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 10-4 (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	8,000
Total cost	$122,100

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	4,400
Total cost	$440,400

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 10-6 (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
1,600,000		10.42%		166,720
$3,600,000				$406,720

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

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

EXERCISE 10-7 (Continued)

(b) **Actual Interest**

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% =	110,000
	Total	$490,000

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

Cost	$5,200,000
Interest capitalized	406,720
Total cost	$5,606,720

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

EXERCISE 10-8 (20–25 minutes)

(a) **Computation of Weighted-Average Accumulated Expenditures**

Expenditures: Date	Expenditures: Amount	X	Capitalization Period	=	Weighted-Average Accumulated Expenditures
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	1,500,000		1/12		125,000
	$3,960,000				$1,525,000

Computation of Avoidable Interest

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

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%	160,000
	$1,040,000

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	(183,000)
Interest expense debit	$ 857,000

EXERCISE 10-9 (20–25 minutes)

(a) **Computation of Weighted-Average Accumulated Expenditures**

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

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

Avoidable interest

Weighted-Average Accumulated Expenditures	X	Interest Rate	=	Avoidable Interest
$50,000		12%		$6,000

Actual Interest

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

Interest capitalized $ 6,000

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

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

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

Date	Amount	Current Year Capitalization Period	Weighted-Average Accumulated Expenditures
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
	$1,210,000		$432,500

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

Avoidable Interest

Weighted-Average Accumulated Expenditures		Interest Rate		Avoidable Interest
$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