Distinguish between revenue and capital expenditures, and explain the entries for each.	9, 24	8				
4. Explain how to account for the disposal of a plant asset.	10, 11	9, 10	4	9, 10	5A, 6A	5B, 6B
5. Compute periodic depletion of natural resources.	12, 13	11	5	11		
6. Explain the basic issues related to accounting for intangible assets.	14, 15, 16, 17, 18, 19	12	5	12, 13	7A, 8A	7B, 8B
7. Indicate how plant assets, natural resources, and intangible assets are reported.	20	13, 14		14	5A, 7A, 9A	5B, 7B, 9B
*8. Explain how to account for the exchange of plant assets.	25, 26	15, 16		15, 16		

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Determine acquisition costs of land and building.	Simple	20–30
2A	Compute depreciation under different methods.	Simple	30–40
3A	Compute depreciation under different methods.	Moderate	30–40
4A	Calculate revisions to depreciation expense.	Moderate	20–30
5A	Journalize a series of equipment transactions related to purchase, sale, retirement, and depreciation.	Moderate	40–50
6A	Record disposals.	Simple	30–40
7A	Prepare entries to record transactions related to acquisition and amortization of intangibles; prepare the intangible assets section.	Moderate	30–40
8A	Prepare entries to correct errors made in recording and amortizing intangible assets.	Moderate	30–40
9A	Calculate and comment on asset turnover.	Moderate	5–10
1B	Determine acquisition costs of land and building.	Simple	20–30
2B	Compute depreciation under different methods.	Simple	30–40
3B	Compute depreciation under different methods.	Moderate	30–40
4B	Calculate revisions to depreciation expense.	Moderate	20–30
5B	Journalize a series of equipment transactions related to purchase, sale, retirement, and depreciation.	Moderate	40–50
6B	Record disposals.	Simple	30–40
7B	Prepare entries to record transactions related to acquisition and amortization of intangibles; prepare the intangible assets section.	Moderate	30–40
8B	Prepare entries to correct errors made in recording and amortizing intangible assets.	Moderate	30–40
9B	Calculate and comment on asset turnover.	Moderate	5–10

WEYGANDT ACCOUNTING PRINCIPLES 11E
CHAPTER 10
PLANT ASSETS, NATURAL RESOURCES, AND INTANGIBLE ASSETS

Number	LO	BT	Difficulty	Time (min.)
BE1	1	AP	Simple	2–4
BE2	1	AP	Simple	1–2
BE3	2	AP	Simple	2–4
BE4	2	E	Moderate	4–6
BE5	2	AP	Simple	4–6
BE6	2	AP	Simple	2–4
BE7	2	AN	Moderate	4–6
BE8	3	AP	Simple	2–4
BE9	4	AP	Simple	4–6
BE10	4	AP	Simple	4–6
BE11	5	AP	Simple	4–6
BE12	6	AP	Simple	2–4
BE13	7	AP	Simple	4–6
BE14	7	AP	Simple	2–4
BE15	8	AP	Simple	4–6
BE16	8	AP	Simple	4–6
DI1	1	C	Simple	4–6
DI2	2	AP	Simple	2–4
DI3	2	AP	Simple	6–8
DI4	4	K	Simple	2–4
D5	6	K	Simple	2–4
EX1	1	C	Simple	6–8
EX2	1	AP	Simple	4–6
EX3	1	AP	Simple	4–6
EX4	2	C	Simple	4–6
EX5	2	AP	Simple	6–8
EX6	2	AP	Simple	8–10
EX7	2	AP	Simple	10–12
EX8	2	AN	Moderate	8–10

Number	LO	BT	Difficulty	Time (min.)
EX9	4	AP	Moderate	8–10
EX10	4	AP	Moderate	10–12
EX11	5	AP	Simple	6–8
EX12	6	AP	Simple	4–6
EX13	6	AP	Simple	8–10
EX14	7	AP	Simple	2–4
EX15	8	AP	Moderate	8–10
EX16	8	AP	Moderate	8–10
P1A	1	C	Simple	20–30
P2A	2	AP	Simple	30–40
P3A	2	AN	Moderate	30–40
P4A	2	AP	Moderate	20–30
P5A	2, 4, 7	AP	Moderate	40–50
P6A	4	AP	Simple	30–40
P7A	6, 7	AP	Moderate	30–40
P8A	6	AP	Moderate	30–40
P9A	7	AN	Moderate	5–10
P1B	1	C	Simple	20–30
P2B	2	AP	Simple	30–40
P3B	2	AN	Moderate	30–40
P4B	2	AP	Moderate	20–30
P5B	2, 4, 7	AP	Moderate	40–50
P6B	4	AP	Simple	30–40
P7B	6, 7	AP	Moderate	30–40
P8B	6	AP	Moderate	30–40
P9B	7	AN	Moderate	5–10
BYP1	2, 6	AN	Simple	15–20
BYP2	7	AN, E	Simple	10–15
BYP3	7	AN, E	Simple	10–15
BYP4	2	C	Simple	10–15
BYP5	2	AP, E	Moderate	20–25
BYP6	2	C	Simple	5–10
BYP7	2	E	Simple	10–15
BYP8	6	E	Simple	5–10
BYP9	1,6	AP	Simple	10–15

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Describe how the historical cost principle applies to plant assets.		Q10-1 E10-1 Q10-2 P10-1A Q10-3 P10-1B DI10-1	BE10-1 E10-2 BE10-2 E10-3			
2. Explain the concept of depreciation and how to compute it.	Q10-5	Q10-4 Q10-6 Q10-7 Q10-8 Q10-21 Q10-22 Q10-23 E10-4	BE10-3 E10-5 P10-2B BE10-5 E10-6 P10-4B BE10-6 E10-7 P10-4B DI10-2 P10-2A P10-5B DI10-3 P10-4A P10-4A P10-5A	BE10-7 E10-8 P10-3A P10-3B		BE10-4
3. Distinguish between revenue and capital expenditures, and explain the entries for each.		Q10-9 Q10-24	BE10-8			
4. Explain how to account for the disposal of a plant asset.	Q10-10 DI10-4	Q10-11	BE10-9 E10-9 P10-6A BE10-10 E10-10 P10-5B P10-5A P10-6B			
5. Compute periodic depletion of natural resources.	Q10-12 DI10-5	Q10-13	BE10-11 E10-11			
6. Explain the basic issues related to accounting for intangible assets.	Q10-18 DI10-5	Q10-14 Q10-17 Q10-15 Q10-19 Q10-16	BE10-12 P10-7A P10-8B E10-12 P10-8A E10-13 P10-7B			
7. Indicate how plant assets, natural resources, and intangible assets are reported.			Q10-20 E10-14 P10-5B BE10-13 P10-5A P10-7B BE10-14 P10-7A	P10-9A P10-9B		
*8. Explain how to account for the exchange of plant assets.	Q10-25	Q10-26	BE10-15 E10-15 BE10-16 E10-16			
Broadening Your Perspective		Real-World Focus Communication	Decision Making Across the Organization FASB Codification	Financial Reporting Comp. Analysis		Comp. Analysis Decision Making Across the Organization Ethics Case All About You

ANSWERS TO QUESTIONS

1. For plant assets, the historical cost principle means that cost consists of all expenditures necessary to acquire the asset and make it ready for its intended use.

2. Examples of land improvements include driveways, parking lots, fences, and underground sprinklers.

3. (a) When only the land is to be used, all demolition and removal costs of the building less any proceeds from salvaged materials are necessary expenditures to make the land ready for its intended use.
(b) When both the land and building are to be used, necessary costs of the building include remodeling expenditures and the cost of replacing or repairing the roofs, floors, wiring, and plumbing.

4. You should explain to the president that depreciation is a process of allocating the cost of a plant asset to expense over its service (useful) life in a rational and systematic manner. Recognition of depreciation is not intended to result in the accumulation of cash for replacement of the asset.

5. (a) Salvage value, also called residual value, is the expected value of the asset at the end of its useful life.
(b) Salvage value is used in determining depreciation in each of the methods except the declining-balance method.

6. (a) Useful life is expressed in years under the straight-line method and in units of activity under the units-of-activity method.
(b) The pattern of periodic depreciation expense over useful life is constant under the straight-line method and variable under the units-of-activity method.

7. The effects of the three methods on annual depreciation expense are: Straight-line—constant amount; units of activity—varying amount; declining-balance—decreasing amounts.

8. A revision of depreciation is made in current and future years but not retroactively. The rationale is that continual restatement of prior periods would adversely affect confidence in the financial statements.

9. Revenue expenditures are ordinary repairs made to maintain the operating efficiency and productive life of the asset. Capital expenditures are additions and improvements made to increase operating efficiency, productive capacity, or useful life of the asset. Revenue expenditures are recognized as expenses when incurred; capital expenditures are generally debited to the plant asset affected.

10. In a sale of plant assets, the book value of the asset is compared to the proceeds received from the sale. If the proceeds of the sale exceed the book value of the plant asset, a gain on disposal occurs. If the proceeds of the sale are less than the book value of the plant asset sold, a loss on disposal occurs.

11. The plant asset and its accumulated depreciation should continue to be reported on the balance sheet without further depreciation adjustment until the asset is retired. Reporting the asset and related accumulated depreciation on the balance sheet informs the reader of the financial statements that the asset is still in use. However, once an asset is fully depreciated, even if it is still being used, no additional depreciation should be taken. In no situation can the accumulated depreciation on the plant asset exceed its cost.

12. Natural resources consist of underground deposits of oil, gas, and minerals, and standing timber. These long-lived productive assets have two distinguishing characteristics: they are physically extracted in operations, and they are replaceable only by an act of nature.

13. Depletion is the allocation of the cost of natural resources to expense in a rational and systematic manner over the resource's useful life. It is computed by multiplying the depletion cost per unit by the number of units extracted and sold.

14. The terms depreciation, depletion, and amortization are all concerned with allocating the cost of an asset to expense over the periods benefited. Depreciation refers to allocating the cost of a plant asset to expense, depletion to recognizing the cost of a natural resource as expense, and amortization to allocating the cost of an intangible asset to expense.

15. The intern is not correct. The cost of an intangible asset should be amortized over that asset's useful life (the period of time when operations are benefited by use of the asset). In addition, some intangibles have indefinite lives and therefore are not amortized at all.

16. The favorable attributes which could result in goodwill include exceptional management, desirable location, good customer relations, skilled employees, high-quality products, and harmonious relations with labor unions.

17. Goodwill is the value of many favorable attributes that are intertwined in the business enterprise. Goodwill can be identified only with the business as a whole and, unlike other assets, cannot be sold separately. Goodwill can only be sold if the entire business is sold. And, if goodwill appears on the balance sheet, it means the company has purchased another company for more than the fair value of its net assets.

18. Goodwill is recorded only when there is a transaction that involves the purchase of an entire business. Goodwill is the excess of cost over the fair value of the net assets (assets less liabilities) acquired. The recognition of goodwill without an exchange transaction would lead to subjective valuations which would reduce the reliability of financial statements.

19. Research and development costs present several accounting problems. It is sometimes difficult to assign the costs to specific projects, and there are uncertainties in identifying the extent and timing of future benefits. As a result, the FASB requires that research and development costs be recorded as an expense when incurred.

20. McDonald's asset turnover ratio is computed as follows:

$$\frac{\text{Net sales}}{\text{Average total assets}} = \frac{\$20.5 \text{ billion}}{\$28.9 \text{ billion}} = .71 \text{ times}$$

21. Since Stark uses the straight-line depreciation method, its depreciation expense will be lower in the early years of an asset's useful life as compared to using an accelerated method. Zuber's depreciation expense in the early years of an asset's useful life will be higher as compared to the straight-line method. Stark's net income will be higher than Zuber's in the first few years of the asset's useful life. And, the reverse will be true late in an asset's useful life.

22. Yes, the tax regulations of the IRS allow a company to use a different depreciation method on the tax return than is used in preparing financial statements. Gomez Corporation uses an accelerated depreciation method for tax purposes to minimize its income taxes and thereby the cash outflow for taxes.

23. By selecting a longer estimated useful life, Ace Corp. is spreading the plant asset's cost over a longer period of time. The depreciation expense reported in each period is lower and net income is higher. Liu's choice of a shorter estimated useful life will result in higher depreciation expense reported in each period and lower net income.

24. Expensing these costs will make current period income lower but future period income higher because there will be no additional depreciation expense in future periods. If the costs are ordinary repairs, they should be expensed.

25. When assets are exchanged, the gain or loss on disposal is computed as the difference between the book value and the fair value of the asset given up at the time of exchange.

26. Yes, Unruh should recognize a gain equal to the difference between the fair value of the old machine and its book value. If the fair value of the old machine is less than its book value, Unruh should recognize a loss equal to the difference between the two amounts.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 10-1

All of the expenditures should be included in the cost of the land. Therefore, the cost of the land is $61,000, or ($50,000 + $3,000 + $2,500 + $2,000 + $3,500).

BRIEF EXERCISE 10-2

The cost of the truck is $32,500 (cash price $30,000 + sales tax $2,100 + painting and lettering $400). The expenditures for insurance and motor vehicle license should not be added to the cost of the truck.

BRIEF EXERCISE 10-3

Depreciable cost of $32,000, or ($38,000 – $6,000). With a four-year useful life, annual depreciation is $8,000, or ($32,000 ÷ 4). Under the straight-line method, depreciation is the same each year. Thus, depreciation is $8,000 for both the first and second years.

BRIEF EXERCISE 10-4

It is likely that management requested this accounting treatment to boost reported net income. Land is not depreciated; thus, by reporting land at $120,000 above its actual value the company increased yearly income by $8,000, $\left(\frac{\$120{,}000}{15\text{ years}}\right)$ or the reduction in depreciation expense. This practice is not ethical because management is knowingly misstating asset values.

BRIEF EXERCISE 10-5

The declining balance rate is 50%, or (25% X 2) and this rate is applied to book value at the beginning of the year. The computations are:

	Book Value	X	Rate	=	Depreciation
Year 1	$38,000		50%		$19,000
Year 2	($38,000 – $19,000)		50%		$ 9,500

BRIEF EXERCISE 10-6

The depreciation cost per unit is 26 cents per mile computed as follows:

Depreciable cost ($39,500 – $500) ÷ 150,000 = $.26
Year 1 30,000 miles X $.26 = $7,800
Year 2 20,000 miles X $.26 = $5,200

BRIEF EXERCISE 10-7

Book value, 1/1/14	$23,000
Less: Salvage value	2,000
Depreciable cost	$21,000
Remaining useful life	4 years
Revised annual depreciation ($21,000 ÷ 4)	$ 5,250

BRIEF EXERCISE 10-8

1.	Maintenance and Repairs Expense	45	
	Cash		45
2.	Equipment	400	
	Cash		400

BRIEF EXERCISE 10-9

(a)	Accumulated Depreciation—Equipment	41,000	
	Equipment		41,000
(b)	Accumulated Depreciation—Equipment	37,000	
	Loss on Disposal of Plant Assets	4,000	
	Equipment		41,000

BRIEF EXERCISE 10-9 (Continued)

Cost of equipment	$41,000
Less accumulated depreciation	37,000
Book value at date of disposal	4,000
Proceeds from sale	0
Loss on disposal	$ 4,000

BRIEF EXERCISE 10-10

(a)	Depreciation Expense	5,250	
	Accumulated Depreciation— Equipment		5,250
(b)	Cash.....	18,000	
	Accumulated Depreciation—Equipment.....	47,250	
	Loss on Disposal of Plant Assets	6,750	
	Equipment		72,000

Cost of equipment	$72,000
Less: Accumulated depreciation	47,250*
Book value at date of disposal	24,750
Proceeds from sale	18,000
Loss on disposal	$ 6,750

*$42,000 + $5,250

BRIEF EXERCISE 10-11

(a) Depletion cost per unit = $7,000,000 ÷ 35,000,000 = $.20 depletion cost per ton
$.20 X 5,000,000 = $1,000,000

Depletion Expense.....	1,000,000	
Accumulated Depletion		1,000,000

(b)	Ore mine.....	$7,000,000	
	Less: Accumulated depletion	1,000,000	$6,000,000

BRIEF EXERCISE 10-12

(a)	Amortization Expense ($140,000 ÷ 10)	14,000	
	Patents		14,000
(b)	Intangible Assets		
	Patents		$126,000

BRIEF EXERCISE 10-13

DENT COMPANY
Balance Sheet (partial)
December 31, 2014

Property, plant, and equipment			
Coal mine	$ 500,000		
Less: Accumulated depletion	108,000	$392,000	
Buildings	1,100,000		
Less: Accumulated depreciation—buildings	600,000	500,000	
Total property, plant, and equipment			$892,000
Intangible assets			
Goodwill			410,000

BRIEF EXERCISE 10-14

$$\$63.4 \div \left(\frac{\$44.1 + \$44.5}{2} \right) = 1.43 \text{ times}$$

*BRIEF EXERCISE 10-15

Equipment (new)	29,000	
Accumulated Depreciation—Equipment	30,000	
Loss on Disposal of Plant Assets	7,000	
Equipment (old)		61,000
Cash		5,000

***BRIEF EXERCISE 10-15 (Continued)**

Fair value of old delivery equipment	$24,000
Cash paid	5,000
Cost of delivery equipment	$29,000

Fair value of old delivery equipment	$24,000
Book value of old delivery equipment ($61,000 – $30,000)	31,000
Loss on disposal	$7,000

***BRIEF EXERCISE 10-16**

Equipment (new)	38,000	
Accumulated Depreciation—Equipment	30,000	
Gain on Disposal of Plant Assets		2,000
Equipment (old)		61,000
Cash		5,000

Fair value of old delivery equipment	$33,000
Cash paid	5,000
Cost of new delivery equipment	$38,000

Fair value of old delivery equipment	$33,000
Book value of old delivery equipment ($61,000 – $30,000)	31,000
Gain on disposal	$ 2,000

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 10-1

The following four items are expenditures necessary to acquire the truck and get it ready for use:

Negotiated purchase price	$24,000
Installation of special shelving	1,100
Painting and lettering	900
Sales tax	1,300
Total paid	$27,300

Thus, the cost of the truck is $27,300. The payments for the motor vehicle license and for the insurance are operating costs and are expensed in the first year of the truck's life.

DO IT! 10-2

$$\text{Depreciation expense} = \frac{\text{Cost – Salvage}}{\text{Useful life}} = \frac{\$15{,}000 - \$3{,}000}{8 \text{ years}} = \$1{,}500$$

The entry to record the first year's depreciation would be:

Depreciation Expense	1,500	
Accumulated Depreciation—Equipment		1,500
(To record annual depreciation on mower)		

DO IT! 10-3

Original depreciation expense = ($70,000 – $2,000) ÷ 8 years = $8,500

Accumulated depreciation after three years = 3 X $8,500 = $25,500

Book value, $70,000 – $25,500	$44,500
Less: Salvage value	6,000
Depreciable cost	$38,500
Remaining useful life	7 years
Revised annual depreciation ($38,500 ÷ 7)	$ 5,500

DO IT! 10-4

(a) Sale of truck for cash at a gain:

Cash	26,000	
Accumulated Depreciation—Equipment	28,000	
Equipment		52,000
Gain on Disposal of Plant Assets		2,000

(b) Sale of truck for cash at a loss:

Cash	15,000	
Loss on Disposal of Plant Assets	9,000	
Accumulated Depreciation—Equipment	28,000	
Equipment		52,000

DO IT! 10-5

1. Intangible assets
2. Amortization
3. Franchises
4. Research and development costs
5. Goodwill

SOLUTIONS TO EXERCISES

EXERCISE 10-1

(a) Under the historical cost principle, the acquisition cost for a plant asset includes all expenditures necessary to acquire the asset and make it ready for its intended use. For example, the cost of factory machinery includes the purchase price, freight costs paid by the purchaser, insurance costs during transit, and installation costs.

(b)
1. **Land**
2. **Equipment**
3. **Equipment**
4. **Land Improvements**
5. **Equipment**
6. **Equipment**
7. **Prepaid Insurance**
8. **License Expense**

EXERCISE 10-2

1. **Equipment**
2. **Equipment**
3. **Equipment**
4. **Land**
5. **Prepaid Insurance**
6. **Land Improvements**
7. **Land Improvements**
8. **Land**
9. **Buildings**

EXERCISE 10-3

(a) Cost of land

Cash paid	$75,000
Net cost of removing warehouse ($8,600 – $1,700)	6,900
Attorney's fee	1,100
Real estate broker's fee	5,000
Total	$88,000

(b) The architect's fee ($7,800) should be debited to the Buildings account. The cost of the driveways and parking lot ($14,000) should be debited to Land Improvements.

EXERCISE 10-4

1. **False. Depreciation is a process of *cost allocation*, not *asset valuation*.**
2. **True.**
3. **False. The book value of a plant asset *may be quite different* from its fair value.**
4. **False. Depreciation applies to three classes of plant assets: land *improvements,* buildings, and equipment.**
5. **False. Depreciation does not apply to *land* because its usefulness and revenue-producing ability generally remain intact over time.**
6. **True.**
7. **False. Recognizing depreciation on an asset *does not result* in an accumulation of cash for replacement of the asset.**
8. **True.**
9. **False. Depreciation expense is reported on the income statement, and *accumulated depreciation is reported as a deduction from plant assets on the balance sheet.***
10. **False. *Three* factors affect the computation of depreciation: cost, useful life, and salvage value *(also called residual value)*.**

EXERCISE 10-5

(a) Depreciation cost per unit is $1.40 per mile [($148,000 – $8,000) ÷ 100,000].

(b)

	Computation				End of Year	
Year	Units of Activity	X Depreciation Cost/Unit	= Annual Depreciation Expense		Accumulated Depreciation	Book Value
2014	26,000	$1.40	$36,400		$ 36,400	$111,600
2015	32,000	1.40	44,800		81,200	66,800
2016	25,000	1.40	35,000		116,200	31,800
2017	17,000	1.40	23,800		140,000	8,000

EXERCISE 10-6

(a) Straight-line method:

$$\left(\frac{\$150{,}000 - \$12{,}000}{5}\right) = \$27{,}600 \text{ per year.}$$

2014 depreciation = $27,600 X 3/12 = $6,900.

(b) Units-of-activity method:

$$\left(\frac{\$150{,}000 - \$12{,}000}{10{,}000}\right) = \$13.80 \text{ per hour.}$$

2014 depreciation = 1,700 hours X $13.80 = $23,460.

(c) Declining-balance method:

2014 depreciation = $150,000 X 40% X 3/12 = $15,000.
Book value January 1, 2015 = $150,000 – $15,000 = $135,000.
2015 depreciation = $135,000 X 40% = $54,000.

EXERCISE 10-7

(a) (1) 2014: ($34,000 – $2,000)/8 = $4,000
2015: ($34,000 – $2,000)/8 = $4,000

(2) ($34,000 – $2,000)/100,000 = $0.32 per mile
2014: 15,000 X $0.32 = $4,800
2015: 12,000 X $0.32 = $3,840

(3) 2014: $34,000 X 25% = $8,500
2015: ($34,000 – $8,500) X 25% = $6,375

(b)	(1)	Depreciation Expense	4,000	
		Accumulated Depreciation—Equipment		4,000
	(2)	Equipment		$34,000
		Less: Accumulated Depreciation—Equipment		4,000
				$30,000

EXERCISE 10-8

(a)

Type of Asset	Building	Warehouse
Book value, 1/1/14	$686,000	$81,000
Less: Salvage value	26,000	6,000
Depreciable cost	$660,000	$75,000
Remaining useful life in years	44	15
Revised annual depreciation	$ 15,000	$ 5,000

(b)	Dec. 31	Depreciation Expense	15,000	
		Accumulated Depreciation—Buildings		15,000

EXERCISE 10-9

Jan.	1	Accumulated Depreciation—Equipment	62,000	
		Equipment		62,000
June	30	Depreciation Expense	4,500	
		Accumulated Depreciation—Equipment ($45,000 X 1/5 X 6/12)		4,500
	30	Cash	14,000	
		Accumulated Depreciation—Equipment ($45,000 X 3/5 = $27,000; $27,000 + $4,500)	31,500	
		Gain on Disposal of Plant Assets [$14,000 – ($45,000 – $31,500)]		500
		Equipment		45,000
Dec.	31	Depreciation Expense	5,000	
		Accumulated Depreciation—Equipment [($33,000 – $3,000) X 1/6]		5,000
	31	Loss on Disposal of Plant Assets	8,000	
		Accumulated Depreciation—Equipment [($33,000 – $3,000) X 5/6]	25,000	
		Equipment		33,000

EXERCISE 10-10

(a)		Cash	31,000	
		Accumulated Depreciation—Equipment [($65,000 – $5,000) X 3/5]	36,000	
		Equipment		65,000
		Gain on Disposal of Plant Assets		2,000
(b)		Depreciation Expense [($65,000 – $5,000) X 1/5 X 4/12]	4,000	
		Accumulated Depreciation—Equipment		4,000
		Cash	31,000	
		Accumulated Depreciation—Equipment ($36,000 + $4,000)	40,000	
		Equipment		65,000
		Gain on Disposal of Plant Assets		6,000

EXERCISE 10-10 (Continued)

(c)	Cash	11,000	
	Accumulated Depreciation—Equipment	36,000	
	Loss on Disposal of Plant Assets	18,000	
	Equipment		65,000
(d)	Depreciation Expense [($65,000 – $5,000) ÷ 5 X 9/12]	9,000	
	Accumulated Depreciation—Equipment		9,000
	Cash	11,000	
	Accumulated Depreciation—Equipment ($36,000 + $9,000)	45,000	
	Loss on Disposal of Plant Assets	9,000	
	Equipment		65,000

EXERCISE 10-11

(a)	Dec. 31	Depletion Expense	80,000	
		Accumulated Depletion (100,000 X $.80)		80,000

Cost	(a)	$720,000
Units estimated	(b)	900,000 tons
Depletion cost per unit [(a) ÷ (b)]		$0.80

(b) The costs pertaining to the unsold units are reported in current assets as part of inventory (20,000 X $.80 = $16,000).

EXERCISE 10-12

Dec. 31	Amortization Expense	10,000	
	Patents ($75,000 ÷ 5 X 8/12)		10,000

Note: No entry is made to amortize goodwill because it has an indefinite life.

EXERCISE 10-13

1/2/14	Patents	595,000	
	Cash		595,000
4/1/14	Goodwill	360,000	
	Cash		360,000
	(Part of the entry to record purchase of another company)		
7/1/14	Franchises	480,000	
	Cash		480,000
9/1/14	Research and Development Expense	185,000	
	Cash		185,000
12/31/14	Amortization Expense		
	($595,000 ÷ 7) + [($480,000 ÷ 10) X 1/2]	109,000	
	Patents		85,000
	Franchises		24,000

Ending balances, 12/31/14:

Patents = $510,000 ($595,000 – $85,000).
Goodwill = $360,000
Franchises = $456,000 ($480,000 – $24,000).
R&D expense = $185,000

EXERCISE 10-14

$$\text{Asset turnover ratio} = \frac{\$3,500,000}{\$1,400,000} = 2.5 \text{ times}$$

*EXERCISE 10-15

(a)	Equipment (new)	55,000	
	Accumulated Depreciation—Equipment (old)	22,000	
	Loss on Disposal of Plant Assets	4,000	
	Equipment (old)		64,000
	Cash		17,000

Cost of old trucks	$64,000
Less: Accumulated depreciation	22,000
Book value	42,000
Fair value of old trucks	38,000
Loss on disposal	$ 4,000

Fair value of old trucks	$38,000
Cash paid	17,000
Cost of new trucks	$55,000

(b)	Equipment (new)	14,000	
	Accumulated Depreciation—Equipment (old)	4,000	
	Gain on Disposal of Plant Assets		3,000
	Equipment (old)		12,000
	Cash		3,000

Cost of old machine	$12,000
Less: Accumulated depreciation	4,000
Book value	8,000
Fair value of old machine	11,000
Gain on disposal	$ 3,000

Fair value of old machine	$ 11,000
Cash paid	3,000
Cost of new machine	$14,000

*EXERCISE 10-16

(a)	Equipment (new)	3,000	
	Loss on Disposal of Plant Assets	4,000	
	Accumulated Depreciation—Equipment (old)	15,000	
	Equipment (old)		22,000

Cost of old truck	$22,000
Less: Accumulated depreciation	15,000
Book value	7,000
Fair value of old truck	3,000
Loss on disposal	$ 4,000

(b)	Equipment (new)	3,000	
	Accumulated Depreciation—Equipment (old)	8,000	
	Equipment (old)		10,000
	Gain on Disposal of Plant Assets		1,000

Cost of old truck	$10,000
Less: Accumulated depreciation	8,000
Book value	2,000
Fair value of old truck	3,000
Gain on disposal	$ 1,000

Cost of new truck*	$ 3,000

*Fair value of old truck

SOLUTIONS TO PROBLEMS

PROBLEM 10-1A

Item	Land	Buildings	Other Accounts	
1	$ 4,000			
2		$690,000		
3			$ 5,000	Property Tax Expense
4	145,000			
5		35,000		
6		10,000		
7	2,000			
8			14,000	Land Improvements
9	25,000			
10	(3,500)			
	$172,500	$735,000		

PROBLEM 10-2A

(a)

Year	Computation	Accumulated Depreciation 12/31
	BUS 1	
2012	$ 90,000 X 20% = $18,000	$18,000
2013	$ 90,000 X 20% = $18,000	36,000
2014	$ 90,000 X 20% = $18,000	54,000
	BUS 2	
2012	$110,000 X 50% = $55,000	$55,000
2013	$ 55,000 X 50% = $27,500	82,500
2014	$ 27,500 X 50% = $13,750	96,250
	BUS 3	
2013	24,000 miles X $.70* = $16,800	$16,800
2014	34,000 miles X $.70 = $23,800	40,600

*$84,000 ÷ 120,000 miles = $.70 per mile.

(b)

	Year	Computation	Expense
		BUS 2	
(1)	2012	$110,000 X 50% X 9/12 = $41,250	$41,250
(2)	2013	$68,750 X 50% = $34,375	$34,375

PROBLEM 10-3A

(a)	(1)	Purchase price		$ 48,000
		Sales tax		1,700
		Shipping costs		150
		Insurance during shipping		80
		Installation and testing		70
		Total cost of machine		$ 50,000
		Equipment	50,000	
		Cash		50,000
	(2)	Recorded cost		$ 50,000
		Less: Salvage value		5,000
		Depreciable cost		$ 45,000
		Years of useful life		÷ 5
		Annual depreciation		$ 9,000
		Depreciation Expense	9,000	
		Accumulated Depreciation—Equipment		9,000
(b)	(1)	Recorded cost		180,000
		Less: Salvage value		10,000
		Depreciable cost		$170,000
		Years of useful life		÷ 4
		Annual depreciation		$ 42,500

(2)

Book Value at Beginning of Year	DDB Rate	Annual Depreciation Expense	Accumulated Depreciation
$180,000	50%*	$90,000	$ 90,000
90,000	50%	45,000	135,000
45,000	50%	22,500	157,500
22,500	50%	12,500**	170,000

*100% ÷ 4-year useful life = 25%; 25% X 2 = 50%.
**$170,000–$157,500.

PROBLEM 10-3A (Continued)

(3) Depreciation cost per unit = ($180,000 – $10,000)/125,000 units = $1.36 per unit.

Annual Depreciation Expense

2014: $1.36 X 45,000 = $61,200
2015: 1.36 X 35,000 = 47,600
2016: 1.36 X 25,000 = 34,000
2017: 1.36 X 20,000 = 27,200

(c) The declining-balance method reports the highest amount of depreciation expense the first year while the straight-line method reports the lowest. In the fourth year, the straight-line method reports the highest amount of depreciation expense while the declining-balance method reports the lowest.

These facts occur because the declining-balance method is an accelerated depreciation method in which the largest amount of depreciation is recognized in the early years of the asset's life. If the straight-line method is used, the same amount of depreciation expense is recognized each year. Therefore, in the early years less depreciation expense will be recognized under this method than under the declining-balance method while more will be recognized in the later years.

The amount of depreciation expense recognized using the units-of-activity method is dependent on production, so this method could recognize more or less depreciation expense than the other two methods in any year depending on output.

No matter which of the three methods is used, the same total amount of depreciation expense will be recognized over the four-year period.

PROBLEM 10-4A

Year	Depreciation Expense	Accumulated Depreciation
2012	$18,000[a]	$18,000
2013	18,000	36,000
2014	14,400[b]	50,400
2015	14,400	64,800
2016	14,400	79,200
2017	17,900[c]	97,100
2018	17,900	115,000

[a] $$\frac{\$120{,}000 - \$12{,}000}{6 \text{ years}} = \$18{,}000$$

[b] $$\frac{\text{Book value} - \text{Salvage value}}{\text{Remaining useful life}} = \frac{\$84{,}000 - \$12{,}000}{5 \text{ years}} = \$14{,}400$$

[c] $$\frac{\$40{,}800 - \$5{,}000}{2 \text{ years}} = \$17{,}900$$

PROBLEM 10-5A

(a)	Apr.	1	Land	2,130,000	
			Cash		2,130,000
	May	1	Depreciation Expense	25,000	
			Accumulated Depreciation—Equipment ($750,000 X 1/10 X 4/12)		25,000
		1	Cash	450,000	
			Accumulated Depreciation—Equipment	325,000	
			Equipment		750,000
			Gain on Disposal of Plant Assets		25,000

Cost	$750,000
Accum. depreciation—equipment [($750,000 X 1/10 X 4) + $25,000]	325,000
Book value	425,000
Cash proceeds	450,000
Gain on disposal	$ 25,000

	June	1	Cash	1,500,000	
			Land		400,000
			Gain on Disposal of Plant Assets		1,100,000
	July	1	Equipment	2,500,000	
			Cash		2,500,000
	Dec.	31	Depreciation Expense	50,000	
			Accumulated Depreciation—Equipment ($500,000 X 1/10)		50,000
		31	Accumulated Depreciation—Equipment	500,000	
			Equipment		500,000

PROBLEM 10-5A (Continued)

		Cost	$500,000		
		Accum. depreciation—equipment ($500,000 X 1/10 X 10)	500,000		
		Book value	$ 0		
(b)	Dec. 31	Depreciation Expense		570,000	
		Accumulated Depreciation—Buildings ($28,500,000 X 1/50)			570,000
	31	Depreciation Expense		4,800,000	
		Accumulated Depreciation—Equipment			4,800,000
		($46,750,000* X 1/10)	$4,675,000		
		[($2,500,000 X 1/10) X 6/12]	125,000		
			$4,800,000		

*($48,000,000 – $750,000 – $500,000)

(c)

GRAND COMPANY
Partial Balance Sheet
December 31, 2015

Plant Assets*		
Land		$ 5,730,000
Buildings	$28,500,000	
Less: Accumulated depreciation—buildings	12,670,000	15,830,000
Equipment	49,250,000	
Less: Accumulated depreciation—equipment	9,050,000	40,200,000
Total plant assets		$61,760,000

*See T-accounts which follow.

PROBLEM 10-5A (Continued)

Land

Bal.	4,000,000	June 1	400,000
Apr. 1	2,130,000		
Bal.	5,730,000		

Buildings

Bal.	28,500,000		
Bal.	28,500,000		

Accumulated Depreciation—Buildings

		Bal.	12,100,000
		Dec. 31 adj.	570,000
		Bal.	12,670,000

Equipment

Bal.	48,000,000	May 1	750,000
July 1	2,500,000	Dec. 31	500,000
Bal.	49,250,000		

Accumulated Depreciation—Equipment

May 1	325,000	Bal.	5,000,000
Dec. 31	500,000	May 1	25,000
		Dec. 31	50,000
		Dec. 31 adj.	4,800,000
		Bal.	9,050,000

PROBLEM 10-6A

(a)	**Accumulated Depreciation—Equipment**	**50,000**	
	Loss on Disposal of Plant Assets	**30,000**	
	Equipment		**80,000**
(b)	**Cash**	**21,000**	
	Accumulated Depreciation—Equipment	**50,000**	
	Loss on Disposal of Plant Assets	**9,000**	
	Equipment		**80,000**
(c)	**Cash**	**31,000**	
	Accumulated Depreciation—Equipment	**50,000**	
	Gain on Disposal of Plant Assets		**1,000**
	Equipment		**80,000**

PROBLEM 10-7A

(a)	Jan. 2	Patents	27,000	
		Cash		27,000
	Jan.–June	Research and Development Expense	140,000	
		Cash		140,000
	Sept. 1	Advertising Expense	50,000	
		Cash		50,000
	Oct. 1	Franchises	140,000	
		Cash		140,000
(b)	Dec. 31	Amortization Expense	10,000	
		Patents		10,000
		[($70,000 X 1/10) + ($27,000 X 1/9)]		
	31	Amortization Expense	5,500	
		Franchises		5,500
		[($48,000 X 1/10) + ($140,000 X 1/50 X 3/12)]		

(c) Intangible Assets

Patents ($97,000 cost – $17,000 amortization) (1)	$ 80,000
Franchises ($188,000 cost – $24,700 amortization) (2)	163,300
Total intangible assets	$243,300

(1) Cost ($70,000 + $27,000); amortization ($7,000 + $10,000).
(2) Cost ($48,000 + $140,000); amortization ($19,200 + $5,500).

PROBLEM 10-8A

1.	**Research and Development Expense**	**136,000**	
	Patents.....		**136,000**
	Patents	**13,600**	
	Amortization Expense		
	[$19,600 – ($60,000 X 1/10)]		**13,600**
2.	**Goodwill**	**920**	
	Amortization Expense.....		**920**

Note: Goodwill should not be amortized because it has an indefinite life unlike Patents.

PROBLEM 10-9A

(a)

	LaPorta	Lott
Asset turnover	$\frac{\$1,300,000}{\$2,500,000}$ = .52 times	$\frac{\$1,180,000}{\$2,000,000}$ = .59 times

(b) Based on the asset turnover, Lott is more effective in using assets to generate sales. Its asset turnover is 13% higher than LaPorta's ratio.

PROBLEM 10-1B

Item	Land	Buildings	Other Accounts	
1	$ 5,000			
2			$ 7,500	Property Tax Expense
3		$490,000		
4		19,000		
5	100,000			
6			18,000	Land Improvements
7		9,000		
8			6,000	Land Improvements
9	27,000			
10	(3,500)			
	$128,500	$518,000		

PROBLEM 10-2B

(a)

Year	Computation	Accumulated Depreciation 12/31
	MACHINE 1	
2011	$100,000 X 10% = $10,000	$ 10,000
2012	$100,000 X 10% = $10,000	20,000
2013	$100,000 X 10% = $10,000	30,000
2014	$100,000 X 10% = $10,000	40,000
	MACHINE 2	
2012	$180,000 X 25% = $45,000	$ 45,000
2013	$135,000 X 25% = $33,750	78,750
2014	$101,250 X 25% = $25,313	104,063
	MACHINE 3	
2014	2,000 X ($110,000 ÷ 25,000) = $8,800	$ 8,800

(b)

	Year	Depreciation Computation	Expense
		MACHINE 2	
(1)	2012	$180,000 X 25% X 8/12 = $30,000	$30,000
(2)	2013	$150,000 X 25% = $37,500	$37,500

PROBLEM 10-3B

(a) (1)

Purchase price			$ 58,000
Sales tax			2,750
Shipping costs			100
Insurance during shipping			75
Installation and testing			75
Total cost of machine			$ 61,000
Equipment	61,000		
Cash			61,000

(2)

Recorded cost			$ 61,000
Less: Salvage value			5,000
Depreciable cost			$ 56,000
Years of useful life			÷ 4
Annual depreciation			$ 14,000
Depreciation Expense	14,000		
Accumulated Depreciation—Equipment			14,000

(b) (1)

Recorded cost			$120,000
Less: Salvage value			10,000
Depreciable cost			$110,000
Years of useful life			÷ 4
Annual depreciation			$ 27,500

(2)

Year	Book Value at Beginning of Year	DDB Rate	Annual Depreciation Expense	Accumulated Depreciation
2014	$120,000	50%*	$60,000	$60,000
2015	60,000	50%	30,000	90,000
2016	30,000	50%	15,000	105,000
2017	15,000	50%	5,000**	110,000

*100% ÷ 4-year useful life = 25% X 2 = 50%.
**$15,000 – $10,000 = $5,000.

PROBLEM 10-3B (Continued)

(3) Depreciation cost per unit = ($120,000 – $10,000)/25,000 units = $4.40 per unit.

Annual Depreciation Expense

2014:	**$4.40 X 5,500 =**	**$24,200**
2015:	**4.40 X 7,000 =**	**30,800**
2016:	**4.40 X 8,000 =**	**35,200**
2017:	**4.40 X 4,500 =**	**19,800**

(c) The units-of-activity method reports the lowest amount of depreciation expense the first year while the declining-balance method reports the highest. In the fourth year, the declining-balance method reports the lowest amount of depreciation expense while the straight-line method reports the highest.

These facts occur because the declining-balance method is an accelerated depreciation method in which the largest amount of depreciation is recognized in the early years of the asset's life. If the straight-line method is used, the same amount of depreciation expense is recognized each year. Therefore, in the early years less depreciation expense will be recognized under this method than under the declining-balance method while more will be recognized in the later years.

The amount of depreciation expense recognized using the units-of-activity method is dependent on production, so this method could recognize more or less depreciation expense than the other two methods in any year depending on output.

No matter which of the three methods is used, the same total amount of depreciation expense will be recognized over the four-year period.

PROBLEM 10-4B

Year	Depreciation Expense	Accumulated Depreciation
2012	$45,000[a]	$ 45,000
2013	45,000	90,000
2014	36,000[b]	126,000
2015	36,000	162,000
2016	36,000	198,000
2017	48,500[c]	246,500
2018	48,500	295,000

[a] $$\frac{\$300{,}000 - \$30{,}000}{6 \text{ years}} = \$45{,}000$$

[b] $$\frac{\text{Book value} - \text{Salvage value}}{\text{Remaining useful life}} = \frac{\$210{,}000 - \$30{,}000}{5 \text{ years}} = \$36{,}000$$

[c] $$\frac{\$102{,}000 - \$5{,}000}{2 \text{ years}} = \$48{,}500$$

PROBLEM 10-5B

(a)	Apr.	1	Land	1,200,000	
			Cash		1,200,000
	May	1	Depreciation Expense	15,000	
			Accumulated Depreciation—Equipment		15,000
			($450,000 X 1/10 X 4/12)		
		1	Cash	260,000	
			Accumulated Depreciation—Equipment	195,000	
			Equipment		450,000
			Gain on Disposal of Plant Assets		5,000

Cost	$450,000
Accum. depreciation—equipment [($450,000 X 1/10 X 4) + $15,000]	195,000
Book value	255,000
Cash proceeds	260,000
Gain on disposal	$ 5,000

	June	1	Cash	1,000,000	
			Land		340,000
			Gain on Disposal of Plant Assets		660,000
	July	1	Equipment	1,500,000	
			Cash		1,500,000
	Dec.	31	Depreciation Expense	30,000	
			Accumulated Depreciation—Equipment		30,000
			($300,000 X 1/10)		
		31	Accumulated Depreciation—Equipment	300,000	
			Equipment		300,000

PROBLEM 10-5B (Continued)

Cost	$300,000
Accum. depreciation—equipment ($300,000 X 1/10 X 10)	300,000
Book value	$ 0

(b)

Dec. 31	Depreciation Expense		400,000	
	Accumulated Depreciation—Buildings			400,000
	($20,000,000 X 1/50)			
31	Depreciation Expense		3,000,000	
	Accumulated Depreciation—Equipment			3,000,000

($29,250,000* X 1/10)	$2,925,000
[($1,500,000 X 1/10) X 6/12]	75,000
	$3,000,000

*($30,000,000 – $450,000 – $300,000)

(c)

TORREALBA COMPANY
Partial Balance Sheet
December 31, 2015

Plant Assets*		
Land		$ 2,860,000
Buildings	$20,000,000	
Less: Accumulated depreciation—buildings	8,400,000	11,600,000
Equipment	30,750,000	
Less: Accumulated depreciation—equipment	6,550,000	24,200,000
Total plant assets		$38,660,000

*See T-accounts which follow.

PROBLEM 10-5B (Continued)

Land

Bal.	2,000,000	June 1	340,000
Apr. 1	1,200,000		
Bal.	2,860,000		

Buildings

Bal.	20,000,000		
Bal.	20,000,000		

Accumulated Depreciation—Buildings

		Bal.	8,000,000
		Dec. 31 adj.	400,000
		Bal.	8,400,000

Equipment

Bal.	30,000,000	May 1	450,000
July 1	1,500,000	Dec. 31	300,000
Bal.	30,750,000		

Accumulated Depreciation—Equipment

May 1	195,000	Bal.	4,000,000
Dec. 31	300,000	May 1	15,000
		Dec. 31	30,000
		Dec. 31 adj.	3,000,000
		Bal.	6,550,000

PROBLEM 10-6B

(a)	**Accumulated Depreciation—Equipment**	**26,000**	
	Loss on Disposal of Plant Assets	**19,000**	
	Equipment		**45,000**
(b)	**Cash**	**29,000**	
	Accumulated Depreciation—Equipment	**26,000**	
	Gain on Disposal of Plant Assets		**10,000**
	Equipment		**45,000**
(c)	**Cash**	**10,000**	
	Accumulated Depreciation—Equipment	**26,000**	
	Loss on Disposal of Plant Assets	**9,000**	
	Equipment		**45,000**

PROBLEM 10-7B

(a)	Jan. 2	Patents	36,000	
		Cash		36,000
	Jan.–June	Research and Development Expense	230,000	
		Cash		230,000
	Sept. 1	Advertising Expense	125,000	
		Cash		125,000
	Oct. 1	Copyrights	300,000	
		Cash		300,000
(b)	Dec. 31	Amortization Expense	14,000	
		Patents		14,000
		[($100,000 X 1/10) + ($36,000 X 1/9)]		
	31	Amortization Expense	7,500	
		Copyrights		7,500
		[($60,000 X 1/10) + ($300,000 X 1/50 X 3/12)]		

(c) Intangible Assets

Patents ($136,000 cost – $24,000 amortization) (1)	$112,000
Copyrights ($360,000 cost – $31,500 amortization) (2)	328,500
Total intangible assets	$440,500

(1) Cost ($100,000 + $36,000); amortization ($10,000 + $14,000).
(2) Cost ($60,000 + $300,000); amortization ($24,000 + $7,500).

(d) The intangible assets of the company consist of two patents and two copyrights. One patent with a total cost of $136,000 is being amortized in two segments ($100,000 over 10 years and $36,000 over 9 years); the other patent was obtained at no recordable cost. A copyright with a cost of $60,000 is being amortized over 10 years; the other copyright with a cost of $300,000 is being amortized over 50 years.

PROBLEM 10-8B

1.	**Research and Development Expense**	**110,000**	
	Patents		**110,000**
	Patents	**11,000**	
	Amortization Expense		
	[$16,000 – ($50,000 X 1/10)]		**11,000**
2.	**Goodwill**	**2,000**	
	Amortization Expense		**2,000**

Note: Goodwill should not be amortized because it has an indefinite life unlike Patents.

PROBLEM 10-9B

(a)

	Auer Corp.	Marte Corp.
Asset turnover	$\frac{\$1{,}050{,}000}{\$1{,}000{,}000}$ = 1.05 times	$\frac{\$945{,}000}{\$1{,}050{,}000}$ = .90 times

(b) Based on the asset turnover, Auer Corp. is more effective in using assets to generate sales. Its asset turnover is 17% higher than Marte's asset turnover ratio.

CHAPTER 10 COMPREHENSIVE PROBLEM SOLUTION

(a) 1.	Equipment	22,800	
	Cash		22,800
2.	Depreciation Expense	450	
	Accumulated Depreciation—Equipment		450
	Cash	3,500	
	Accumulated Depreciation—Equipment	2,250	
	Equipment		5,000
	Gain on Disposal of Plant Assets		750
3.	Accounts Receivable	9,000	
	Sales Revenue		9,000
	Cost of Goods Sold	6,300	
	Inventory		6,300
4.	Bad Debt Expense	3,500	
	Allowance for Doubtful Accounts		3,500
5.	Interest Receivable ($10,000 X .08 X 9/12)	600	
	Interest Revenue		600
6.	Insurance Expense ($3,600 X 4/6)	2,400	
	Prepaid Insurance		2,400
7.	Depreciation Expense	4,000	
	Accumulated Depreciation—Buildings		4,000
8.	Depreciation Expense	9,900	
	Accumulated Depreciation—Equipment [($60,000 – $5,000) – ($55,000 X .10)] ÷ 5		9,900
9.	Depreciation Expense	2,800	
	Accumulated Depreciation—Equipment [($22,800 – $1,800) ÷ 5] X 8/12		2,800

COMPREHENSIVE PROBLEM (Continued)

10.	Amortization Expense	900	
	Patents		900
11.	Salaries and Wages Expense	5,200	
	Salaries and Wages Payable		5,200
12.	Unearned Rent Revenue ($6,000 ÷ 3)	2,000	
	Rent Revenue		2,000
13.	Interest Expense ($11,000 + $30,000) X .09	3,690	
	Interest Payable		3,690

COMPREHENSIVE PROBLEM (Continued)

(b)

HASSELLHOUF COMPANY
Trial Balance
December 31, 2014

	Debits	Credits
Cash	$ 8,700	
Accounts Receivable	45,800	
Notes Receivable	10,000	
Interest Receivable	600	
Inventory	29,900	
Prepaid Insurance	1,200	
Land	20,000	
Buildings	150,000	
Equipment	77,800	
Patents	8,100	
Allowance for Doubtful Accounts		$ 4,000
Accumulated Depreciation—Buildings		54,000
Accumulated Depreciation—Equipment		34,900
Accounts Payable		27,300
Salaries and Wages Payable		5,200
Unearned Rent Revenue		4,000
Notes Payable (due in 2015)		11,000
Interest Payable		3,690
Notes Payable (due after 2015)		30,000
Owner's Capital		113,600
Owner's Drawings	12,000	
Sales Revenue		914,000
Interest Revenue		600
Rent Revenue		2,000
Gain on Disposal of Plant Assets		750
Bad Debt Expense	3,500	
Cost of Goods Sold	636,300	
Depreciation Expense	17,150	
Insurance Expense	2,400	
Interest Expense	3,690	
Other Operating Expenses	61,800	
Amortization Expense	900	
Salaries and Wages Expense	115,200	
Total	$1,205,040	$1,205,040

(c)

HASSELLHOUF COMPANY
Income Statement
For the Year Ended December 31, 2014

Sales Revenue		$914,000
Cost of Goods Sold		636,300
Gross Profit		277,700
Operating Expenses		
Salaries and Wages Expense	$115,200	
Other Operating Expenses	61,800	
Depreciation Expense	17,150	
Bad Debt Expense	3,500	
Insurance Expense	2,400	
Amortization Expense	900	
Total Operating Expenses		200,950
Income From Operations		76,750
Other Revenues and Gains		
Rent Revenue	2,000	
Gain on Disposal of Plant Assets	750	
Interest Revenue	600	
	3,350	
Other Expenses and Losses		
Interest Expense	3,690	(340)
Net Income		$ 76,410

HASSELLHOUF COMPANY
Owner's Equity Statement
For the Year Ended December 31, 2014

Owner's Capital, 1/1/14	$113,600
Add: Net Income	76,410
	190,010
Less: Drawings	12,000
Owner's Capital, 12/31/14	$178,010

(d)

HASSELLHOUF COMPANY
Balance Sheet
December 31, 2014

Assets			
Current Assets			
Cash		$ 8,700	
Accounts Receivable	$ 45,800		
Allowance for Doubtful Accounts	4,000	41,800	
Notes Receivable		10,000	
Interest Receivable		600	
Inventory		29,900	
Prepaid Insurance		1,200	
Total Current Assets			$92,200
Property, Plant, and Equipment			
Land		20,000	
Buildings	150,000		
Less Accum. Depr.—Buildings	54,000	96,000	
Equipment	77,800		
Less Accum. Depr.—Equipment	34,900	42,900	
Total Plant Assets			158,900
Intangible Assets			
Patents			8,100
Total Assets			$259,200
Liabilities and Owner's Equity			
Current Liabilities			
Notes Payable		$11,000	
Accounts Payable		27,300	
Interest Payable		3,690	
Unearned Rent Revenue		4,000	
Salaries and Wages Payable		5,200	
Total Current Liabilities			51,190
Long-term Liabilities			
Notes Payable			30,000
Total Liabilities			81,190
Owner's Equity			
Owner's Capital			178,010
Total Liabilities and Owner's Equity			$259,200

BYP 10-1 FINANCIAL REPORTING PROBLEM

(a) Property, plant, and equipment is reported net, book value, on the September 24, 2011, balance sheet at $7,777,000,000. The cost of the property, plant, and equipment is $11,768,000,000 as shown in Note 3.

(b) Depreciation and amortization expense was:

2011:	**$1,814,000,000.**
2010:	**$1,027,000,000.**
2009:	**$ 734,000,000.**

(c) Apple's capital spending was:

2011:	**$4,260,000,000.**
2010:	**$2,005,000,000.**

(d) Apple reports (in Note 4) amortizable intangible assets, net of $3,436,000,000, and non-amortizable trademarks of $100,000,000. In addition, it reported goodwill of $896,000,000.

BYP 10-2 COMPARATIVE ANALYSIS PROBLEM

(a)

	PepsiCo	Coca-Cola
Asset turnover ratio	$\$66{,}504 \div \frac{\$68{,}153 + \$72{,}882}{2} = 0.94$ times	$\$46{,}542 \div \frac{\$79{,}974 + \$72{,}921}{2} = .61$ times

(b) The asset turnover measures how efficiently a company uses its assets to generate sales. It shows the dollars of sales generated by each dollar invested in assets. PepsiCo's asset turnover (0.94) was 54% higher than Coca-Cola (.61). Therefore, it can be concluded that PepsiCo was more efficient during 2011 in utilizing assets to generate sales.

BYP 10-3 COMPARATIVE ANALYSIS PROBLEM

(a)

	Amazon	Wal-Mart
Asset turnover	$\$48{,}077 \div \frac{\$25{,}278 + \$18{,}797}{2} = 2.18$ times	$\$443{,}854 \div \frac{\$193{,}406 + \$180{,}782}{2} = 2.37$ times

(b)The asset turnover measures how efficiently a company uses its assets to generate sales. It shows the dollars of sales generated by each dollar invested in assets. Wal-Mart's asset turnover (2.37) was 9% higher than Amazon (2.18). Therefore, it can be concluded that Wal-Mart was more efficient during 2011 in utilizing assets to generate sales.

BYP 10-4 REAL-WORLD FOCUS

Answers will vary depending on the company selected.

BYP 10-5 DECISION MAKING ACROSS THE ORGANIZATION

(a) **Pinson Company—Straight-line method**

Annual Depreciation	
Buildings [($360,000 – $20,000) ÷ 40]	**$ 8,500**
Equipment [($130,000 – $10,000) ÷ 10]	**12,000**
Total annual depreciation	**$20,500**
Total accumulated depreciation ($20,500 X 3)	**$61,500**

Estes Company—Double-declining-balance method

Year	Asset	Computation	Annual Depreciation	Accumulated Depreciation
2012	Buildings	$360,000 X 5%	$18,000	
	Equipment	$130,000 X 20%	26,000	$44,000
2013	Buildings	$342,000 X 5%	17,100	
	Equipment	$104,000 X 20%	20,800	37,900
2014	Buildings	$324,900 X 5%	16,245	
	Equipment	$ 83,200 X 20%	16,640	32,885
				$114,785

(b)

Year	Pinson Company Net Income	Estes Company Net Income As Adjusted	Computations for Estes Company
2012	$ 84,000	$ 91,500	$68,000 + $44,000 – $20,500 = $91,500
2013	88,400	93,400	$76,000 + $37,900 – $20,500 = $93,400
2014	90,000	97,385	$85,000 + $32,885 – $20,500 = $97,385
Total net income	$262,400	$282,285	

(c) **As shown above, when the two companies use the same depreciation method, Estes Company is more profitable than Pinson Company. When the two companies are using different depreciation methods, Estes Company has more cash than Pinson Company for two reasons:**

(1) its earnings are generating more cash than the earnings of Pinson Company, and (2) depreciation expense has no effect on cash. Cash generated by operations can be arrived at by adding depreciation expense to net income. If this is done, it can be seen that Estes Company's operations generate more cash ($229,000 + $114,785 = $343,785) than Pinson Company's ($262,400 + $61,500 = $323,900). Based on the above analysis, Lynda Peace should buy Estes Company. It not only is in a better financial position than Pinson Company, but it is also more profitable.

BYP 10-6 COMMUNICATION ACTIVITY

To: Instructor

From: Student

Re: American Exploration Company footnote

American Exploration Company accounts for its oil and gas activities using the successful efforts approach. Under this method, only the costs of successful exploration are included in the cost of the natural resource, and the costs of unsuccessful explorations are expensed.

Depletion is determined using the units-of-activity method. Under this method, a depletion cost per unit is computed based on the total number of units expected to be extracted. Depletion expense for the year is determined by multiplying the units extracted and sold by the depletion cost per unit.

BYP 10-7 ETHICS CASE

(a) The stakeholders in this situation are:

- **Robert Griffin, president of Turner Container Company.**
- **Alexis Landrum, controller.**
- **The stockholders of Turner Container Company.**
- **Potential investors in Turner Container Company.**

(b) The intentional misstatement of the life of an asset or the amount of the salvage value is unethical for whatever the reason. There is nothing per se unethical about changing the estimate either of the life of an asset or of an asset's salvage value if the change is an attempt to better match cost and revenues and is a better allocation of the asset's depreciable cost over the asset's useful life. In this case, it appears from the controller's reaction that the revisions in the life are intended only to improve earnings and, therefore, are unethical.

The fact that the competition uses a longer life on its equipment is not necessarily relevant. The competition's maintenance and repair policies and activities may be different. The competition may use its equipment fewer hours a year (e.g., one shift rather than two shifts daily) than Turner Container Company.

(c) Income before income taxes in the year of change is increased $160,000 by implementing the president's proposed changes.

	Old Estimates
Asset cost	$3,500,000
Estimated salvage	300,000
Depreciable cost	3,200,000
Depreciation per year (1/8)	$ 400,000

	Revised Estimates
Asset cost	$3,500,000
Estimated salvage	300,000
Depreciable cost	3,200,000
Depreciation taken to date ($400,000 X 2)	800,000
	2,400,000
Remaining life in years	10 years
Depreciation per year	$ 240,000

BYP 10-8 ALL ABOUT YOU

(a) 1 c 2 b 3 a 4 d 5 c

(b) For the most part, the value of a brand is not reported on a company's balance sheet. Most companies are required to expense all costs related to the maintenance of a brand name. Also any research and development that went into the development of the related product is generally expensed. The only way significant costs related to the value of the brand are reported on balance sheet is when a company purchases another company that has a significant tradename (brand). In that case, given an objective transaction, companies are able to assign value to the brand and report it on the balance sheet. A conservative approach is used in this area because the value of the brand can be extremely difficult to determine. It should be noted that international rules permit companies to report brand values on their balance sheets.

(a) Capitalize is used to indicate that the cost would be recorded as the cost of an asset. That procedure is often referred to as deferring a cost, and the resulting asset is sometimes described as a deferred cost.

(b) Intangible assets are assets that lack physical substance. (The term intangible asset is used to refer to intangible assets other than goodwill.)

(c) Codification reference 360-10-35-2 addresses the concept of depreciation accounting and the various factors to consider in selecting the related periods and methods to be used in such accounting. Generally accepted accounting principles (GAAP) require that the cost of a productive facility be spread over the expected useful life of the facility in such a way as to allocate it as equitably as possible to the periods during which services are obtained from the use of the facility (Codification reference 360-10-35-4).

IFRS EXERCISES

IFRS10-1

Component depreciation is a method of allocating the cost of a plant asset into separate parts based on the estimated useful lives of each component. IFRS requires an entity to use component depreciation whenever significant parts of a plant asset have significantly different useful lives.

IFRS10-2

Revaluation is an accounting procedure that adjusts plant assets to fair value at the reporting date. If revaluation is used, it must be applied annually to assets that are experiencing rapid price changes.

IFRS10-3

Both types of development expenditures relate to the creation of new products but one is expensed and the other is capitalized. Development costs incurred before a new product achieves technological feasibility are recorded as development expenses and appear as part of operating expenses on the income statement.

Cost incurred after technological feasibility are recorded as development costs and appear as an intangible asset on the statement of financial position.

IFRS10-4

Warehouse component: ($280,000 – $50,000)/20 = $11,500
HVAC component: $50,000/10 = $5,000
Total component depreciation in first year $16,500

IFRS10-5

(a)	**Accumulated Depreciation—Plant Assets**	**60,000**	
	Revaluation Surplus		**45,000**
	Plant Assets		**15,000**
	(To record revaluation of plant assets)		

IFRS10-5 (Continued)

(b)	**Accumulated Depreciation—Plant Assets**	**60,000**	
	Revaluation Surplus	**15,000**	
	Plant Assets		**75,000**
	(To record revaluation of plant assets)		

IFRS10-6

Development Expense	**400,000**	
Research Expense	**350,000**	
Development Costs	**200,000**	
Cash		**950,000**
(To record research and development costs)		

IFRS10-7 INTERNATIONAL FINANCIAL STATEMENT ANALYSIS

(a) Zetar uses straight line and reducing-balance depreciation methods. The depreciation rates range from 10-33%.

(b) Goodwill is reviewed annually for impairment.

(c)	**Accumulated Depreciation**	**50**	
	Cash	**45**	
	Loss on Disposal	**9**	
	Property, Plant, and Equipment		**104**