

CHAPTER 10

Acquisition and Disposition of Property, Plant, and Equipment

ASSIGNMENT CLASSIFICATION TABLE (BY TOPIC)

Topics	Questions	Brief Exercises	Exercises	Problems	Concepts for Analysis
1. Valuation and classification of land, buildings, and equipment.	1, 2, 3, 4, 6, 7, 12, 13, 18	1	1, 2, 3, 4, 5, 13	1, 2, 3, 5	1, 6, 7
2. Self-constructed assets, capitalization of overhead.	5, 8, 20, 21		4, 6, 12		2
3. Capitalization of interest.	7, 9, 10, 13, 18	2, 3, 4	4, 5, 7, 8, 9, 10, 16	1, 5, 6, 7	3, 4
4. Exchanges of assets	12, 16, 17	8, 9, 10, 11, 12	3, 11, 16, 17, 18, 19, 20	4, 8, 9, 10, 11	5
5. Lump-sum purchases, issuance of stock, deferred payment contracts.	12, 14, 15	6, 7	3, 6, 11, 12, 13, 14, 15, 16	1, 11	
6. Costs subsequent to acquisition.	16, 18, 19, 22	13	21, 22, 23		1
7. Alternative valuations.	23	5		3	
8. Disposition of assets.	24	14, 15	24, 25	4	1

ASSIGNMENT CLASSIFICATION TABLE (BY LEARNING OBJECTIVE)

Learning Objectives	Brief Exercises	Exercises	Problems
1. Describe property, plant, and equipment.			
2. Identify the costs to include in initial valuation of property, plant, and equipment.	1	1, 2, 3, 4, 5, 11, 12, 13	1, 2, 3, 4, 5, 6, 11
3. Describe the accounting problems associated with self-constructed assets.		4, 5, 6, 11, 12	3
4. Describe the accounting problems associated with interest capitalization.	2, 3, 4	5, 6, 7, 8, 9, 10	5, 6, 7, 8, 9, 10, 11
5. Understand the accounting issues related to acquiring and valuing plant assets.	5, 6, 7, 8, 9, 10, 11, 12	11, 12, 13, 14, 15, 16, 17, 18, 19, 20	3, 4
6. Describe the accounting treatment for costs subsequent to acquisition.	13	21, 22, 23, 24	
7. Describe the accounting treatment for the disposal of property, plant, and equipment.	14, 15	25	2, 4, 11

ASSIGNMENT CHARACTERISTICS TABLE

Item	Description	Level of Difficulty	Time (minutes)
E10-1	Acquisition costs of realty.	Moderate	15–20
E10-2	Acquisition costs of realty.	Simple	10–15
E10-3	Acquisition costs of trucks.	Simple	10–15
E10-4	Purchase and self-constructed cost of assets.	Moderate	20–25
E10-5	Treatment of various costs.	Moderate	30–40
E10-6	Correction of improper cost entries.	Moderate	15–20
E10-7	Capitalization of interest.	Moderate	20–25
E10-8	Capitalization of interest.	Moderate	20–25
E10-9	Capitalization of interest.	Moderate	20–25
E10-10	Capitalization of interest.	Moderate	20–25
E10-11	Entries for equipment acquisitions.	Simple	10–15
E10-12	Entries for asset acquisition, including self-construction.	Simple	15–20
E10-13	Entries for acquisition of assets.	Simple	20–25
E10-14	Purchase of equipment with zero-interest-bearing debt.	Moderate	15–20
E10-15	Purchase of computer with zero-interest-bearing debt.	Moderate	15–20
E10-16	Asset acquisitions.	Moderate	25–35
E10-17	Nonmonetary exchange.	Simple	10–15
E10-18	Nonmonetary exchange.	Moderate	20–25
E10-19	Nonmonetary exchange.	Moderate	15–20
E10-20	Nonmonetary exchange.	Moderate	15–20
E10-21	Analysis of subsequent expenditures.	Moderate	20–25
E10-22	Analysis of subsequent expenditures.	Simple	15–20
E10-23	Analysis of subsequent expenditures.	Simple	20–25
E10-24	Entries for disposition of assets.	Moderate	20–25
E10-25	Disposition of assets.	Simple	15–20
P10-1	Classification of acquisition and other asset costs.	Moderate	35–40
P10-2	Classification of acquisition costs.	Moderate	40–55
P10-3	Classification of land and building costs.	Moderate	35–45
P10-4	Dispositions, including condemnation, demolition, and trade-in.	Moderate	35–40
P10-5	Classification of costs and interest capitalization.	Moderate	20–30
P10-6	Interest during construction.	Moderate	25–35
P10-7	Capitalization of interest, disclosures.	Moderate	20–30
P10-8	Nonmonetary exchanges.	Moderate	35–45
P10-9	Nonmonetary exchanges.	Moderate	30–40
P10-10	Nonmonetary exchanges.	Moderate	30–40
P10-11	Purchases by deferred payment, lump-sum, and nonmonetary exchanges.	Moderate	35–45
CA10-1	Acquisition, improvements, and sale of realty.	Moderate	20–25
CA10-2	Accounting for self-constructed assets.	Moderate	20–25

ASSIGNMENT CHARACTERISTICS TABLE (Continued)

Item	Description	Level of Difficulty	Time (minutes)
CA10-3	Capitalization of interest.	Simple	20–25
CA10-4	Capitalization of interest.	Moderate	30–40
CA10-5	Nonmonetary exchanges.	Moderate	30–40
CA10-6	Costs of acquisition.	Simple	20–25
CA10-7	Cost of land versus buildings—ethics.	Moderate	20–25

ANSWERS TO QUESTIONS

1. The major characteristics of plant assets are (1) that they are acquired for use in operations and not for resale, (2) that they are long-term in nature and usually subject to depreciation, and (3) that they have physical substance.
2. The company should report the asset at its historical cost of \$420,000, not its current value. The main reasons for this position are (1) at the date of acquisition, cost reflects fair value; (2) historical cost involves actual, not hypothetical transactions, and as a result is extremely reliable; and (3) gains and losses should not be anticipated but should be recognized when the asset is sold.
3.
 - (a) The acquisition costs of land may include the purchase or contract price, the broker's commission, title search and recording fees, assumed taxes or other liabilities, and surveying, demolition (less salvage), and landscaping costs.
 - (b) Machinery and equipment costs may properly include freight and drayage (handling), taxes on purchase, insurance in transit, installation, and expenses of testing and breaking-in.
 - (c) If a building is purchased, all repair charges, alterations, and improvements necessary to ready the building for its intended use should be included as a part of the acquisition cost. Building costs in addition to the amount paid to a contractor may include excavation, permits and licenses, architect's fees, interest accrued on funds obtained for construction purposes (during construction period only) called avoidable interest, insurance premiums applicable to the construction period, temporary buildings and structures, and property taxes levied on the building during the construction period.
4.
 - (a) Land.
 - (b) Land.
 - (c) Land.
 - (d) Machinery. The only controversy centers on whether fixed overhead should be allocated as a cost to the machinery.
 - (e) Land Improvements, may be depreciated.
 - (f) Building.
 - (g) Building, provided the benefits in terms of information justify the additional cost involved in providing the information (**FASB Statement No. 34**).
 - (h) Land.
 - (i) Land.
5.
 - (a) The position that no fixed overhead should be capitalized assumes that the construction of plant (fixed) assets will be timed so as not to interfere with normal operations. If this were not the case, the savings anticipated by constructing instead of purchasing plant assets would be nullified by reduced profits on the product that could have been manufactured and sold. Thus, construction of plant assets during periods of low activity will have a minimal effect on the total amount of overhead costs. To capitalize a portion of fixed overhead as an element of the cost of constructed assets would, under these circumstances, reduce the amount assignable to operations and therefore overstate net income in the construction period and understate net income in subsequent periods because of increased depreciation charges.
 - (b) Capitalizing overhead at the same rate as is charged to normal operations is defended by those who believe that all manufacturing overhead serves a dual purpose during plant asset construction periods. Any attempt to assign construction activities less overhead than the normal rate implies costing favors and results in the misstatement of the cost of both plant assets and finished goods.

Questions Chapter 10 (Continued)

6. (a) Disagree. Organization and promotion expenses should be expensed.
- (b) Agree. Architect's fees for plans actually used in construction of the building should be charged to the building account as part of the cost.
- (c) Agree. **FASB Statement No. 34** recommends that avoidable interest or actual interest cost, whichever is lower, be capitalized as part of the cost of acquiring an asset if a significant period of time is required to bring the asset to a condition or location necessary for its intended use. Interest costs are capitalized starting with the first expenditure related to the asset and capitalization would continue until the asset is substantially completed and ready for its intended use. Property taxes during construction should also be charged to the building account.
- (d) Disagree. Interest revenue is not considered to be related to the interest received as part of the acquisition cost of the building.
7. Since the land for the plant site will be used in the operations of the firm, it is classified as property, plant, and equipment. The other tract is being held for speculation. It is classified as an investment.
8. A common accounting justification is that all costs associated with the construction of an asset, including interest, should be capitalized in order that the costs can be matched to the revenues which the new asset will help generate.
9. Assets that do not qualify for interest capitalization are (1) assets that are in use or ready for their intended use, and (2) assets that are not being used in the earnings activities of the firm.
10. The avoidable interest is determined by multiplying (an) interest rate(s) by the weighted-average amount of accumulated expenditures on qualifying assets. For the portion of weighted-average accumulated expenditures which is less than or equal to any amounts borrowed specifically to finance construction of the assets, the capitalization rate is the specific interest rate incurred. For the portion of weighted-average accumulated expenditures which is greater than specific debt incurred, the interest rate is a weighted average of all other interest rates incurred.

The amount of interest to be capitalized is the avoidable interest, or the actual interest incurred, whichever is lower.

As indicated in the chapter, an alternative to the specific rate is to use an average borrowing rate.

11. The total interest cost incurred during the period should be disclosed, indicating the portion capitalized and the portion charged to expense.

Interest revenue from temporarily invested excess funds should not be offset against interest cost when determining the amount of interest to be capitalized. The interest revenue would be reported in the same manner customarily used to report any other interest revenue.

12. (a) **Assets acquired by issuance of capital stock**—when property is acquired by issuance of securities such as common stock, the cost of the property is not measured by par or stated value of such stock. If the stock is actively traded on the market, then the market value of the stock is a fair indication of the cost of the property because the market value of the stock is a good measure of the current cash equivalent price. If the market value of the common stock is not determinable, then the market value of the property should be established and used as the basis for recording the asset and issuance of common stock.

Questions Chapter 10 (Continued)

- (b) **Assets acquired by gift or donation**—when assets are acquired in this manner a strict cost concept would dictate that the valuation of the asset be zero. However, in this situation, accountants record the asset at its fair market value. The credit would be made to Contribution Revenue or “donated capital.” Contributions received should be credited to revenue unless the contribution is from a governmental unit. Even in that case, we believe that the credit should be to contribution revenue.
 - (c) **Cash discount**—when assets are purchased subject to a cash discount, the question of how the discount should be handled occurs. If the discount is taken, it should be considered a reduction in the asset cost. Different viewpoints exist, however, if the discount is not taken. One approach is that the discount must be considered a reduction in the cost of the asset. The rationale for this approach is that the terms of these discounts are so attractive that failure to take the discount must be considered a loss because management is inefficient. The other view is that failure to take the discount should not be considered a loss, because the terms may be unfavorable or the company might not be prudent to take the discount. Presently both methods are employed in practice. The former approach is conceptually correct.
 - (d) **Deferred payments**—assets should be recorded at the present value of the consideration exchanged between contracting parties at the date of the transaction. In a deferred payment situation, there is an implicit (or explicit) interest cost involved, and the accountant should be careful not to include this amount in the cost of the asset.
 - (e) **Lump sum or basket purchase**—sometimes a group of assets are acquired for a single lump sum. When a situation such as this exists, the accountant must allocate the total cost among the various assets on the basis of their relative fair market value.
 - (f) **Trade or exchange of assets**—when one asset is exchanged for another asset, the accountant is faced with several issues in determining the value of the new asset. The basic principle involved is to record the new asset at the fair market value of the new asset or the fair market value of what is given up to acquire the new asset, whichever is more clearly evident. However, the accountant must also be concerned with whether the exchange has commercial substance and whether monetary consideration is involved in the transaction. The commercial substance issue rests on whether the expected cash flows on the assets involved are significantly different. In addition, monetary consideration may affect the amount of gain recognized on the exchange under consideration.
13. The cost of such assets includes the purchase price, freight and handling charges incurred, insurance on the equipment while in transit, cost of special foundations if required, assembly and installation costs, and costs of conducting trial runs. Costs thus include all expenditures incurred in acquiring the equipment and preparing it for use. When plant assets are purchased subject to cash discounts for prompt payment, the question of how the discount should be handled arises. The appropriate view is that the discount, whether taken or not, is considered a reduction in the cost of the asset. The rationale for this approach is that the real cost of the asset is the cash or cash equivalent price of the asset. Similarly, assets purchased on long-term payment plans should be accounted for at the present value of the consideration exchanged between the contracting parties at the date of the transaction.

14.
$$\frac{\text{Fair market value of land}}{\text{Fair market value of building and land}} \times \text{Cost} = \text{Cost allocated to land}$$

$$\frac{\$500,000}{\$2,500,000} \times \$2,200,000 = \$440,000 \quad (\text{Bldg.} = \frac{\$2,000,000}{\$2,500,000} \times \$2,200,000 = \$1,760,000)$$

Cost allocated to the land is therefore \$440,000.
 Cost allocated to building is \$1,760,000 (\$2,200,000 – \$440,000).

Questions Chapter 10 (Continued)

15. $\$10,000 + \$4,058 = \$14,058$
16. Ordinarily accounting for the exchange of nonmonetary assets should be based on the fair value of the asset given up or the fair value of the asset received, whichever is clearly more evident. Thus any gains and losses on the exchange should be recognized immediately. If the fair value of either asset is not reasonably determinable, the book value of the asset given up is usually used as the basis for recording the nonmonetary exchange. This approach is always employed when the exchange has commercial substance. The general rule is modified when exchanges lack commercial substance. In this case, the enterprise is not considered to have completed the earnings process and therefore a gain should not be recognized. However, a loss should be recognized immediately. In certain situations, gains on an exchange that lacks commercial substance may be recorded when monetary consideration is received. When monetary consideration is received, it is assumed that a portion of the earnings process is completed, and therefore, a partial gain is recognized.

17. In accordance with **SFAS No. 153** which requires losses to be recognized immediately, the entry should be:

Heavy Duty Truck (new)	39,000	
Accumulated Depreciation on Heavy Duty Truck	9,800*	
Loss on Disposal of Heavy Duty Truck.....	7,200**	
Heavy Duty Truck (old)		30,000
Cash.....		26,000

* $[(\$30,000 - \$6,000) \times 49 \text{ months} / 120 \text{ months} = \$9,800]$

** $(\text{Book value } \$20,200 - \$13,000 \text{ trade-in} = \$7,200 \text{ loss})$

18. Ordinarily such expenditures include (1) the recurring costs of servicing necessary to keep property in good operating condition, (2) cost of renewing structural parts of major plant units, and (3) costs of major overhauling operations which may or may not extend the life beyond original expectation.

The first class of expenditures represents the day-to-day service and in general is chargeable to operations as incurred. These expenditures should not be charged to the asset accounts.

The second class of expenditures may or may not affect the recorded cost of property. If the asset is rigidly defined as a distinct unit, the renewal of parts does not usually disturb the asset accounts; however, these costs may be capitalized and apportioned over several fiscal periods on some equitable basis. If the property is conceived in terms of structural elements subject to separate replacement, such expenditures should be charged to the plant asset accounts.

The third class of expenditures, major overhauls, is usually entered through the asset accounts because replacement of important structural elements is usually involved. Other than maintenance charges mentioned above are those expenditures which add some physical aspect not a part of the asset at the time of its original acquisition. These expenditures may be capitalized in the asset account.

An expenditure which extends the life but not the usefulness of the asset is often charged to the accumulated depreciation account. A more appropriate treatment requires retiring from the asset and accumulated depreciation accounts the appropriate amounts (original cost from the asset account) and to capitalize in the asset account the new cost. Often it is difficult to determine the original cost of the item being replaced. For this reason the replacement or renewal is charged to the accumulated depreciation account.

19. (a) **Additions.** Additions represent entirely new units or extensions and enlargements of old units. Expenditures for additions are capitalized by charging either old or new asset accounts depending on the nature of the addition.

Questions Chapter 10 (Continued)

- (b) **Major Repairs.** Expenditures to replace parts or otherwise to restore assets to their previously efficient operating condition are regarded as repairs. To be considered a major repair, several periods must benefit from the expenditure. The cost should be handled as an addition, improvement or replacement depending on the type of major repair made.
- (c) **Improvements.** An improvement does not add to existing plant. Expenditures for such betterments represent increases in the quality of existing plant by rearrangements in plant layout or the substitution of improved components for old components so that the facilities have increased productivity, greater capacity, or longer life. The cost of improvement is accounted for by charges to the appropriate property accounts and the elimination of the cost and accumulated depreciation associated with the replaced components, if any.

Replacements. Replacements involve an “in kind” substitution of a new asset or part for an old asset or part. Accounting for major replacements requires entries to retire the old asset or part and to record the cost of the new asset or part. Minor replacements are treated as period costs.

20. The cost of installing the machinery should be capitalized, but the extra month’s wages paid to the dismissed employees should not, as this payment did not add any value to the machinery.

The extra wages should be charged off immediately as an expense; the wages could be shown as a separate item in the income statement for disclosure purposes.

21. (a) Overhead of a business which builds its own equipment. Some accountants have maintained that the equipment account should be charged only with the additional overhead caused by such construction. However, a more realistic figure for cost of equipment results if the plant asset account is charged for overhead applied on the same basis and at the same rate as used for production (see Question 5).
- (b) Cash discounts on purchases of equipment. Some accountants treat all cash discounts as financial or other revenue, regardless of whether they arise from the payment of invoices for merchandise or plant assets. Others take the position that only the net amount paid for plant assets should be capitalized on the basis that the discount represents a reduction of price and is not income. The latter position seems more logical in light of the fact that plant assets are purchased for use and not for sale and that they are written off to expense over a long period of time.
 - (c) Interest paid during construction of a building. **FASB Statement No. 34** recommends that avoidable or actual interest cost, whichever is lower, be capitalized as part of the cost of acquiring an asset if a significant period of time is required to bring the asset to a condition and location necessary for its intended use.
 - (d) Cost of a safety device installed on a machine. This is an addition to the machine and should be capitalized in the machinery account if material.
 - (e) Freight on equipment returned before installation, for replacement by other equipment of greater capacity. If ordering the first equipment was an error, whether due to judgment or otherwise, the freight should be regarded as a loss. However, if information became available after the order was placed which indicated purchase of the new equipment was more advantageous, the cost of the return freight may be viewed as a necessary cost of the new equipment.

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- (f) Cost of moving machinery to a new location. Normally, only the cost of one installation should be capitalized for any piece of equipment. Thus the original installation and any accumulated depreciation relating thereto should be removed from the accounts and the new installation costs (i.e., cost of moving) should be capitalized. In cases where this is not possible and the cost of moving is substantial, it is capitalized and depreciated appropriately over the period during which it makes a contribution to operations.
 - (g) Cost of plywood partitions erected in the remodeling of the office. This is a part of the remodeling cost and may be capitalized if the remodeling itself is of such a nature that it is an addition to the building and not merely a replacement or repair.
 - (h) Replastering of a section of the building. This seems more in the nature of a repair than anything else and as such should be treated as expense.
 - (i) Cost of a new motor for one of the trucks. This probably extends the useful life of the truck. As such it may be viewed as an extraordinary repair and charged against the accumulated depreciation on the truck. The remaining service life of the truck should be estimated and depreciation adjusted to write off the new book value, less salvage, over the remaining useful life. A more appropriate treatment is to remove the cost of the old motor and related depreciation and add the cost of the new motor if possible.
22. The authors believe it is difficult to justify an Allowance for Repairs account under any circumstances, except possibly for interim statements. It is difficult to justify the "Allowance for Repairs" as a liability under any conditions because no past transaction has occurred which will result in future payments to satisfy an existing obligation. Furthermore, as a liability we might ask the question—whom do you owe? Placement in the stockholders' equity section is also illogical because no addition to the stockholders' investment has taken place. The only reasonable method of presentation appears to be as a contra account to the asset involved. Even this approach is highly questionable.
23. This approach is not correct since at the very minimum the investor should be aware that certain assets are used in the business which are not reflected in the main body of the financial statements. Either the company should keep these assets on the balance sheet or they should be recorded at salvage value and the resulting gain recognized. In either case, there should be a clear indication that these assets are fully depreciated, but are still being used in the business.
24. Gains or losses on plant asset retirements should be shown in the income statement along with other items that arise from customary business activities.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 10-1

$$\$27,000 + \$1,400 + \$12,200 = \underline{\underline{\$40,600}}$$

BRIEF EXERCISE 10-2

Expenditures		Capitalization Period	Weighted-Average Accumulated Expenditures
Date	Amount		
3/1	\$1,500,000	10/12	\$1,250,000
6/1	1,200,000	7/12	700,000
12/31	<u>3,000,000</u>	0	<u>0</u>
	<u>\$5,700,000</u>		<u>\$1,950,000</u>

BRIEF EXERCISE 10-3

	Principal	Interest
13%, 5-year note	\$2,000,000	\$260,000
15%, 4-year note	<u>3,500,000</u>	<u>525,000</u>
	<u>\$5,500,000</u>	<u>\$785,000</u>

$$\text{Weighted-average interest rate} = \frac{\$785,000}{\$5,500,000} = \underline{\underline{14.27\%}}$$

BRIEF EXERCISE 10-4

Weighted-Average Accumulated Expenditures	X	Interest Rate	=	Avoidable Interest
\$1,000,000		12%		\$120,000
<u>950,000</u>		14.27%		<u>135,565</u>
<u>\$1,950,000</u>				<u>\$255,565</u>

BRIEF EXERCISE 10-5

Truck (\$80,000 X .63552).....	50,842	
Discount on Notes Payable	29,158	
Notes Payable.....		80,000

BRIEF EXERCISE 10-6

	<u>Fair Value</u>	<u>% of Total</u>		<u>Cost</u>	<u>Recorded Amount</u>
Land	\$ 60,000	60/360	X	\$306,000	\$ 51,000
Building	220,000	220/360	X	\$306,000	187,000
Equipment	<u>80,000</u>	80/360	X	\$306,000	<u>68,000</u>
	<u>\$360,000</u>				<u>\$306,000</u>

BRIEF EXERCISE 10-7

Land (2,000 X \$41)	82,000	
Common Stock (2,000 X \$10)		20,000
Paid-in Capital in Excess of Par		62,000

BRIEF EXERCISE 10-8

Computer	3,700	
Accumulated Depreciation	18,000	
Truck.....		20,000
Cash.....		1,000
Gain on Disposal of Truck.....		700

BRIEF EXERCISE 10-9

Computer (\$3,700 – \$700)	3,000	
Accumulated Depreciation	18,000	
Truck		20,000
Cash		1,000

BRIEF EXERCISE 10-10

Office Equipment.....	5,000	
Accumulated Depreciation	3,000	
Loss on Disposal of Machine	3,000	
Machine		9,000
Cash		2,000

BRIEF EXERCISE 10-11

Truck.....	35,000	
Accumulated Depreciation	27,000	
Loss on Disposal of Truck	1,000	
Truck		30,000
Cash		33,000

BRIEF EXERCISE 10-12

Truck.....	35,000	
Accumulated Depreciation	17,000	
Loss on Disposal of Truck	1,000	
Truck		20,000
Cash		33,000

BRIEF EXERCISE 10-13

Only cost (b) is expensed when incurred.

BRIEF EXERCISE 10-14

(a)	Depreciation Expense (\$3,000 X 8/12).....	2,000	
	Accumulated Depreciation.....		2,000
(b)	Cash	10,500	
	Accumulated Depreciation	11,000	
	Machinery		20,000
	Gain on Disposal of Machinery		1,500

BRIEF EXERCISE 10-15

(a)	Depreciation Expense (\$3,000 X 8/12).....	2,000	
	Accumulated Depreciation.....		2,000
(b)	Cash	5,200	
	Loss on Disposal of Machinery.....	3,800	
	Accumulated Depreciation	11,000	
	Machinery		20,000

SOLUTIONS TO EXERCISES

EXERCISE 10-1 (15–20 minutes)

Item	Land	Land Improvements	Building	Other Accounts
(a)				(\$275,000) Notes Payable
(b)			\$275,000	
(c)	\$ 8,000			
(d)	7,000			
(e)			6,000	
(f)			(1,000)	
(g)			22,000	
(h)	250,000			
(i)	9,000			
(j)		\$ 4,000		
(k)	11,000			
(l)	(5,000)			
(m)			13,000	
(n)		19,000		
(o)	14,000			
(p)			3,000	

EXERCISE 10-2 (10–15 minutes)

The allocation of costs would be as follows:

	Land	Building
Land	\$400,000	
Razing costs	42,000	
Salvage	(6,300)	
Legal fees	1,850	
Survey		\$ 2,200
Plans		68,000
Title insurance	1,500	
Liability insurance		900
Construction		2,740,000
Interest		170,000
	\$439,050	\$2,981,100

EXERCISE 10-3 (10–15 minutes)

1.	Truck #1.....	13,900.00	
	Cash.....		13,900.00
2.	Truck #2.....	14,727.26*	
	Discount on Notes Payable	1,272.74	
	Cash.....		2,000.00
	Notes Payable.....		14,000.00
	*PV of \$14,000 @ 10% for 1 year =		
	\$14,000 X .90909 = \$12,727.26		
	\$12,727.26 + \$2,000.00 = \$14,727.26		
3.	Truck #3.....	15,200.00	
	Cost of Goods Sold.....	12,000.00	
	Inventory		12,000.00
	Sales		15,200.00

[Note to instructor: The selling (retail) price of the computer system appears to be a better gauge of the fair value of the consideration given than is the list price of the truck as a gauge of the fair value of the consideration received (truck). Vehicles are very often sold at a price below the list price.]

4.	Truck #4.....	13,000.00	
	Common Stock		10,000.00
	Paid-in Capital in Excess of Par.....		3,000.00
	(1,000 shares X \$13 = \$13,000)		

EXERCISE 10-4 (20–25 minutes)

Purchase

Cash paid for equipment, including sales tax of \$5,000	\$105,000
Freight and insurance while in transit	2,000
Cost of moving equipment into place at factory	3,100
Wage cost for technicians to test equipment	4,000
Special plumbing fixtures required for new equipment	<u>8,000</u>
Total cost	<u>\$122,100</u>

The insurance premium paid during the first year of operation of this equipment should be reported as insurance expense, and not be capitalized. Repair cost incurred in the first year of operations related to this equipment should be reported as repair and maintenance expense, and not be capitalized. Both these costs relate to periods subsequent to purchase.

Construction

Material and purchased parts (\$200,000 X .98)	\$196,000
Labor costs	190,000
Overhead costs	50,000
Cost of installing equipment	<u>4,400</u>
Total cost	<u>\$440,400</u>

Note that the cost of material and purchased parts is reduced by the amount of cash discount not taken because the equipment should be reported at its cash equivalent price. The imputed interest on funds used during construction related to stock financing should not be capitalized or expensed. This item is an opportunity cost that is not reported.

Profit on self-construction should not be reported. Profit should only be reported when the asset is sold.

EXERCISE 10-5 (30–40 minutes)

	Land	Buildings	M & E	Other	
Abstract fees	\$ 520				
Architect's fees		\$ 3,170			
Cash paid for land and old building	87,000				
Removal of old building (\$20,000 – \$5,500)	14,500				
Interest on loans during construction		7,400			
Excavation before construction		19,000			
Machinery purchased			\$53,900	\$1,100	—Misc. expense
Freight on machinery			1,340		(Discount Lost)
Storage charges caused by noncompletion of building				2,180	—Misc. expense (Loss)
New building		485,000			
Assessment by city	1,600				
Hauling charges—machinery				620	—Misc. expense
Installation—machinery			2,000		(Loss)
Landscaping	5,400				
	<u>\$109,020</u>	<u>\$514,570</u>	<u>\$57,240</u>	<u>\$3,900</u>	

EXERCISE 10-6 (15–25 minutes)

1. Land	131,250	
Buildings.....	306,250	
Equipment	262,500	
Cash.....		700,000

$$\$700,000 \times \frac{\$150,000}{\$800,000} = \$131,250 \quad \text{Land}$$

$$\$700,000 \times \frac{\$350,000}{\$800,000} = \$306,250 \quad \text{Buildings}$$

$$\$700,000 \times \frac{\$300,000}{\$800,000} = \$262,500 \quad \text{Equipment}$$

EXERCISE 10-6 (Continued)

2.	Store Equipment	25,000	
	Cash		2,000
	Note Payable		23,000
3.	Office Equipment	19,600	
	Accounts Payable (\$20,000 X .98)		19,600
4.	Land	27,000	
	Contribution Revenue		27,000
5.	Warehouse	600,000	
	Cash		600,000

EXERCISE 10-7 (20–25 minutes)

(a) Avoidable Interest

Weighted-Average Accumulated Expenditures	X	Interest Rate	=	Avoidable Interest
\$2,000,000		12%		\$240,000
<u>1,600,000</u>		10.42%		<u>166,720</u>
<u>\$3,600,000</u>				<u>\$406,720</u>

Weighted-average interest rate computation	Principal	Interest
10% short-term loan	\$1,400,000	\$140,000
11% long-term loan	<u>1,000,000</u>	<u>110,000</u>
	<u>\$2,400,000</u>	<u>\$250,000</u>

$$\frac{\text{Total Interest}}{\text{Total Principal}} = \frac{\$250,000}{\$2,400,000} = 10.42\%$$

EXERCISE 10-7 (Continued)

(b)		<u>Actual Interest</u>	
	Construction loan	\$2,000,000 X 12% =	\$240,000
	Short-term loan	\$1,400,000 X 10% =	140,000
	Long-term loan	\$1,000,000 X 11% =	<u>110,000</u>
		Total	<u>\$490,000</u>

Because avoidable interest is lower than actual interest, use avoidable interest.

Cost	\$5,200,000
Interest capitalized	<u>406,720</u>
Total cost	<u>\$5,606,720</u>

$$\text{Depreciation Expense} = \frac{\$5,606,720 - \$300,000}{30 \text{ years}} = \$176,891$$

EXERCISE 10-8 (20–25 minutes)

(a) Computation of Weighted-Average Accumulated Expenditures

<u>Expenditures</u>			<u>Capitalization</u>		<u>Weighted-Average</u>
<u>Date</u>	<u>Amount</u>	X	<u>Period</u>	=	<u>Accumulated Expenditures</u>
March 1	\$ 360,000		10/12		\$ 300,000
June 1	600,000		7/12		350,000
July 1	1,500,000		6/12		750,000
December 1	<u>1,500,000</u>		1/12		<u>125,000</u>
	<u>\$3,960,000</u>				<u>\$1,525,000</u>

Computation of Avoidable Interest

<u>Weighted-Average</u>			<u>Weighted-Average</u>
<u>Accumulated Expenditures</u>	X	<u>Interest Rate</u>	= <u>Avoidable Interest</u>
\$1,525,000		.12 (Construction loan)	<u>\$183,000</u>

Computation of Actual Interest

Actual interest	
\$3,000,000 X 12%	\$ 360,000
\$4,000,000 X 13%	520,000
\$1,600,000 X 10%	<u>160,000</u>
	<u>\$1,040,000</u>

Note: Use avoidable interest for capitalization purposes because it is lower than actual.

EXERCISE 10-8 (Continued)

(b) Building.....	183,000	
Interest Expense*	857,000	
Cash (\$360,000 + \$520,000 + \$160,000)		1,040,000

*Actual interest for year	\$1,040,000
Less: Amount capitalized	<u>(183,000)</u>
Interest expense debit	<u>\$ 857,000</u>

EXERCISE 10-9 (20–25 minutes)

(a) Computation of Weighted-Average Accumulated Expenditures

<u>Expenditures</u>			<u>Capitalization</u>		<u>Weighted-Average</u>
<u>Date</u>	<u>Amount</u>	X	<u>Period</u>	=	<u>Accumulated Expenditures</u>
July 31	\$200,000		3/12		\$50,000
November 1	100,000		0		<u>0</u>
					<u>\$50,000</u>

Interest revenue \$100,000 X 10% X 3/12 = \$2,500

Avoidable interest

<u>Weighted-Average</u>		<u>Interest Rate</u>	=	<u>Avoidable Interest</u>
<u>Accumulated Expenditures</u>	X			
\$50,000		12%		\$6,000

Actual Interest

\$300,000 X 12% X 5/12 =	\$15,000
\$30,000 X 8% =	<u>2,400</u>
	<u>\$17,400</u>

Interest capitalized \$ 6,000

EXERCISE 10-9 (Continued)

(b) (1)	7/31	Cash	300,000	
		Note Payable		300,000
		Machine	200,000	
		Trading Securities.....	100,000	
		Cash.....		300,000
(2)	11/1	Cash	102,500	
		Interest Revenue		
		(\$100,000 X 10% X 3/12)		2,500
		Trading Securities		100,000
		Machine	100,000	
		Cash.....		100,000
(3)	12/31	Machine	6,000	
		Interest Expense		
		(\$17,400 – \$6,000)	11,400	
		Cash (\$30,000 X 8%).....		2,400
		Interest Payable		
		(\$300,000 X 12% X 5/12)		15,000

EXERCISE 10-10 (20–25 minutes)

Situation I. \$80,000—The requirement is the amount Oksana Baiul should report as capitalized interest at 12/31/07. The amount of interest eligible for capitalization is

Weighted-Average Accumulated Expenditures X Interest Rate = Avoidable Interest

Since Oksana Baiul has outstanding debt incurred specifically for the construction project, in an amount greater than the weighted-average accumulated expenditures of \$800,000, the interest rate of 10% is used for capitalization purposes. Therefore, the avoidable interest is \$80,000, which is less than the actual interest.

$$\mathbf{\$800,000 \times .10 = \$80,000}$$

EXERCISE 10-10 (Continued)

Finally, per FASB Statement No. 62, the interest earned of \$250,000 is irrelevant to the question addressed in this problem because such interest earned on the unexpended portion of the loan is not to be offset against the amount eligible for capitalization.

Situation II. \$39,000—The requirement is total interest costs to be capitalized. FASB Statement No. 34 identifies assets which qualify for interest capitalization: assets constructed for an enterprise's own use and assets intended for sale or lease that are produced as discrete projects. Inventories that are routinely produced in large quantities on a repetitive basis do not qualify for interest capitalization. Therefore, only \$30,000 and \$9,000 are capitalized.

Situation III. \$385,000—The requirement is to determine the amount of interest to be capitalized on the financial statements at April 30, 2008. The requirements of the FASB Statement No. 34 are met: (1) expenditures for the asset have been made, (2) activities that are necessary to get the asset ready for its intended use are in progress, and (3) interest cost is being incurred. The amount to be capitalized is determined by applying an interest rate to the weighted-average amount of accumulated expenditures for the asset during the period. Because the \$7,000,000 of expenditures incurred for the year ended April 30, 2008, were incurred evenly throughout the year, the weighted-average amount of expenditures for the year is \$3,500,000, ($\$7,000,000 \div 2$). Therefore, the amount of interest to be capitalized is \$385,000 ($\$3,500,000 \times 11\%$). In any period the total amount of interest cost to be capitalized shall not exceed the total amount of interest cost incurred by the enterprise. (Total interest is \$1,100,000). Finally, per FASB Statement No. 62, the interest earned of \$650,000 is irrelevant to the question addressed in this problem because such interest earned on the unexpended portion of the loan is not to be offset against the amount eligible for capitalization.

EXERCISE 10-11 (10–15 minutes)

(a)	Equipment	10,000	
	Accounts Payable		10,000
	Accounts Payable	10,000	
	Equipment (\$10,000 X .02).....		200
	Cash.....		9,800

(b)	Equipment (new)	9,900*	
	Loss on Disposal of Equipment.....	1,600**	
	Accumulated Depreciation	6,000	
	Accounts Payable		9,500
	Equipment (old)		8,000

**Cost	\$8,000
Accumulated depreciation	<u>6,000</u>
Book value	2,000
Fair market value	<u>400</u>
Loss	<u>\$1,600</u>

*Cost (\$9,500 + \$400)	\$9,900
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Accounts Payable	9,500	
Cash.....		9,500

(c)	Equipment (\$10,800 X .91743).....	9,908	
	Discount on Note Payable	892	
	(\$10,800 – \$9,908)		
	Note Payable.....		10,800
	Interest Expense	892	
	Note Payable.....	10,800	
	Discount on Note Payable.....		892
	Cash.....		10,800

EXERCISE 10-12 (15–20 minutes)

(a)	Land	81,000	
	Contribution Revenue		81,000
(b)	Land	180,000	
	Buildings	630,000	
	Common Stock (\$50 X 13,000)		650,000
	Additional Paid-in Capital*		160,000

*Since the market value of the stock is not determinable, the market value of the property is used as the basis for recording the asset and issuance of the stock.

(c)	Machinery.....	40,100	
	Materials		12,500
	Direct Labor		15,000
	Factory Overhead		12,600*

*Fixed overhead applied	(60% X \$15,000)	\$ 9,000
Additional overhead		2,700
Factory supplies used		900
		<u>\$12,600</u>

EXERCISE 10-13 (20–25 minutes)

1.	Land	350,000	
	Building.....	1,050,000	
	Machinery and Equipment.....	700,000	
	Common Stock (12,500 X \$100)		1,250,000
	Paid-in Capital in Excess of Par		850,000
	(\$2,100,000 – \$1,250,000)		

The cost of the property, plant and equipment is \$2,100,000 (\$12,500 X \$168). This cost is allocated based on appraisal values as follows:

Land	$\frac{\$400,000}{\$2,400,000}$	X \$2,100,000 = \$350,000
Building	$\frac{\$1,200,000}{\$2,400,000}$	X \$2,100,000 = \$1,050,000
Machinery & Equipment	$\frac{\$800,000}{\$2,400,000}$	X \$2,100,000 = \$700,000

EXERCISE 10-13 (Continued)

2.	Buildings (\$105,000 plus \$161,000)	266,000	
	Machinery and Equipment	135,000	
	Land Improvements	122,000	
	Land	18,000	
	Cash		541,000
3.	Machinery and Equipment	265,300	
	Cash		265,300
	(\$10,500 plus \$254,800, which is 98% of \$260,000.)		

EXERCISE 10-14 (15–20 minutes)

(a)	Equipment	576,765*	
	Discount on Notes Payable	223,235	
	Notes Payable		800,000
	*PV of \$160,000 annuity @ 12% for 5 years (\$160,000 X 3.60478) = \$576,765		
(b)	Interest Expense	69,212*	
	Notes Payable	160,000	
	Discount on Notes Payable		69,212
	Cash		160,000
	*(12% X \$576,765)		

<u>Year</u>	<u>Note Payment</u>	<u>12% Interest</u>	<u>Reduction of Principal</u>	<u>Balance</u>
1/2/07				\$576,765
12/31/07	\$160,000	\$69,212	\$ 90,788	485,977
12/31/08	160,000	58,317	101,683	384,294

EXERCISE 10-14 (Continued)

(c)	Interest Expense	58,317	
	Notes Payable	160,000	
	Discount on Notes Payable		58,317
	Cash		160,000
(d)	Depreciation Expense	57,677*	
	Accumulated Depreciation		57,677

*($\$576,765 \div 10$)

EXERCISE 10-15 (15–20 minutes)

(a)	Equipment	86,861.85*	
	Discount on Notes Payable	18,138.15	
	Cash		30,000.00
	Notes Payable		75,000.00

*PV of \$15,000 annuity @ 10% for

5 years ($\$15,000 \times 3.79079$)	\$56,861.85
Down payment	<u>30,000.00</u>
Capitalized value of equipment	<u>\$86,861.85</u>

(b)	Notes Payable	15,000.00	
	Interest Expense (see schedule)	5,686.19	
	Cash		15,000.00
	Discount on Notes Payable		5,686.19

Year	Note Payment	10% Interest	Reduction of Principal	Balance
12/31/06				\$56,861.85
12/31/07	\$15,000.00	\$5,686.19	\$ 9,313.81	47,548.04
12/31/08	15,000.00	4,754.80	10,245.20	37,302.84

EXERCISE 10-15 (Continued)

(c) Notes Payable	15,000.00	
Interest Expense	4,754.80	
Cash.....		15,000.00
Discount on Notes Payable		4,754.80

EXERCISE 10-16 (25–35 minutes)

**Hayes Industries
Acquisition of Assets 1 and 2**

Use Appraised Values to break-out the lump-sum purchase

<u>Description</u>	<u>Appraisal</u>	<u>Percentage</u>	<u>Lump-Sum</u>	<u>Value on Books</u>
Machinery	90,000	90/120	100,000	75,000
Office Equipment	<u>30,000</u>	30/120	100,000	25,000
	<u>120,000</u>			

Machinery	75,000	
Office Equipment	25,000	
Cash.....		100,000

Acquisition of Asset 3

Use the cash price as a basis for recording the asset with a discount recorded on the note.

Machinery	35,900	
Discount on Notes Payable (\$40,000 – \$35,900).....	4,100	
Cash.....		10,000
Notes Payable.....		30,000

EXERCISE 10-16 (Continued)

Acquisition Asset 4

Since the exchange lacks commercial substance, a gain will be recognized in the proportion of cash received (\$10,000/\$80,000) times the \$20,000 gain (FMV of \$80,000 minus BV of \$60,000). The gain recognized will then be \$2,500 with \$17,500 of it being unrecognized and used to reduce the basis of the asset acquired.

Machinery (\$70,000 – \$17,500)	52,500	
Accumulated Depreciation	40,000	
Cash	10,000	
Machinery		100,000
Gain on Disposal of Machinery		2,500

Acquisition of Asset 5

In this case the Office Equipment should be placed on Hayes's books at the fair market value of the stock. The difference between the stock's par value and its fair market value should be credited to Additional Paid-in Capital in Excess of Par.

Office Equipment.....	1,100	
Common Stock		800
Additional Paid-in Capital		300

EXERCISE 10-16 (Continued)

Schedule of Weighted-Average Accumulated Expenditures

<u>Date</u>	<u>Amount</u>	<u>Current Year Capitalization Period</u>	<u>Weighted-Average Accumulated Expenditures</u>
February 1	\$ 150,000	9/12	\$112,500
February 1	120,000	9/12	90,000
June 1	360,000	5/12	150,000
September 1	480,000	2/12	80,000
November 1	100,000	0/12	0
	<u>\$1,210,000</u>		<u>\$432,500</u>

Note that the capitalization is only 9 months in this problem.

Avoidable Interest

<u>Weighted-Average Accumulated Expenditures</u>		<u>Interest Rate</u>		<u>Avoidable Interest</u>
\$432,500	X	.12	=	\$51,900

The weighted expenditures are less than the amount of specific borrowing; the specific borrowing rate is used.

Land Cost 150,000
 Building Cost 1,111,900 (1,060,000 + 51,900)

Land.....	150,000	
Building.....	1,111,900	
Cash.....		1,210,000
Interest Expense.....		51,900

EXERCISE 10-17 (10–15 minutes)

Busytown Corporation

Machine (\$340 + \$85).....	425	
Accumulated Depreciation	140	
Loss on Disposal of Machine	65*	
Machine.....		290
Cash		340

***Computation of loss:**

Book value of old machine (\$290 – \$140)	\$150
Fair value of old machine	<u>(85)</u>
Loss on exchange	<u>\$ 65</u>

Dick Tracy Business Machine Company

Cash.....	340	
Inventory	85	
Cost of Goods Sold	270	
Sales.....		425
Inventory.....		270

EXERCISE 10-18 (20–25 minutes)

(a) Exchange has commercial substance:

Depreciation Expense	700	
Accumulated Depreciation—Melter		700
(\$11,200 – \$700 = \$10,500; \$10,500 ÷ 5 = \$2,100; \$2,100 X 4/12 = \$700)		
 Melter	15,200**	
Accumulated Depreciation—Melter	7,000	
Gain on Disposal of Plant Assets		1,000*
Melter.....		11,200
Cash.....		10,000

*Cost of old asset	\$11,200
Accumulated depreciation	
(\$6,300 + \$700)	<u>(7,000)</u>
Book value	4,200
Fair market value of old asset	<u>(5,200)</u>
Gain (on disposal of plant asset)	<u>\$ 1,000</u>

**Cash paid	\$10,000
Fair market value of old melter	<u>5,200</u>
Cost of new melter	<u>\$15,200</u>

EXERCISE 10-18 (Continued)

(b) Exchange lacks commercial substance:

Depreciation Expense.....	700	
 Accumulated Depreciation—Melter.....		700
Melter.....	15,200**	
Accumulated Depreciation—Melter.....	7,000	
 Gain on Disposal of Plant Assets.....		1,000
 Melter.....		11,200
 Cash.....		10,000

**Cash paid	\$10,000
 Fair market value of old asset	<u>5,200</u>
 Cost of new asset	<u>\$15,200</u>

Note that the entries are the same for both (a) and (b). Gain is not deferred because cash boot is greater than 25%, which makes the transaction monetary in nature.

EXERCISE 10-19 (15–20 minutes)

(a) Exchange lacks commercial substance.

Carlos Arruza Company:

Equipment	12,000	
Accumulated Depreciation	19,000	
Equipment		28,000
Cash.....		3,000

Valuation of equipment

Book value of equipment given	\$ 9,000
Fair value of boot given	<u>3,000</u>
New equipment	<u>\$12,000</u>

OR

Fair value received	\$15,500
Less: Gain deferred	<u>3,500*</u>
New equipment	<u>\$12,000</u>

*Fair value of old equipment	\$12,500
Book value of old equipment	<u>(9,000)</u>
Gain on disposal	<u>\$ 3,500</u>

Note: Cash paid is less than 25%, the transaction is nonmonetary, so the gain is deferred.

Tony Lo Bianco Company:

Cash	3,000	
Equipment	12,500	
Accumulated Depreciation—Equipment.....	10,000	
Loss on Disposal of Plant Assets	2,500*	
Equipment		28,000

***Computation of loss:**

Book value of old equipment	\$18,000
Fair value of old equipment	<u>15,500</u>
Loss on disposal of equipment	<u>\$ 2,500</u>

EXERCISE 10-19 (Continued)

(b) Exchange has commercial substance

<u>Carlos Arruza Company</u>		
Equipment.....	15,500*	
Accumulated Depreciation—Equipment	19,000	
Equipment		28,000
Cash		3,000
Gain on Disposal of Equipment.....		3,500**

***Cost of new equipment:**

Cash paid	\$ 3,000
Fair value of old equipment	<u>12,500</u>
Cost of new equipment	<u>\$15,500</u>

****Computation of gain on disposal of equipment:**

Fair value of old equipment	\$12,500
Book value of old equipment	
(\$28,000 – \$19,000)	<u>9,000</u>
Gain on disposal of equipment	<u>\$ 3,500</u>

<u>Tony LoBianco Company</u>		
Cash.....	3,000	
Equipment.....	12,500*	
Accumulated Depreciation—Equipment (Old)	10,000	
Loss on Disposal of Equipment	2,500**	
Equipment		28,000

***Cost of new equipment:**

Fair value of equipment	\$15,500
Less: Cash received	<u>3,000</u>
Cost of new equipment	<u>\$12,500</u>

****Computation of loss on disposal of equipment:**

Book value of old equipment	
(\$28,000 – \$10,000)	\$18,000
Fair value of equipment (Old)	<u>15,500</u>
Loss on disposal of equipment	<u>\$ 2,500</u>

EXERCISE 10-20 (15–20 minutes)

(a) Exchange has commercial substance

Automatic Equipment.....	56,900	
Accumulated Depreciation—Equipment.....	20,000	
Gain on Disposal of Equipment		5,800
Equipment		62,000
Cash.....		9,100

Valuation of equipment

Cash	\$ 8,000
Installation cost	1,100
Market value of used equipment	<u>47,800</u>
Cost of new equipment	<u>\$56,900</u>

Computation of gain

Cost of old asset	\$62,000
Accumulated depreciation	<u>20,000</u>
Book value	42,000
Fair market value of old asset	<u>47,800</u>
Gain on disposal of equipment	<u>\$ 5,800</u>

(b) Exchange lacks commercial substance

Automatic Equipment.....	51,100*	
Accumulated Depreciation—Equipment.....	20,000	
Equipment		62,000
Cash.....		9,100

***Basis of new equipment**

Book value of old equipment	\$42,000
Cash paid (including installation costs)	<u>9,100</u>
Basis of new equipment	<u>\$51,100</u>

EXERCISE 10-21 (20–25 minutes)

- (a) Any addition to plant assets is capitalized because a new asset has been created. This addition increases the service potential of the plant.**
- (b) Expenditures that do not increase the service benefits of the asset are expensed. Painting costs are considered ordinary repairs because they maintain the existing condition of the asset or restore it to normal operating efficiency.**
- (c) The approach to follow is to remove the old book value of the roof and substitute the cost of the new roof. It is assumed that the expenditure increases the future service potential of the asset.**
- (d) Conceptually, the book value of the old electrical system should be removed. However, practically it is often difficult if not impossible to determine this amount. In this case, one of two approaches is followed. One approach is to capitalize the replacement on the theory that sufficient depreciation was taken on the old system to reduce the carrying amount to almost zero. A second approach is to debit accumulated depreciation on the theory that the replacement extends the useful life of the asset and thereby recaptures some or all of the past depreciation. In our present situation, the problem specifically states that the useful life is not extended and therefore debiting Accumulated Depreciation is inappropriate. Thus, this expenditure should be added to the cost of the plant facility.**
- (e) See discussion in (d) above. In this case, because the useful life of the asset has increased, a debit to Accumulated Depreciation would appear to be the most appropriate.**

EXERCISE 10-22 (15–20 minutes)

1/30	Accumulated Depreciation—Buildings	112,200*	
	Loss on Disposal of Plant Assets	24,900**	
	Buildings		132,000
	Cash		5,100

***(5% X \$132,000 = \$6,600; \$6,600 X 17 = \$112,200)**

****(\$132,000 – \$112,200) + \$5,100**

3/10	Cash (\$2,900 – \$300)	2,600	
	Accumulated Depreciation—Machinery	11,200*	
	Loss on Disposal of Plant Assets	2,200**	
	Machinery		16,000

***(70% X \$16,000 = \$11,200)**

****(\$16,000 – \$11,200) + \$300 – \$2,900**

3/20	Machinery	8,000	
	Cash		8,000

5/18	Machinery	5,500	
	Accumulated Depreciation—Machinery	2,100*	
	Loss on Disposal of Plant Assets	1,400**	
	Machinery		3,500
	Cash		5,500

***(60% X \$3,500 = \$2,100)**

****(\$3,500 – \$2,100)**

6/23	Building Maintenance and Repairs Expense	6,900	
	Cash		6,900

EXERCISE 10-23 (20–25 minutes)

- (a) C
- (b) E, assuming immaterial
- (c) C
- (d) C
- (e) C
- (f) C
- (g) C
- (h) E

EXERCISE 10-24 (20–25 minutes)

(a)	Depreciation Expense (8/12 X \$60,000)	40,000	
	Accumulated Depreciation—Machine		40,000
	Loss on Disposal of Machine.....	470,000	
	(\$1,300,000 – \$400,000) – \$430,000		
	Cash	430,000	
	Accumulated Depreciation—Machine.....	400,000	
	(\$360,000 + \$40,000)		
	Machine		1,300,000
(b)	Depreciation Expense (3/12 X \$60,000)	15,000	
	Accumulated Depreciation—Machine		15,000
	Cash	1,040,000	
	Accumulated Depreciation—Machine.....	375,000	
	(\$360,000 + \$15,000)		
	Machine		1,300,000
	Gain on Disposal of Machine		115,000*
	*\$1,040,000 – (\$1,300,000 – \$375,000)		

EXERCISE 10-24 (Continued)

(c)	Depreciation Expense (7/12 X \$60,000).....	35,000	
	Accumulated Depreciation—Machine.....		35,000
	Contribution Expense	1,100,000	
	Accumulated Depreciation—Machine	395,000	
	(\$360,000 + \$35,000)		
	Machine		1,300,000
	Gain on Disposal of Machine		195,000*
	*\$1,100,000 – (\$1,300,000 – \$395,000)		

EXERCISE 10-25 (15–20 minutes)

April 1	Cash	430,000	
	Accumulated Depreciation—Building	160,000	
	Land.....		60,000
	Building.....		280,000
	Gain on Disposal of Plant Assets.....		250,000*

***Computation of gain:**

Book value of land	\$ 60,000
Book value of buildings	
(\$280,000 – \$160,000)	<u>120,000</u>
Book value of land and building	180,000
Cash received	<u>430,000</u>
Gain on disposal	<u>\$250,000</u>

Aug. 1	Land	90,000	
	Building.....	400,000	
	Cash		490,000

TIME AND PURPOSE OF PROBLEMS

Problem 10-1 (Time 35–40 minutes)

Purpose—to provide a problem involving the proper classification of costs related to property, plant, and equipment. Property, plant, and equipment must be segregated into land, buildings, leasehold improvements, and machinery and equipment for purposes of the analysis. Such costs as demolition costs, real estate commissions, imputed interest, minor and major repair work, and royalty payments are presented. An excellent problem for reviewing the first part of this chapter.

Problem 10-2 (Time 40–55 minutes)

Purpose—to provide a problem involving the proper classification of costs related to property, plant, and equipment. Such costs as land, freight and unloading, installation, parking lots, sales and use taxes, and machinery costs must be identified and appropriately classified. An excellent problem for reviewing the first part of this chapter.

Problem 10-3 (Time 35–45 minutes)

Purpose—to provide a problem involving the proper classification of costs related to land and buildings. Typical transactions involve allocation of the cost of removal of a building, legal fees paid, general expenses, cost of organization, special tax assessments, etc. A good problem for providing a broad perspective as to the types of costs expensed and capitalized.

Problem 10-4 (Time 35–40 minutes)

Purpose—to provide a problem involving the method of handling the disposition of certain properties. The dispositions include a condemnation, demolition, trade-in, contribution and sale to a stockholder. The problem therefore involves a number of situations and provides a good overview of the accounting treatment accorded property dispositions.

Problem 10-5 (Time 20–30 minutes)

Purpose—to provide the student with a problem in which schedules must be prepared on the costs of acquiring land and the costs of constructing a building. Interest costs are included.

Problem 10-6 (Time 25–35 minutes)

Purpose—to provide the student with a problem to determining costs to include in the value of land and plant, including interest capitalization.

Problem 10-7 (Time 20–30 minutes)

Purpose—to provide the student with a problem to compute capitalized interest and to present disclosures related to capitalized interest.

Problem 10-8 (Time 35–45 minutes)

Purpose—to provide the student with a problem involving the exchange of machinery. Four different exchange transactions are possible, and journal entries are required for each possible transaction. The exchange transactions cover the receipt and disposition of cash as well as the purchase of a machine from a dealer of machinery.

Problem 10-9 (Time 30–40 minutes)

Purpose—to provide a problem on the accounting treatment for exchanges of assets that have and do not have commercial substance involving gain situations is highlighted.

Problem 10-10 (Time 30–40 minutes)

Purpose—to provide the student with another problem involving the exchange of productive assets. This problem is unusual because the size of the boot is greater than 25%. As a result, the entire transaction is monetary in nature and all gains and losses are recognized.

Problem 10-11 (Time 35–45 minutes)

Purpose—to provide a property, plant, and equipment problem consisting of three transactions that have to be recorded—(1) an asset purchased on a deferred payment contract, (2) a lump sum purchase, and (3) a nonmonetary exchange.

SOLUTIONS TO PROBLEMS

PROBLEM 10-1

(a) **Craig Ehlo Company**
ANALYSIS OF LAND ACCOUNT
for 2007

Balance at January 1, 2007			\$ 230,000
<u>Land site number 621</u>			
Acquisition cost		\$850,000	
Commission to real estate agent		51,000	
Clearing costs	\$35,000		
Less: Amounts recovered	<u>13,000</u>	<u>22,000</u>	
Total land site number 621			923,000
<u>Land site number 622</u>			
Land value		300,000	
Building value		120,000	
Demolition cost		<u>41,000</u>	
Total land site number 622			<u>461,000</u>
Balance at December 31, 2007			<u>\$1,614,000</u>

Craig Ehlo Company
ANALYSIS OF BUILDINGS ACCOUNT
for 2007

Balance at January 1, 2007			\$ 890,000
Cost of new building constructed on land site number 622			
Construction costs		\$330,000	
Excavation fees		38,000	
Architectural design fees		11,000	
Building permit fee		<u>2,500</u>	<u>381,500</u>
Balance at December 31, 2007			<u>\$1,271,500</u>

PROBLEM 10-1 (Continued)

Craig Ehlo Company
ANALYSIS OF LEASEHOLD IMPROVEMENTS ACCOUNT
for 2007

Balance at January 1, 2007	\$660,000
Office space	<u>89,000</u>
Balance at December 31, 2007	<u>\$749,000</u>

Craig Ehlo Company
ANALYSIS OF MACHINERY AND EQUIPMENT ACCOUNT
for 2007

Balance at January 1, 2007		\$875,000
Cost of the new machines acquired		
Invoice price	\$ 87,000	
Freight costs	3,300	
Unloading charges	<u>2,400</u>	<u>92,700</u>
Balance at December 31, 2007		<u>\$967,700</u>

(b) Items in the fact situation which were not used to determine the answer to (a) above are as follows:

1. Interest imputed on common stock financing is not permitted by FASB Statement No. 34 and thus does not appear in any financial statement.
2. Land site number 623, which was acquired for \$650,000, should be included in Ehlo's balance sheet as land held for resale (investment section).
3. Royalty payments of \$17,500 should be included as a normal operating expense in Ehlo's income statement.

PROBLEM 10-2

(a) **Spud Webb Corporation**
ANALYSIS OF LAND ACCOUNT
2007

Balance at January 1, 2007	\$300,000
Plant facility acquired from Ken Norman Company— portion of fair value allocated to land (Schedule 1)	<u>185,000</u>
Balance at December 31, 2007	<u>\$485,000</u>

Spud Webb Corporation
ANALYSIS OF LAND IMPROVEMENTS ACCOUNT
2007

Balance at January 1, 2007	\$140,000
Parking lots, streets, and sidewalks	<u>95,000</u>
Balance at December 31, 2007	<u>\$235,000</u>

Spud Webb Corporation
ANALYSIS OF BUILDINGS ACCOUNT
2007

Balance at January 1, 2007	\$1,100,000
Plant facility acquired from Ken Norman Company— portion of fair value allocated to building (Schedule 1)	<u>555,000</u>
Balance at December 31, 2007	<u>\$1,655,000</u>

PROBLEM 10-2 (Continued)

Spud Webb Corporation
ANALYSIS OF MACHINERY AND EQUIPMENT ACCOUNT
2007

Balance at January 1, 2007		\$ 960,000
Cost of new machinery and equipment acquired		
Invoice price	\$400,000	
Freight and unloading costs	13,000	
Sales taxes	20,000	
Installation costs	<u>26,000</u>	<u>459,000</u>
		\$1,419,000
Deduct cost of machines disposed of		
Machine scrapped June 30, 2007	\$ 80,000*	
Machine sold July 1, 2007	<u>44,000*</u>	<u>124,000</u>
Balance at December 31, 2007		<u>\$1,295,000</u>

***(The accumulated depreciation account can be ignored for this part of the problem.)**

PROBLEM 10-2 (Continued)

Schedule 1

**Computation of Fair Value of Plant Facility Acquired from
Ken Norman Company and Allocation to Land and Building**

20,000 shares of Webb common stock at \$37 quoted
market price on date of exchange (20,000 X \$37) \$740,000

Allocation to land and building accounts in proportion
to appraised values at the exchange date:

	<u>Amount</u>	<u>Percentage of total</u>
Land	\$230,000	25
Building	<u>690,000</u>	<u>75</u>
Total	<u>\$920,000</u>	<u>100</u>

Land	(\$740,000 X 25%)	\$185,000
Building	(\$740,000 X 75%)	<u>555,000</u>
Total		<u>\$740,000</u>

(b) Items in the fact situation that were not used to determine the answer to (a) above, are as follows:

1. The tract of land, which was acquired for \$150,000 as a potential future building site, should be included in Webb's balance sheet as an investment in land.
2. The \$110,000 and \$320,000 book values respective to the land and building carried on Ken Norman's books at the exchange date are not used by Webb.
3. The \$12,080 loss (Schedule 2) incurred on the scrapping of a machine on June 30, 2007, should be included in the other expenses and losses section in Webb's income statement. The \$67,920 accumulated depreciation (Schedule 3) should be deducted from the accumulated depreciation—machinery and equipment account in Webb's balance sheet.

PROBLEM 10-2 (Continued)

4. The \$3,000 loss on sale of a machine on July 1, 2007 (Schedule 4) should be included in the other expenses and losses section of Webb's income statement. The \$21,000 accumulated depreciation (Schedule 4) should be deducted from the accumulated depreciation—machinery and equipment account in Webb's balance sheet.

Schedule 2

Loss on Scrapping of Machine
June 30, 2007

Cost, January 1, 1999	\$80,000
Accumulated depreciation (double-declining-balance method, 10-year life) January 1, 1999, to June 30, 2007 (Schedule 3)	<u>67,920</u>
Asset book value June 30, 2007	<u>\$12,080</u>
Loss on scrapping of machine	<u>\$12,080</u>

PROBLEM 10-2 (Continued)

Schedule 3

**Accumulated Depreciation Using
Double-Declining-Balance Method**
June 30, 2007
(Double-declining-balance rate is 20%)

Year	Book Value at Beginning of Year	Depreciation Expense	Accumulated Depreciation
1999	\$80,000	\$16,000	\$16,000
2000	64,000	12,800	28,800
2001	51,200	10,240	39,040
2002	40,960	8,192	47,232
2003	32,768	6,554	53,786
2004	26,214	5,243	59,029
2005	20,971	4,194	63,223
2006	16,777	3,355	66,578
2007 (6 months)	13,422	1,342	67,920

Schedule 4

Loss on Sale of Machine
July 1, 2007

Cost, January 1, 2004	\$44,000
Depreciation (straight-line method, salvage value of \$2,000, 7-year life) January 1, 2004, to July 1, 2007 [$3\frac{1}{2}$ years $(\\$44,000 - \\$2,000) \div 7$]	<u>(21,000)</u>
Asset book value July 1, 2007	<u>\$23,000</u>
Asset book value	\$23,000
Proceeds from sale	<u>(20,000)</u>
Loss on sale	<u>\$ 3,000</u>

PROBLEM 10-3

(a)	1.	Land (Schedule A)	180,700	
		Building (Schedule B).....	146,250	
		Insurance Expense (6 months X \$95).....	570	
		Prepaid Insurance (16 months X \$95)	1,520	
		Organization Expense	610	
		Retained Earnings	43,800	
		Salary Expense	32,100	
		Land and Building		399,950
		Additional Paid-in Capital		5,600
		(800 shares X \$7)		

Schedule A

Amount Consists of:

Acquisition Cost	
(\$80,000 + [800 X \$107])	\$165,600
Removal of Old Building	9,800
Legal Fees (Examination of title)	1,300
Special Tax Assessment	4,000
Total	<u>\$180,700</u>

Schedule B

Amount Consists of:

Legal Fees (Construction contract)	\$ 1,860
Construction Costs (First payment)	60,000
Construction Costs (Second payment)	40,000
Insurance (2 months)	
([2,280 ÷ 24] = \$95 X 2 = \$190)	190
Plant Superintendent's Salary	4,200
Construction Costs (Final payment)	40,000
Total	<u>\$146,250</u>

	2.	Land and Building.....	4,000	
		Depreciation Expense.....		2,537
		Accumulated Depreciation—Building		1,463

PROBLEM 10-3 (Continued)

Schedule C

Depreciation taken		\$ 4,000
Depreciation that should be taken (1% X \$146,250)		<u>(1,463)</u>
Depreciation adjustment		<u>\$ 2,537</u>

(b) Plant, Property, and Equipment:

Land		\$180,700
Building	\$146,250	
Less: Accumulated depreciation	<u>1,463</u>	<u>144,787</u>
Total		<u>\$325,487</u>

PROBLEM 10-4

The following accounting treatment appears appropriate for these items:

Land—The loss on the condemnation of the land of \$9,000 (\$40,000 – \$31,000) should be reported as an extraordinary item on the income statement. If condemnations are either usual or recurring, then an ordinary or unusual classification is more appropriate. The \$35,000 land purchase has no income statement effect.

Building—There is no recognized gain or loss on the demolition of the building. The entire purchase cost (\$15,000), decreased by the demolition proceeds (\$3,600), is allocated to land.

Warehouse—The gain on the destruction of the warehouse should be reported as an extraordinary item, assuming that it is unusual and infrequent. The gain is computed as follows:

Insurance proceeds		\$74,000
Deduct: Cost	\$70,000	
Less: Accumulated depreciation	<u>11,000</u>	<u>59,000</u>
Realized gain		<u>\$15,000</u>

Some contend that a portion of this gain should be deferred because the proceeds are reinvested in similar assets. We do not believe such an approach should be permitted. Deferral of the gain in this situation is not permitted under GAAP.

Machine—The recognized gain on the transaction would be computed as follows:

Fair market value of old machine		\$7,200
Deduct: Book value of old machine		
Cost	\$8,000	
Less: Accumulated depreciation	<u>3,200</u>	<u>4,800</u>
Total gain		<u>\$2,400</u>

$$\text{Total gain recognized} = \$2,400 \times \frac{\$900}{\$900 + \$6,300} = \underline{\underline{\$300}}$$

The gain deferred is \$2,100 (\$2,400 – \$300)

PROBLEM 10-4 (Continued)

This gain would probably be reported in other revenues and gains. It might be reported as an unusual item if the company believes that such a situation occurs infrequently and if material. The cost of the new machine would be capitalized at \$4,200.

Fair market value of new machine	\$6,300
Less: Gain deferred (\$2,400 – \$300)	<u>2,100</u>
Cost of new machine	<u>\$4,200</u>

Furniture—The contribution of the furniture would be reported as a contribution expense of \$3,100 with a related gain on disposition of furniture of \$950: $\$3,100 - (\$10,000 - \$7,850)$. The contribution expense and the related gain may be netted, if desired.

Automobile—The loss on sale of the automobile of \$1,580: $[\$2,960 - (\$8,000 - \$3,460)]$ should probably be reported in the other expenses or losses section. It might be reported as an unusual item if the company believes that such a situation occurs infrequently.

PROBLEM 10-5

(a) **George Solti Corporation**
Cost of Land (Site #101)
As of September 30, 2008

Cost of land and old building	\$600,000
Real estate broker's commission	36,000
Legal fees	6,000
Title insurance	18,000
Removal of old building	<u>54,000</u>
Cost of land	<u>\$714,000</u>

(b) **George Solti Corporation**
Cost of Building
As of September 30, 2008

Fixed construction contract price	\$3,000,000
Plans, specifications, and blueprints	21,000
Architects' fees	82,000
Interest capitalized during 2007 (Schedule 1)	120,000
Interest capitalized during 2008 (Schedule 2)	<u>190,000</u>
Cost of building	<u>\$3,413,000</u>

Schedule 1

Interest Capitalized During 2007 and 2008

	Weighted-average accumulated construction expenditures	X	Interest rate	=	Interest to be capitalized
2007:	\$1,200,000	X	10%	=	<u>\$120,000</u>
2008:	\$1,900,000	X	10%	=	<u>\$190,000</u>

PROBLEM 10-6

**Interest Capitalization
Balance in the Land Account**

Purchase Price	\$142,000
Surveying Costs	2,000
Title Insurance Policy	4,000
Demolition Costs	3,000
Salvage	<u>(1,000)</u>
Total Land Cost	<u>\$150,000</u>

<u>Expenditures (2005)</u>			<u>Weighted—Average Accumulated Expenditures</u>
<u>Date</u>	<u>Amount</u>	<u>Fraction</u>	
1-Dec	\$150,000	1/12	\$12,500
1-Dec	30,000	1/12	2,500
1-Dec	<u>3,000</u>	1/12	<u>250</u>
	<u>\$183,000</u>		<u>\$15,250</u>

Interest Capitalized for 2005

<u>Weighted—Average Accumulated Expenditures</u>	<u>Interest Rate</u>	<u>Amount Capitalizable</u>
\$15,250	0.08	<u>\$1,220</u>

Interest charged to Interest Expense **\$2,780**
 [(\$600,000 X .08 X 1/12) – \$1,220]

PROBLEM 10-6 (Continued)

<u>Expenditures (2006)</u>			<u>Weighted</u>
<u>Date</u>	<u>Amount</u>	<u>Fraction</u>	<u>Expenditure</u>
1-Jan	\$183,000	6/12	\$ 91,500
1-Jan	1,220	6/12	610
1-Mar	240,000	4/12	80,000
1-May	360,000	2/12	60,000
1-Jul	<u>60,000</u>	0	<u>0</u>
	<u>\$844,220</u>		<u>\$232,110</u>

Interest Capitalized for 2006

<u>Weighted</u>	<u>Interest</u>	<u>Amount</u>
<u>Expenditure</u>	<u>Rate</u>	<u>Capitalizable</u>
\$232,110	0.08	<u>\$18,568.80</u>

Interest charged to Interest Expense \$29,431.20
 [(\$600,000 X .08) – \$18,568.80]

(a) Balance in Land Account—2005 and 2006	150,000.00
(b) Balance in Building—2005	34,220.00*
Balance in Building—2006	712,788.80**
(c) Balance in Interest Expense—2005	2,780.00
Balance in Interest Expense—2006	29,431.20

*\$30,000 + \$3,000 + \$1,220

**\$34,220 + \$240,000 + \$360,000 + \$60,000 + \$18,568.80

PROBLEM 10-7

(a) Computation of Weighted-Average Accumulated Expenditures

Expenditures			Capitalization		Weighted-Average
Date	Amount	X	Period	=	Accumulated Expenditures
July 30, 2007	\$1,200,000		10/12		\$1,000,000
January 30, 2008	1,500,000		4/12		500,000
May 30, 2008	<u>1,300,000</u>		0		<u>0</u>
	<u>\$4,000,000</u>				<u>\$1,500,000</u>

Weighted-Average Accumulated Expenditures	X	Weighted-Average Interest Rate	=	Avoidable interest
\$1,500,000		13%*		<u>\$195,000</u>

Loans Outstanding During Construction Period

	Principal	Actual Interest
*14.5% five-year note	\$2,000,000	\$290,000
12% ten-year bond	<u>3,000,000</u>	<u>360,000</u>
	<u>\$5,000,000</u>	<u>\$650,000</u>

$$\frac{\text{Total interest}}{\text{Total principal}} = \frac{\$650,000}{\$5,000,000} = 13\% \text{ (weighted-average rate)}$$

(c) (1) and (2)

Total actual interest cost	<u>\$650,000</u>
Total interest capitalized	<u>\$195,000</u>
Total interest expensed	<u>\$455,000</u>

PROBLEM 10-8

1.	<u>Susquehanna Corporation</u>		
	Cash.....	23,000	
	Machinery.....	69,000	
	Accumulated Depreciation.....	50,000	
	Loss on Exchange of Machinery.....	18,000*	
	Machinery		160,000
	*Computation of loss:		
	Book value	\$110,000	
	Fair value	<u>(92,000)</u>	
	Loss	<u>\$ 18,000</u>	
	 <u>Choctaw Company</u>		
	Machinery.....	92,000	
	Accumulated Depreciation.....	45,000	
	Loss on Exchange of Machinery.....	6,000*	
	Cash		23,000
	Machinery		120,000
	*Computation of loss:		
	Book value	\$ 75,000	
	Fair value	<u>(69,000)</u>	
	Loss	<u>\$ 6,000</u>	
 2.	<u>Susquehanna Corporation</u>		
	Machinery.....	92,000	
	Accumulated Depreciation.....	50,000	
	Loss on Exchange of Machinery.....	18,000	
	Machinery		160,000
	 <u>Powhatan Company</u>		
	Machinery (\$92,000 – \$16,000).....	76,000*	
	Accumulated Depreciation.....	71,000	
	Machinery		147,000
	*Computation of gain		
	deferred:	Fair value	\$92,000
		Book value	<u>(76,000)</u>
		Gain deferred	<u>\$16,000</u>

PROBLEM 10-8 (Continued)

3. Susquehanna Corporation

Machinery	100,000	
Accumulated Depreciation	50,000	
Loss on Exchange of machinery	18,000	
Machinery.....		160,000
Cash.....		8,000

Shawnee Company

Machinery	92,000	
Accumulated Depreciation	75,000	
Cash	8,000	
Machinery.....		160,000
Gain on Exchange of Machinery		15,000*

*Fair value	\$100,000
Book value	<u>(85,000)</u>
Gain	<u>\$ 15,000</u>

Because the exchange has commercial substance, the entire gain should be recognized.

4. Susquehanna Corporation

Machinery	185,000	
Accumulated Depreciation	50,000	
Loss on Exchange of machinery	18,000	
Machinery.....		160,000
Cash.....		93,000

Seminole Company

Cash	93,000	
Used Machine Inventory.....	92,000	
Sales		185,000
Cost of Goods Sold.....	130,000	
Inventory		130,000

PROBLEM 10-9

(a) Exchange has commercial substance:

Arna Inc.'s Books

Asset B	75,000	
Accumulated Depreciation—Asset A	45,000	
Asset A		96,000
Gain on Disposal of Plant Assets (\$60,000 – [\$96,000 – \$45,000])		9,000
Cash		15,000

Bontemps Inc.'s Books

Cash	15,000	
Asset A	60,000	
Accumulated Depreciation—Asset B	52,000	
Asset B		110,000
Gain on Disposal of Plant Assets (\$75,000 – [\$110,000 – \$52,000])		17,000

(b) Exchange lacks commercial substance:

Arna Inc.'s Books

Asset B (\$75,000 – \$9,000)	66,000*	
Accumulated Depreciation—Asset A	45,000	
Asset A		96,000
Cash		15,000

*Computation of gain deferred:

Fair value	\$60,000	
Book value	<u>(51,000)</u>	
Gain deferred	<u>\$ 9,000</u>	

PROBLEM 10-9 (Continued)

Bontemps Inc.'s Books

Cash	15,000	
Asset A.....	46,400**	
Accumulated Depreciation—Asset B	52,000	
Asset B.....		110,000
Gain on Disposal of Plant Assets		3,400*

Computation of total gain:

Fair value of Asset B	\$75,000
Book value of Asset B	<u>(58,000)</u>
Total gain	<u>\$17,000</u>

$$\text{*Gain recognized} = \frac{\$15,000}{\$15,000 + \$60,000} \times \$17,000 = \underline{\underline{\$3,400}}$$

**Fair value of asset acquired	\$60,000
Less: Gain deferred (\$17,000 – \$3,400)	<u>13,600</u>
Basis of Asset A	<u>\$46,400</u>

OR

Book value of Asset B	\$58,000
Portion of book value sold	<u>(11,600)</u>
	<u>\$46,400</u>

Note to instructor: This illustrates the exception to no gain or loss recognition for exchanges that lack commercial substance. Although it would be rare for an exchange to lack commercial substance when cash is received, a gain can be recognized based on the proportion of cash received to the overall fair value (para. 22, APB 29—which was not modified by FAS No. 153)

PROBLEM 10-10

(a) Has Commercial Substance

<u>Garrison Construction</u>			
(1)	Equipment (\$72,000 + \$118,000).....	190,000	
	Accumulated Depreciation—Equipment	60,000	
	Loss on Disposal of Plant Assets.....	8,000*	
	Equipment		140,000
	Cash.....		118,000

***Computation of loss:**

Book value of old crane		
(\$140,000 – \$60,000)		\$80,000
Fair value of old crane		<u>72,000</u>
Loss on disposal of plant assets		<u>\$ 8,000</u>

<u>Keillor Manufacturing</u>			
(2)	Cash	118,000	
	Equipment Inventory	72,000	
	Sales		190,000
	Cost of Goods Sold	165,000	
	Equipment Inventory		165,000

(b) Lacks Commercial Substance

- (1) Garrison Construction should record the same entry as in part (a) above, since the exchange resulted in a loss.
- (2) Keillor should record the same entry as in part (a) above. No gain is deferred because we are assuming that Garrison is a customer. In addition, because the cash involved is greater than 25% of the value of the exchange, the entire transaction is considered a monetary transaction and a gain is recognized.

(c) Has Commercial Substance

<u>Garrison Construction</u>			
(1)	Equipment (\$98,000 + \$92,000).....	190,000	
	Accumulated Depreciation—Equipment	60,000	
	Equipment		140,000
	Cash.....		92,000
	Gain on Disposal of Plant Assets.....		18,000*

***Computation of gain:**

Book value of old crane		
(\$140,000 – \$60,000)		\$80,000
Fair value of old crane		<u>98,000</u>
Gain on disposal of plant assets		<u>\$18,000</u>

PROBLEM 10-10 (Continued)

		<u>Keillor Manufacturing</u>	
(2)	Cash	92,000	
	Equipment Inventory	98,000	
	Sales		190,000
	 Cost of Goods Sold	 165,000	
	Equipment Inventory		165,000

		<u>Garrison Construction</u>	
(d)			
(1)	Equipment	190,000	
	Accumulated Depreciation—Equipment.....	60,000	
	Cash		103,000
	Equipment.....		140,000
	Gain on Disposal of Plant Assets		7,000*

*[Fair Value—Old (\$87,000) – Book Value—Old (\$80,000)]

Note: Cash involved is greater than 25% of the value of the exchange, so the gain is not deferred.

		<u>Keillor Manufacturing</u>	
(2)	Cash	103,000	
	Equipment Inventory	87,000	
	Sales		190,000
	 Cost of Goods Sold	 165,000	
	Equipment Inventory		165,000

Same reasons as cited in (b) (2) above.

Note: Even though the exchange lacks commercial substance, cash paid exceeds 25% of total fair value so the transaction is treated as a monetary exchange and recorded at fair value (EITF 86-29). Note that with this much cash involved, it is unlikely that the exchange would lack commercial substance.

PROBLEM 10-11

- (a) The major characteristics of plant assets, such as land, buildings, and equipment, that differentiate them from other types of assets are presented below.
1. Plant assets are acquired for use in the regular operations of the enterprise and are not for resale.
 2. Property, plant, and equipment possess physical substance or existence and are thus differentiated from intangible assets such as patents and goodwill. Unlike other assets that possess physical substance (i.e., raw material), property, plant, and equipment do not physically become part of the product held for resale.
 3. These assets are durable and long-term in nature and are usually subject to depreciation.
- (b) *Transaction 1.* To properly reflect cost, assets purchased on deferred payment contracts should be accounted for at the present value of the consideration exchanged between the contracting parties at the date of the consideration. When no interest rate is stated, interest must be imputed at a rate that approximates the rate that would be negotiated in an arm's-length transaction. In addition, all costs necessary to ready the asset for its intended use are considered to be costs of the asset.

$$\begin{aligned}\text{Asset cost} &= \text{Present value of the note} + \text{Freight} + \text{Installation} \\ &= \left[\left(\frac{\$20,000}{4} \right) \times 3.17 \right] + \$425 + \$500 \\ &= \$15,850 + 925 \\ &= \$16,775\end{aligned}$$

PROBLEM 10-11 (Continued)

Transaction 2. The lump-sum purchase of a group of assets should be accounted for by allocating the total cost among the various assets on the basis of their relative fair market values. The \$8,000 of interest expense incurred for financing the purchase is a period cost and is not a factor in determining asset cost.

Inventory	$\$210,000 \times (\$ 50,000/\$250,000) = \$42,000$
Land	$\$210,000 \times (\$ 80,000/\$250,000) = \$67,200$
Building	$\$210,000 \times (\$120,000/\$250,000) = \$100,800$

Transaction 3. The cost of a nonmonetary asset acquired in exchange that has commercial substance should be recorded at the fair value of the asset given up plus any cash paid. Furthermore, any gain on exchange is also recognized.

Fair value of trucks	\$46,000
Cash paid	<u>19,000</u>
Cost of land	<u>\$65,000</u>

- (c)
1. A building purchased for speculative purposes is not a plant asset as it is not being used in normal operations. The building is more appropriately classified as an investment.
 2. The two-year insurance policy covering plant equipment is not a plant asset as it is not long-term in nature, not subject to depreciation, and has no physical substance. This policy is more appropriately classified as a current asset (prepaid insurance).
 3. The rights for the exclusive use of a process used in the manufacture of ballet shoes are not plant assets as they have no physical substance. The rights should be classified as an intangible asset.

TIME AND PURPOSE OF CONCEPTS FOR ANALYSIS

CA 10-1 (Time 20–25 minutes)

Purpose—the student discusses which expenditures related to purchasing land, constructing a building, and adding to the building should be capitalized and how each should be depreciated. When the land and building are sold, the student discusses how the book value is determined and how a gain would be reported.

CA 10-2 (Time 20–25 minutes)

Purpose—to provide the student with a situation involving the proper allocation of costs to self-constructed machinery. As part of this case, the student is required to discuss the propriety of including overhead costs in the construction costs. Finally, the proper accounting treatment accorded the development costs associated with the construction of a new machine must be evaluated.

CA 10-3 (Time 20–25 minutes)

Purpose—to provide the student with a problem involving the proper accounting treatment for interest costs. The student is required to assess the advantages and disadvantages of capitalizing interest. In addition, this problem should provide you with an opportunity to discuss the FASB pronouncement in this area.

CA 10-4 (Time 30–40 minutes)

Purpose—to provide the student a context to determine capitalization of interest and to explain in a memorandum the conceptual basis for interest capitalization.

CA 10-5 (Time 30–40 minutes)

Purpose—to provide the student with a context in which to examine differences in accounting for exchanges that have or lack commercial substance.

CA 10-6 (Time 20–25 minutes)

Purpose—to provide the student with an understanding of the proper accounting treatment involving incidental costs associated with the purchase of a machine. The student must be able to defend why certain costs might be capitalized even though this valuation has no relationship to net realizable value. In addition, the costs may be charged off immediately for tax purposes and the student is required to analyze why these costs may still be capitalized for book purposes.

CA 10-7 (Time 20–25 minutes)

Purpose—to provide the student with a case involving allocation of costs between land and buildings, including ethical issues.

SOLUTIONS TO CONCEPTS FOR ANALYSIS

CA 10-1

- (a) Expenditures should be capitalized when they benefit future periods. The cost to acquire the land should be capitalized and classified as land, a nondepreciable asset. Since tearing down the small factory is readying the land for its intended use, its cost is part of the cost of the land and should be capitalized and classified as land. As a result, this cost will not be depreciated as it would if it were classified with the capitalizable cost of the building.

Since rock blasting and removal is required for the specific purpose of erecting the building, these costs are part of the cost of the building and should be capitalized and classified with the capitalizable cost of the building. This cost should be depreciated over the estimated useful life of the building.

The road and the parking lot are land improvements, and these costs should be capitalized and classified separately as a land improvements. These costs should be depreciated over their estimated useful lives.

The added four stories is an addition, and its cost should be capitalized and classified with the capitalizable cost of the building. This cost should be depreciated over the remaining life of the original office building because that life is shorter than the estimated useful life of the addition.

- (b) A gain should be recognized on the sale of the land and building because income is realized whenever the earning process has been completed and a sale has taken place.

The net book value at the date of sale would be composed of the capitalized cost of the land, the land improvement, and the building, as determined above, less the accumulated depreciation on the land improvement and the building. The excess of the proceeds received from the sale over the net book value at the date of sale would be accounted for as a gain in continuing operations in the income statement.

CA 10-2

- (a) Materials and direct labor used in the construction of the equipment definitely should be charged to the equipment account. It should be emphasized that no gain on self-construction should be recorded because such an approach violates the historical cost principle. The controversy centers on the assignment of indirect costs, called overhead or burden, consisting of power, heat, light, insurance, property taxes on factory buildings, etc. The suggested approaches are discussed below.
- (b) 1. Many believe that only the variable overhead costs that increase as a result of the construction should be assigned to the cost of the asset. This approach assumes that the company will have the same fixed costs regardless of whether the company constructs the asset or not, so to charge a portion of the fixed overhead costs to the equipment will usually decrease current expenses and consequently overstate income of the current period. Therefore, only the incremental costs should be charged.
2. Proponents of alternative (2) argue that such assets should be given the same treatment as inventory items and that all costs should be allocated thereto just as if saleable goods were being produced. They state that no special favor should be granted in the allocation of any cost, as long as sufficient facts are available to enable the allocation to be made. They argue that allocation of overhead to fixed assets is similar to allocation to joint products and byproducts, and should be made at regular rates. Of course, no item should be capitalized at an amount greater than that prevailing in the market.

CA 10-2 (Continued)

- (c) It could be argued that because costs of development are usually higher on the first few units, the additional costs of \$273,000 should be allocated to all four machines. If these costs are due to inefficiency and not development costs, the additional costs should be expensed.

CA 10-3

Three approaches have been suggested to account for actual interest incurred in financing the construction or acquisition of property, plant, and equipment. One approach is to capitalize no interest during construction. Under this approach interest is considered a cost of financing and not a cost of construction. It is contended that if the company had used stock financing rather than debt financing, this expense would not have developed. The major arguments against this approach are that an implicit interest cost is associated with the use of cash regardless of the source.

A second approach is to capitalize the actual interest costs. This approach relies on the historical cost concept that only actual transactions are recorded. It is argued that interest incurred is as much a cost of acquiring the asset as the cost of the materials, labor, and other resources used. As a result, a company that uses debt financing will have an asset of higher cost than an enterprise that uses stock financing. The results achieved by this approach are held to be unsatisfactory by some because the cost of an asset should be the same whether cash, debt financing, or stock financing is employed.

A third approach is to charge construction with all costs of funds employed, whether identifiable or not. This approach is an economic cost approach that maintains that one part of the cost of construction is the cost of financing whether by debt, cash, or stock financing. An asset should be charged with all costs necessary to get it ready for its intended use. Interest, whether actual or imputed, is a cost of building, just as labor, materials, and overhead are costs. A major criticism of this approach is that imputation of a cost of equity capital is subjective and outside the framework of a historical cost system.

FASB Statement No. 34 requires that the lower of actual or avoidable interest cost be capitalized as part of the cost of acquiring an asset if a significant period of time is required to bring the asset to a condition or location necessary for its intended use. Interest costs would be capitalized (provided interest costs are being incurred) starting with the first expenditure related to the asset and would continue until the asset is substantially completed and ready for its intended use. Capitalization should occur only if the benefits exceed the costs.

CA 10-4

To: Dee Pettepiece, President

From: Good Student, Manager of Accounting

Date: January 15, 2006

Subject: Capitalization of avoidable interest on the warehouse construction project

I am writing in response to your questions about the capitalized interest costs for the warehouse construction project. This brief explanation of my calculations should facilitate your understanding of these costs.

Generally, the accounting profession does not allow accrued interest to be capitalized along with an asset's cost. However, the FASB made an exception for interest costs incurred during construction. In order to qualify for this treatment, the constructed asset must require a period of time to become ready for its intended use.

Because interest capitalization is allowed in special circumstances only, the company must be especially careful to capitalize only that interest which is associated with the construction itself. Thus, the FASB issued a standard indicating how much interest may be associated with the construction, i.e., the lower of actual or avoidable interest.

On the surface, this standard seems simple. Actual interest incurred during the construction period equals all interest which accrued on any debt outstanding during that period. Avoidable interest equals the amount of interest which would not have been incurred if the construction project had not been undertaken. The amount of interest capitalized is the smaller of the two.

To determine the amount capitalized, we must calculate both the actual and the avoidable interest during 2005. Actual interest is computed by applying the interest rates of 12%, 10%, and 11% to their related debt. Thus, total actual interest for this period is \$600,000 (see Schedule #1).

CA 10-4 (Continued)

Calculations for avoidable interest are more complex. First, interest can be capitalized only on the weighted-average amount of accumulated expenditures. Although total costs amounted to \$6,200,000 for the project, an average of only \$4,000,000 was outstanding during the period of construction.

Second, of the total \$5,400,000 debt outstanding during this period, only 2,000,000 of it can be associated with the actual construction project. Therefore, rather than arbitrarily choose the interest rate for one of the other loans, we must calculate the weighted-average interest rate. This rate is the ratio of accrued interest on the other loans to the total amount of their principal. For the \$2,000,000 balance of weighted-average accumulated expenditures, this interest rate equals 10.59% (see Schedule #2).

Third, we compute our avoidable interest as follows: calculate the interest on the loan directly associated with the construction. Apply the weighted-average interest rate to the remainder of the weighted-average accumulated expenditure. Now, add these products. Avoidable interest for 2005 amounts to \$451,800 (see Schedule #3).

So as not to overstate the interest associated with the construction, we capitalize the smaller of the two—\$451,800—along with the other construction costs. The remainder of the interest (\$148,200) is expensed.

I hope that this explanation has answered any questions you may have had about capitalized interest. If any further questions should arise, please contact me.

CA 10-4 (Continued)

Schedule #1

Actual Interest

Construction loan	\$2,000,000 X 12% =	\$240,000
Short-term loan	\$1,400,000 X 10% =	140,000
Long-term loan	\$2,000,000 X 11% =	<u>220,000</u>
	Total	<u>\$600,000</u>

Schedule #2

Weighted-Average Interest Rate

Weighted-average interest rate computation	<u>Principal</u>	<u>Interest</u>
10% short-term loan	\$1,400,000	\$140,000
11% long-term loan	<u>2,000,000</u>	<u>220,000</u>
	<u>\$3,400,000</u>	<u>\$360,000</u>

$$\frac{\text{Total Interest}}{\text{Total Principal}} = \frac{\$360,000}{\$3,400,000} = 10.59\%$$

Schedule #3

Avoidable Interest

<u>Weighted-Average Accumulated Expenditures</u>		X	<u>Interest Rate</u>	=	<u>Avoidable Interest</u>
\$2,000,000			12%		\$240,000
<u>2,000,000</u>			10.59%		<u>211,800</u>
<u>\$4,000,000</u>					<u>\$451,800</u>

Schedule #4

Interest Capitalized

Because avoidable interest is lower than actual interest, use avoidable interest.

Cost	\$6,200,000
Interest capitalized	<u>451,800</u>
Total cost	<u>\$6,651,800</u>

CA 10-5

(a) Client A

Treatment if has Commercial Substance

Client A would recognize a gain of \$35,000 on the exchange. The basis of the asset acquired would be \$125,000. The entry would be as follows:

Machinery (\$95,000 + \$30,000).....	125,000	
Accumulated Depreciation—Machinery	40,000	
Cash		30,000
Gain on Disposal of Plant Assets		35,000*
Machinery		100,000
*Book value of old machinery (\$100,000 – \$40,000)	\$60,000	
Fair value of old machinery	<u>95,000</u>	
Gain on disposal of plant asset	<u>\$35,000</u>	

(b) Treatment if lacks Commercial Substance

Client A would be prohibited from recognizing a \$35,000 gain on the exchange. This is because the transaction lacks commercial substance. The new asset on his books would have a basis of \$90,000 (\$125,000 less the \$35,000 unrecognized gain). The entry would be as follows:

Machinery (\$125,000 – \$35,000).....	90,000	
Accumulated Depreciation	40,000	
Cash		30,000
Machinery		100,000

(c) Memo to the Controller:

TO: The Controller

RE: Exchanges of Assets—Commercial Substance Issues.

Financial statement effect of treating the exchange as having commercial substance versus not.

1. The income statement will reflect a before tax gain of \$35,000. This gain will increase the reported income on this year's financial statements. Future income statements will probably show a higher depreciation deduction because of an increased book value of the new asset. Thus future income statements will reflect lower income.
2. The current balance sheet will show a \$35,000 higher value for fixed assets, a higher liability for taxes payable and higher retained earnings if the exchange has commercial substance. This difference will disappear gradually as the asset is depreciated.

CA 10-5 (Continued)

(d) Client B

Treatment if Exchange has Commercial Substance

In this situation, the full \$55,000 gain would be recognized on this year's income statement. The new asset would go on the books at its fair market value. The entry is as follows:

Machinery	95,000	
Accumulated Depreciation—Machinery	80,000	
Cash.....	30,000	
Machinery		150,000
Gain on Exchange of Plant Assets		55,000*
*Book value of old machinery (\$150,000 – \$80,000)	\$ 70,000	
Fair value of old machinery	<u>125,000</u>	
Gain on disposal of plant assets	<u>\$ 55,000</u>	

(e) Treatment if Exchange Lacks Commercial Substance

Machinery (\$95,000 – \$41,800).....	53,200	
Accumulated Depreciation—Machinery	80,000	
Cash.....	30,000	
Machinery.....		150,000
Gain on Exchange of Plant Assets		13,200*

* A partial gain will be recognized in the ratio of cash received. In this case, a gain of \$13,200 will be recognized ($\$30,000/\$125,000$ times the gain of \$55,000). The unrecognized portion of \$41,800 will be used to reduce the basis of the new asset. The entry to record the exchange is as above.

(f) Memo to the Controller:

TO: The Controller

RE: Exchanges of Assets—Commercial Substance Issues

Financial Statement effect of treating the exchange as having commercial substance versus not.

TO: The Controller

RE: Asset Exchanges—Commercial Substance

1. The income statement will reflect a before tax gain of \$55,000 if the exchange has commercial substance. This gain will increase the reported income on this year's financial statements. Future income statements will probably show a higher depreciation deduction because of an increased book value of the new asset. Thus future income statements will reflect lower income. The reported gain will only be \$13,200 if the exchange lacks commercial substance.
2. The current balance sheet will show a \$41,800 higher value for fixed assets, a higher liability for taxes payable and higher retained earnings if the exchange has commercial substance. This difference will disappear gradually as the asset is depreciated.

CA 10-6

In general, the inclusion of the \$7,500 as part of the cost of the machine is justified because the primary purpose in accounting for plant asset costs is to secure an equitable allocation of incurred costs over the period of time when the benefits are being received from the use of the assets. These costs—both the \$40,000 and the \$7,500—are much like prepaid expenses, to be matched against the revenue emerging through their use. The purpose of accounting for plant assets then is not primarily aimed at determining the fair valuation of the asset for balance sheet purposes, but proper matching of incurred costs with revenue resulting from use of the assets.

1. It may be true that these installation costs could not be recovered if the machine were to be sold. This is not important, however, because presumably the machine was acquired to be used, not to be sold. Assuming approximately equal utilization of the machine in each of the ten years, the owner properly could allocate \$4,750 (10% of \$47,500) against each year's operations. If the owner's suggestion was followed, the first year would be charged with \$11,500 (\$7,500 plus 10% of \$40,000), and the following nine years with \$4,000 per year, hence overstating expenses by \$6,750 the first year and understating expenses by \$750 per year for the succeeding nine years. This could hardly be defended as proper matching of costs and revenue.
2. Again, the purpose of accounting for plant assets is not to arrive at an approximation of fair value of the assets each year over the life of the assets. However, even if this were an objective, the question of which method would come closer to stating current market value at some later date would revolve around the general trend of the price level over the years involved.
3. Assuming that the \$7,500 could properly be deducted, there would be some tax savings over the years unless the tax rates applicable to the business were reduced during the following years. There is some value to taking the \$7,500 deduction right now because of the present value of money. If the rates increased, there would be an increase in total taxes, due to higher rates applicable during the period when depreciation deductions would be reduced. However, generally accepted accounting principles are not determined by income tax effects. In many instances, GAAP requires different accounting treatment of an item than the IRS Revenue Code does.

CA 10-7

- (a) If the land is undervalued so that a higher depreciation expense is assigned to the building, management interests are served. The lower net income and reduced tax liability save cash to be used for management purposes. By contrast, stockholders and potential investors are misled by the inaccurate cost values. They will have been deprived of information concerning the significant impact of changing real estate values on this holding.
- (b) The ethical question centers on whether to allocate the cost of the purchase on the fair market value of land and building or whether to determine the allocation in view of the potential effect on net income. Phillips faces an ethical dilemma if Smith will not accept Phillips' position. Phillips should specify alternative courses of action and carefully assess the consequences of each before deciding what to do.
- (c) For basket (lump sum) purchases of land and buildings, costs should be allocated on the ratio of fair market values of the land and buildings.

FINANCIAL STATEMENT ANALYSIS CASE

JOHNSON & JOHNSON

- (a) The cost of buildings and building equipment at the end of 2004 was \$5,907,000,000.
- (b) As indicated in footnote number one to the financial statements, the company utilizes the straight-line method for financial statement purposes for all additions to property, plant, and equipment. Given that straight-line depreciation provides a lower charge for depreciation as compared to an accelerated method in the early years of an asset's life, the accounting appears to be less conservative.
- (c) The cash flow statement reports the amount of interest paid in cash (\$222 million).

A review of the income statement indicates that J&J recorded interest expense of \$187 million (net of capitalized interest of \$136 million—see note 3).

The total interest incurred for 2004 is \$323 million: \$187 million recorded as expense; \$136 million capitalized.

- (d) Free cash flow is defined as net cash flows provided by operating activities less capital expenditures and dividends.

Free cash flow is the amount of discretionary cash flow a company has for purchasing additional investments, retiring its debt, purchasing treasury stock, or simply adding to its liquidity. In Johnson & Johnson's situation, free cash flow is computed as follows:

Net cash flows from operating activities	\$11,131,000,000
Less: Additions to property, plant, and equipment	2,175,000,000
Dividends	<u>3,251,000,000</u>
Free cash flow	<u>\$5,705,000,000</u>

As indicated from the above computation, Johnson & Johnson has considerable free cash flows. The company has excellent financial flexibility.

FINANCIAL STATEMENT ANALYSIS CASE (Continued)

For example, the company is able to pay its dividends without resorting to external financing. Secondly, even if operations decline, it appears that the company will be able to fund additions to property, plant, and equipment. Thirdly, the company is using its free cash flow to expand its operations by acquiring new businesses.

RESEARCH CASE

- (a) The EITF stands for the Emerging Issues Task Force. The EITF is a unit of the Financial Accounting Standards Board. The EITF has as its mission to work out the conventions of cutting-edge accounting issues. The EITF has no binding enforcement power, but, by providing a forum to debate issues, it helps create consistent standards, which in turn allows investors to compare companies in the same industry.
- (b) The issue involves exchanges of similar network capacity. Companies engaged in such deals count as revenue the money received from the company on the other end of the deal. (In general, in transactions involving leased capacity, the companies booked the revenue over the life of the contract.) Some of these companies then treated their own purchases as capital expenditures, which aren't run through the income statement; instead, the spending led to the addition of assets on the balance sheet. Mr. Lucas and others view an exchange of similar network capacity as equivalent to trading a blue truck for a red truck; it shouldn't boost a company's revenue.
- (c) Until recently the swaps of network capacity were not that common. Not until companies raced to expand their networks did the swaps become controversial. As a result, the exchanges of network capacity never arose as a subject at this task force, according to its head, Timothy Lucas. "I don't know what it looked like to people at the time," Mr. Lucas says. "It is obvious in hindsight that [the accounting for such exchanges of capacity] was something that raises questions" that should have been debated publicly, he says. Generally, as a new industry evolves, the big accounting firms either approach the SEC or the EITF directly to establish a consensus on proper accounting standards. In the early years of the telecom boom, the SEC was very involved in working with the industry on accounting standards involving one-way leases of network capacity, an SEC spokesman confirmed the assertion of Mr. Lucas, of the EITF, that the SEC, like the auditing firms, hadn't referred swap-related accounting issues to the EITF for discussion.

PROFESSIONAL RESEARCH

Search Strings: “capitalization of interest”, assets and capitalization, disclosures and capitalization

- (a) Yes; see Statement of Financial Accounting Standards No. 34, “Capitalization of Interest Cost.” (FAS 34.)
- (b) FAS 34, Par 7. The objectives of capitalizing interest are (a) to obtain a measure of acquisition cost that more closely reflects the enterprise’s total investment in the asset and (b) to charge a cost that relates to the acquisition of a resource that will benefit future periods against the revenues of the periods benefited.
- (c) FAS 34, Par 9. Subject to the provisions of paragraph 8, interest shall be capitalized for the following types of assets (“qualifying assets”):
 - a. Assets that are constructed or otherwise produced for an enterprise’s own use (including assets constructed or produced for the enterprise by others for which deposits or progress payments have been made)
 - b. Assets intended for sale or lease that are constructed or otherwise produced as discrete projects (e.g., ships or real estate developments).
- (d) FAS 34, Par 15. The total amount of interest cost capitalized in an accounting period shall not exceed the total amount of interest cost incurred by the enterprise in that period. In consolidated financial statements, that limitation shall be applied by reference to the total amount of interest cost incurred by the parent company and consolidated subsidiaries on a consolidated basis. In any separately issued financial statements of a parent company or a consolidated subsidiary and in the financial statements (whether separately issued or not) of unconsolidated subsidiaries and other investees accounted for by the equity method, the limitation shall be applied by reference to the total amount of interest cost (including interest on intercompany borrowings) incurred by the separate entity.
- (e) FAS 34, Par 21. The following information with respect to interest cost shall be disclosed in the financial statements or related notes:
 - a. For an accounting period in which no interest cost is capitalized, the amount of interest cost incurred and charged to expense during the period
 - b. For an accounting period in which some interest cost is capitalized, the total amount of interest cost incurred during the period and the amount thereof that has been capitalized.

PROFESSIONAL SIMULATION

Measurement

Historical cost is measured by the cash or cash-equivalent price of obtaining the asset and bringing it to the location and condition for its intended use. For Norwel, this is:

Price	\$12,000	
Tax (\$12,000 X .05)	600	
Platform	<u>1,400</u>	
Total		<u>\$14,000</u>

Journal Entry

January 2, 2006

Machine	14,000	
Cash		14,000

December 31, 2006

Depreciation Expense.....	1,500	
Accumulated Depreciation		1,500*

*Depreciable base: $(\$14,000 - \$2,000) = \$12,000$

Depreciation expense: $\$12,000 \div 4 = \$3,000$ per year

2006: $\frac{1}{2}$ year = $\$3,000 \times .50 = \$1,500$

Financial Statements

The amount reported on the balance sheet is the cost of the asset less accumulated depreciation:

Machine	\$14,000	
Accumulated depreciation	<u>(4,500)</u>	
Book value		<u>\$ 9,500</u>

PROFESSIONAL SIMULATION (Continued)

Analysis

The income effect is a gain or loss, determined by comparing the book value of the asset to the disposal value:

Cost	\$14,000
Accumulated depreciation	<u>6,000</u>
Book value	8,000
Cash received for machine and platform	<u>7,000</u>
Pretax loss	<u>\$ 1,000</u>