

Managerial 9e – Chapter 1 – Exercises and Problems – Set B

Exercise 1-1B

	Managerial Accounting	Financial Accounting
a.		X
b.	X	
c.		X
d.		X
e.	X	
f.		X
g.		X
h.	X	
i.	X	
j.	X	

Exercise 1-2B

	Product Cost	Selling, General, and Administrative Cost
a.	X	
b.		X
c.		X
d.	X	
e.		X
f.	X	
g.		X
h.		X
i.	X	
j.	X	

Exercise 1-3B

Cost Category	Product / SG&A	Asset / Expense
Cost of merchandise shipped to customers	Product	Expense
Depreciation on vehicles used by salespeople	SG&A	Expense
Wages of administrative building security guards	SG&A	Expense
Supplies used in the plant manager's office	Product	Asset
Purchase of computers for the accounting department	SG&A	Asset
Depreciation on computers used in factory	Product	Asset
Natural gas used in the factory	Product	Asset
Cost of television commercials	SG&A	Expense
Wages of factory workers	Product	Asset
Paper and ink cartridges used in the cashier's office	SG&A	Expense
Raw material used to make products	Product	Asset
Lubricant used to maintain factory equipment	Product	Asset
Cost of a delivery truck	SG&A	Asset
Cash dividend to stockholders	Neither	Neither

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Exercise 1-4B

	Assets	=	Liab.	+	Equity	Rev.	–	Exp.	=	Net Inc.
1.	NA		I		D	NA		I		D
2.	I		I		NA	NA		NA		NA

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Exercise 1-5B

Event No.	<i>Assets</i>			<i>Equity</i>		<i>Income Statement</i>		
	<i>Cash</i>	<i>Prepaid Insurance</i>	<i>Inventory</i>	<i>Com. Stk.</i>	<i>Ret. Ear.</i>	<i>Rev.</i>	<i>Exp.</i>	<i>Net Inc.</i>
1.	NA	D	NA	NA	D	NA	I	D
2.	NA	D	I	NA	NA	NA	NA	NA

Exercise 1-6B

- a. Depreciation costs that would be classified as selling, general, and administrative expense are the following:

Depreciation of a building for finished product display	\$24,000
Depreciation of delivery trucks	18,000
Depreciation of furniture used in the president's office	15,000
Depreciation of elevators in administrative buildings	20,000
Total	<u>\$77,000</u>

- b. Depreciation costs that would be classified as product costs are the following:

Depreciation of factory buildings	\$ 75,000
Depreciation of computers used in manufacturing	12,000
Depreciation of forklifts used in the factory	30,000
Depreciation of factory machinery	36,000
Total	<u>\$ 153,000</u>

Since 2,000 units of 3,000 products finished were sold, $\frac{2}{3}$ ($2,000 \div 3,000$) of the product cost would be included in cost of goods sold. Therefore, the total depreciation cost that would be included in cost of goods sold is:

$$\$153,000 \times \frac{2}{3} = \$102,000$$

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Exercise 1-7B

Event No.	Assets						=	Equity			Income Statement					
	Cash	+	Inventory	+	Manuf. Equip.	+	Adm. Offices	=	Com. Stk.	+	Ret. Ear.	Rev.	-	Exp.	=	Net Inc.
1.	I	+	NA	+	NA	+	NA	=	I	+	NA	NA	-	NA	=	NA
2.	D	+	I	+	NA	+	NA	=	NA	+	NA	NA	-	NA	=	NA
3.	D	+	NA	+	NA	+	NA	=	NA	+	D	NA	-	I	=	D
4.	D	+	I	+	NA	+	NA	=	NA	+	NA	NA	-	NA	=	NA
5.	NA	+	NA	+	NA	+	D	=	NA	+	D	NA	-	I	=	D
6.	NA	+	I	+	D	+	NA	=	NA	+	NA	NA	-	NA	=	NA
7.	I	+	NA	+	NA	+	NA	=	NA	+	I	I	-	NA	=	I
8.	NA	+	D	+	NA	+	NA	=	NA	+	D	NA	-	I	=	D

Exercise 1-8B

a.

Raw materials purchased and used	\$ 8,100
Wages of production workers	6,500
Depreciation on manufacturing equipment	<u>3,400</u>
Total product cost	<u>\$18,000</u>

b. Cost of inventory per unit = $\$18,000 \div 6,000 = \3

Ending inventory in units = $6,000 - 4,800 = 1,200$

Cost of ending inventory = $\$3 \times 1,200 = \$3,600$

c. Cost of goods sold = $\$3 \times 4,800 = \$14,400$

Exercise 1-9B

Item	Upstream	Midstream	Downstream
Telephone cost of a manufacturing plant		X	
Steering wheel used to assemble a car		X	
Wages of a manufacturing plant		X	
Cost of product warranty			X
Cost of researching a cancer treatment drug	X		
Plant manager's salary		X	
Sales commissions			X
Cost of pursuing FDA's approval on a new drug	X		
Cost of product advertisement			X
Cost of providing Internet service in a plant		X	
Year-end bonus paid to factory foremen		X	
Shipping manager's salary			X
Cost of research and development	X		
Depreciation on vehicles used by salespersons			X
Depreciation on vehicles used in a plant		X	

Exercise 1-10B

- a. The \$35,000,000 of research and development costs is an upstream cost. Packaging, shipping, and sales commissions are downstream costs.

- b. Cost of goods sold: $\$20 \times 600,000 = \$12,000,000$
Ending inventory: $\$20 \times 200,000 = \$4,000,000$

- c.
- | | |
|---|-------------|
| Upstream cost per unit, $\$35,000,000 \div 5,000,000$ | \$ 7 |
| Manufacturing cost per unit | 20 |
| Downstream costs per unit | 3 |
| Total cost | 30 |
| Plus: 40% profit margin, $\$30 \times 40\%$ | 12 |
| Price | <u>\$42</u> |

- d.

Income Statement	
Sales revenue ($\$42 \times 600,000$)	\$ 25,200,000
Cost of goods sold ($\$20 \times 600,000$)	(12,000,000)
Gross margin	13,200,000
Research and development expense	(35,000,000)
Selling expenses ($\$3 \times 600,000$)	(1,800,000)
Net income (Loss)	<u><u>\$(23,600,000)</u></u>

- e. GAAP requires expensing research and development costs in the period in which they are incurred. However, Hutton expects the R&D costs to result in overall Allergone sales of 5,000,000 units in Year 1 and future years. The income statement for Year 1 recognizes revenue from selling 600,000 units while recognizing the entire R&D cost as expense. No R&D cost will be recognized on future income statements. The Year 1 net loss will be more than offset by positive net incomes from future Allergone sales.

Exercise 1-11B

- a. **The three components of product cost incurred in producing cakes are direct materials such as flour, sugar, and eggs; direct labor such as Susan's effort to mix ingredients together and bake them into cakes; and manufacturing overhead such as the cost of an oven, electric power cost, and the cost of detergent to wash pans.**
- b. **Measuring product cost for a merchandising company, such as a retail store, is relatively easy. It includes the vendor's invoice price, freight cost, and other costs necessary to get the inventory ready to sell. Measuring product cost for a manufacturing entity requires a more complex system. A manufacturing enterprise must classify its costs as product costs or period costs. It must accumulate product costs (direct materials, direct labor, and manufacturing overhead). It must then classify the cost of sold products as expense and unsold products as inventory, an asset.**

Exercise 1-12B

- a. **Event No. 1 represents the expiration of insurance on a factory building because the recognition decreases prepaid insurance and increases inventory, both assets on the balance sheet. The expiration of insurance on a factory building does not affect the income statement until the products made in the factory are sold.**
- b. **The cost of insuring a factory is among the costs necessary to produce inventory. The expiration of factory insurance, therefore, is an asset exchange: the asset prepaid insurance is exchanged for the asset inventory, affecting only the balance sheet. The expiration of insurance on an administrative building, however, is an asset use transaction which increases expense on the income statement. No asset that will benefit future periods is produced in the administrative building.**

Exercise 1-13B

Increases in inventory without corresponding increases in sales revenue often signal increasing working capital costs and a decreasing rate of cash inflows. More cash has been invested in inventory, but the inventory has not been sold and therefore converted back into cash. With a just-in-time inventory management system (JIT system), Fargo would only acquire inventory when it is needed for sale, eliminating its costly investment in idle inventory and speeding up its cash flow.

Exercise 1-14B

a.

Income Statement	
Sales revenue (\$30 x 900)	\$27,000
Cost of goods sold (\$20 x 900)	(18,000)
Gross margin	9,000
Waste due to excess inventory (\$20 x 100)	(2,000)
Net income	\$ 7,000

b.

Income Statement	
Sales revenue (\$30 x 1,000)	\$30,000
Cost of goods sold (\$20 x 1,000)	(20,000)
Net income	\$10,000

The opportunity cost of lost sales: $(\$30 - \$20) \times 100 = \$1,000$

- c. If Denise could arrange to order only the number of yearbooks actually needed, the school could eliminate potential losses from either the waste attributable to unsold yearbooks or the opportunity cost of lost sales from having too few yearbooks available. For example, the yearbook staff could request that students, faculty members, and staff members who want to purchase yearbooks complete order forms 10 days in advance of the school fair day. On that day, the yearbook staff could set up a yearbook stand to receive customer payments and deliver yearbooks at the same time.

Exercise 1-15B

a. The new inventory system is an approximate just-in-time system since it does not eliminate all inventory.

b. Reduced cost of inventory: $\$12,000 - \$2,000 = \$10,000$

Finance cost: $\$10,000 \times 9\% = \900

Total eliminated inventory holding cost: $\$5,000 + \$900 = \$5,900$

Exercise 1-16B

- a. While the entire \$1,500,000 of upstream research and development cost should have been expensed immediately, the CFO put the \$1,500,000 into an inventory account. Since some of the inventory was not sold, some of the R&D cost is still in the inventory account. The computations are shown below:

$$\text{Misclassified cost per unit} = \frac{\$1,500,000}{5,000} = \$300 \text{ per unit}$$

Number of units in ending inventory:

Inventory Completed	5,000
Less Inventory Sold	<u>(4,000)</u>
Ending Inventory	1,000

The portion of R&D cost still in ending inventory is \$300,000 (\$300 x 1,000 units).

Instead of being in the inventory account, the \$300,000 should have been expensed. As a result, assets, retained earnings (equity), and net income are overstated by \$300,000. Expenses are understated by the same amount. Revenue and liabilities are not affected.

- b. The CFO's motive was probably that he was under pressure to present an inflated amount of net income. Executive compensation is frequently tied to net income or stock price which is related by net income. Further, a strong balance sheet and income statement make borrowing money or selling stock easier, because the company appears more attractive to a potential lender or investor.

Exercise 1-17B

Had the Sarbanes-Oxley Act been in effect, HealthSouth would have been required to establish a hotline and other mechanisms for the anonymous reporting of fraudulent activities. The company also would have been prohibited from applying any form of punishment to whistleblowers such as Greg Madrid.

Exercise 1-18B

The process of shampooing a customer's hair before cutting is nonvalue-added if the customer's hair isn't dirty. The barber could change shop policy to offer a reduced price haircut to customers who have just washed their hair before coming to the barbershop.

Problem 1-19B

Information Item	Financial Accounting	Managerial Accounting
Cost per unit of individual products		x
Profit margin of individual products		x
Annual report filed with SEC	x	
Cash flow of the company as a whole	x	
Income statement prepared according to GAAP	x	
Balance sheet prepared according to market-value estimates		x
Estimated profit of a new product ready to be launched		x
Footnote disclosures required by FASB	x	
Cost analysis provided to production manager		x
Facility utilization report provided to company president		x
Financial figures released to press	x	
Financial statements provided to creditors	x	
Report on employee turnover		x
Cost of goods sold as reported according to GAAP	x	

Chapter 1 - Management Accounting and Corporate Governance

Problem 1-20B

The following horizontal financial statements model is not required in the problem. It is provided to show the process of computation.

Event	Assets							=	Equity			Income Statement				
No.	Cash	+	Invent.	+	Office Furn.*	+	Manuf. Equip*.	=	Common Stock	+	Ret. Ear.	Rev.	-	Exp.	=	Net Inc.
1.	98,000	+		+		+		=	98,000	+			-		=	
2a.	(28,000)	+		+	28,000	+		=		+			-		=	
2b.		+		+	(7,000)	+		=		+	(7,000)		-	7,000	=	(7,000)
3a.	(58,000)	+		+		+	58,000	=		+			-		=	
3b.		+	9,000	+		+	(9,000)	=		+			-		=	
4.	(20,000)	+		+		+		=		+	(20,000)		-	20,000	=	(20,000)
5.	(27,000)	+	27,000	+		+		=		+			-		=	
6.	(39,000)	+	39,000	+		+		=		+			-		=	
7a.	150,000	+		+		+		=		+	150,000	150,000	-		=	150,000
7b.		+	(62,500)	+		+		=		+	(62,500)		-	62,500	=	(62,500)
Total	76,000	+	12,500	+	21,000	+	49,000	=	98,000	+	60,500	150,000	-	89,500	=	60,500

*Record accumulated depreciation as negative amounts under these columns.

Problem 1-20B (continued)

a.

Direct materials	\$39,000
Direct labor	27,000
Manufacturing overhead	<u>9,000*</u>
Total product cost	<u>75,000</u>
Divided by	<u>÷ 12,000</u>
Average cost per unit	<u>\$6.25</u>

* Depreciation of manufacturing equipment:
 $(\$58,000 - \$4,000) \div 6 = \$9,000$

b. Cost of goods sold: $\$6.25 \times 10,000 = \$62,500$

c. Ending inventory: $\$6.25 \times (12,000 - 10,000) = \$12,500$

d. \$60,500

e. \$60,500

f. $\$76,000^* + \$12,500 + \$21,000 + \$49,000 = \$158,500$

*** $\$98,000 - \$28,000 - \$58,000 - \$20,000 - \$27,000 - \$39,000 + (\$15 \times 10,000)$
 $= \$76,000$**

Problem 1-21B

Event	Assets							=	Equity			Income Statement				
No.	Cash	+	Invent.	+	Manuf. Equip*	+	Office Furn.*	=	Com. Stk.	+	Ret. Ear.	Rev.	-	Exp.	=	Net Inc.
1.	87,000	+		+		+		=	87,000	+			-		=	
2.	(17,000)	+	17,000	+		+		=		+			-		=	
3.	(7,000)	+		+		+		=		+	(7,000)		-	7,000	=	(7,000)
4.	(10,000)	+	10,000	+		+		=		+			-		=	
5a.	(12,000)	+		+		+	12,000	=		+			-		=	
5b.		+		+		+	(1,500)	=		+	(1,500)		-	1,500	=	(1,500)
6a.	(18,000)	+		+	18,000	+		=		+			-		=	
6b.		+	3,000	+	(3,000)	+		=		+			-		=	
7a.	58,000	+		+		+		=		+	58,000	58,000	-		=	58,000
7b.		+	(26,000)	+		+		=		+	(26,000)		-	26,000	=	(26,000)
Total	81,000	+	4,000	+	15,000	+	10,500	=	87,000	+	23,500	58,000	-	34,500	=	23,500

*Record accumulated depreciation as negative amounts under these columns.

Problem 1-22B

Fuzhou Company			
Income Statement for Year 1		Balance Sheet as of 12/31/Year 1	
Sales revenue	\$29,700	Assets	
Cost of goods sold ¹	(22,000)	Cash ³	\$50,700
Gross margin	7,700	Fin. goods inventory ¹	2,000
Administrative expense ²	(5,000)	Total assets	<u>\$52,700</u>
Net income	<u>\$2,700</u>	Equity	
		Common stock	\$50,000
		Retained earnings	2,700
		Total equity	<u>\$52,700</u>

¹ The product costs are \$10,500 for materials, \$8,600 for labor, and \$4,900 for overhead. Accordingly, \$24,000 (*i.e.*, \$10,500 + \$8,600 + \$4,900) was used to make the 1,200 units of product. The cost per unit is \$20 (*i.e.* \$24,000 ÷ 1,200 units). Since 1,100 units were sold, ending inventory will be composed of 100 units (*i.e.* 1,200 units - 1,100 units). The amount of cost of goods sold is \$22,000 (*i.e.*, \$20 x 1,100 units). The balance in ending inventory would be \$2,000 (*i.e.*, \$20 x 100 units).

² Administrative expenses are composed of \$2,100 administrative salaries + \$2,900 administrative rent = \$5,000.

³ Cash balance: \$50,000 – \$10,500 – \$8,600 – \$4,900 – \$2,100 – \$2,900 + \$29,700 = \$50,700.

Problem 1-23B

- a. Upstream costs = \$520,000 product design + \$1,800,000 research and development = \$2,320,000
- b. Downstream costs = \$400,000 advertising + \$250,000 administrative costs = \$650,000
- c. Midstream costs = (\$450 direct materials + \$180 direct labor + \$300 manufacturing overhead) x 5,000 units = \$4,650,000
- d. Sales price = GAAP defined product cost x 160%
Sales Price = (\$450 direct materials + \$180 direct labor + \$300 manufacturing overhead) x 1.6 = \$1,488

e.	Sales revenue (\$1,488 price x 5,000 units)	\$7,440,000
	Cost of goods sold (\$930 cost x 5,000 units)	<u>(4,650,000)</u>
	Gross margin	2,790,000
	General, selling, and administrative costs	
	Upstream costs (R&D, and Design)	(2,320,000)
	Downstream costs (Administrative and Advertising)	(650,000)
	Net loss	<u>\$ (180,000)</u>

- f. It appears that management failed to give appropriate consideration to upstream and downstream costs when pricing the product. Only the GAAP based product cost was used to determine the price. The total cost of making a battery is upstream cost + midstream cost + downstream cost.

Total per unit costs:

Midstream cost = (\$450 direct materials + \$180 direct labor + \$300 manufacturing overhead) = \$930

Upstream cost = (\$2,320,000 R&D and Design) / 5,000 units = \$464

Downstream cost = (\$650,000 Administrative and Advertising) / 5,000 units = \$130

Total cost per unit = \$930 Midstream + \$464 Upstream + \$130

Downstream = \$1,524.

Note that the selling price of \$1,488 is below the total cost per unit of \$1,524. This explains the loss incurred by the company.

Problem 1-24B

a.

Financial Statements Packer Company			
Income Statement		Balance Sheet	
Sales revenue	\$98,000	Assets	
Operating expenses¹	(90,000)	Cash²	\$128,000
Net Income	<u>\$ 8,000</u>	Total assets	<u>\$128,000</u>
		Equity	
		Common stock	\$120,000
		Retained earnings	<u>8,000</u>
		Total equity	<u>\$128,000</u>

¹ The entire \$90,000 expenditure is an administrative cost that is recognized as an expense.

² The cash balance will be the same for all three scenarios. The company acquires \$120,000 of capital, earns sales revenue of \$98,000 and spends \$90,000 thereby leaving a \$128,000 ending balance. Do not be confused by the fact that the \$90,000 is used to pay for different things under the alternative scenarios. The cash outflow is always \$90,000 regardless of what is bought.

Problem 1-24B (continued)

b.

Financial Statements Packer Company			
Income Statement		Balance Sheet	
Sales revenue	\$98,000	Assets	
Depreciation exp. ¹	(18,000)	Cash	\$128,000
Net income	<u>\$80,000</u>	Trucks	90,000
		Accumulated dep. ¹	<u>(18,000)</u>
		Total assets	<u>\$200,000</u>
		Equity	
		Common stock	\$120,000
		Retained earnings	80,000
		Total equity	<u>\$200,000</u>

¹ The \$90,000 was used to purchase trucks that had a zero salvage value and 5-year useful lives. The depreciation charge is \$18,000 [*i.e.*, $(\$90,000 - 0) \div 5$ years]. Since the solution applies to the first year of operation the amount in the accumulated depreciation account and the amount in depreciation expense are equal.

Problem 1-24B (continued)

c.

Financial Statements			
Packer Company			
Income Statement		Balance Sheet	
Sales revenue	\$98,000	Assets	
Cost of goods Sold ¹	<u>(40,000)</u>	Cash	\$128,000
Gross margin	58,000	Finished goods inv. ¹	10,000
Administrative expense ²	<u>(2,000)</u>	Mfg. equipment	48,000
Net income	<u>\$56,000</u>	Accumulated dep. ¹	<u>(10,000)</u>
		Total assets	<u>\$176,000</u>
		Equity	
		Common stock	\$120,000
		Retained earnings	<u>56,000</u>
		Total equity	<u>\$176,000</u>

¹ The product costs are \$18,000 for materials, \$22,000 for labor, and \$10,000 for overhead. The overhead cost results from depreciation on the manufacturing equipment [*i.e.*, (\$48,000 cost - \$8,000 salvage) ÷ 4-year life]. Accordingly, \$50,000 (*i.e.*, \$18,000 + \$22,000 + \$10,000) was used to make the 2,500 units of product. The cost per unit is \$20 (*i.e.*, \$50,000 ÷ 2,500 units). Since 2,000 units were sold, ending inventory will be composed of 500 units (*i.e.*, 2,500 units - 2,000 units). The amount of cost of goods sold is \$40,000 (*i.e.*, \$20 x 2,000 units). The balance in ending inventory would be \$10,000 (*i.e.*, \$20 x 500 units).

² Salaries of sales and administrative employees.

- d. It is highly unlikely that Packer can determine the exact cost of any particular unit of product. Materials and labor usage will differ slightly between product units. Cost averaging smooths these differences across units of product.

Problem 1-25B

- a. **Annual inventory holding cost:**
 $(\$750,000 \times 12\%) + \$80,000 = \$170,000$
- b. **Hanna uses a JIT system. Hanna acquires automobiles only when it has received customer orders. Therefore, Hanna does not hold inventory. Without the associated inventory holding cost, Hanna can afford to offer reduced prices to its customers.**

Problem 1-26B

- a. 240 hamburgers are sold:

Revenue (240 x \$4.50)	\$1,080
Cost of hamburgers (300 x \$1.50)	<u>(450)</u>
Gross margin	630
Selling, general, & administrative expenses	<u>(130)</u>
Net income	<u>\$500</u>

Cost of wasted hamburgers: $[(300 - 240) \times \$1.50] = \90 .

- b. 360 customers attempt to buy hamburgers but 60 of them must be turned away:

Revenue (300 x \$4.50)	\$1,350
Cost of hamburgers (300 x \$1.50)	<u>(450)</u>
Gross margin	900
Selling, general, & administrative expenses	<u>(130)</u>
Net income	<u>\$ 770</u>

Had Mark's prepared 360 hamburgers in advance, it could have made more profit:

Revenue (360 x \$4.50)	\$1,620
Cost of hamburgers (360 x \$1.50)	<u>(540)</u>
Gross margin	1,080
Selling, general, & administrative expenses	<u>(130)</u>
Net income	<u>\$ 950</u>

The lost profit resulting from insufficient supply is \$90 per day $(\$950 - \$770 = \$180, \text{ or } \$3 \times 60 = \$180)$.

Problem 1-26B (continued)

- c. 240 hamburgers are sold under the JIT system:**

Revenue (240 x \$4.50)	\$1,080
Cost of hamburgers (240 x \$1.50)	<u>(360)</u>
Gross margin	720
Selling, general, & administrative expenses	<u>(160)</u>
Net income	<u>\$ 560</u>

Under the JIT system, the cost of excessive hamburgers can be eliminated. The reduction of hamburger cost exceeds the increase of employee payroll cost. As a result, the net income increases by \$60, as compared to the net income under the original inventory system.

- d. 360 hamburgers are sold under the JIT system:**

Revenue (360 x \$4.50)	\$1,620
Cost of hamburgers (360 x 1.50)	<u>(540)</u>
Gross margin	1,080
Selling, general, & administrative expenses	<u>(160)</u>
Net income	<u>\$ 920</u>

Under the JIT system, additional customer orders can be accepted. The additional revenue exceeds the additional employee payroll cost. Therefore, the net income increases by \$150, as compared to that under the original inventory system.

- e.** The hamburgers prepared under the JIT system are fresher than those prepared hours in advance. Mark's can also prepare hamburgers according to individual customer preferences. Consequently, customer satisfaction will increase. Better customer satisfaction will lead to more customer purchases and higher revenues. As the cost per hamburger remains stable, the higher sales revenue will result in a higher profit. In addition, Mark's can avoid turning excess customers away, which could have a negative impact on its reputation.

Problem 1-27B

a. Option No. 1

Financial Statements Briggs Company			
Income Statement		Balance Sheet	
Sales revenue	\$160,000	Assets	
Cost of goods sold ¹	(96,000)	Cash ²	\$170,000
Gross margin	64,000	Finished goods inv. ³	24,000
Gen., sell., & adm. exp.	(20,000)	Total assets	<u>\$194,000</u>
Net income	<u>\$ 44,000</u>		
		Equity	
		Common stock	\$150,000
		Retained earnings	44,000
		Total equity	<u>\$194,000</u>

¹\$120,000 (Total product cost) ÷ 10,000 = \$12 per unit. \$12 * 8,000 = \$96,000.

²Cash balance: \$150,000 - \$120,000 - \$20,000 + \$160,000 = \$170,000

³\$12 X 2,000 = \$24,000.

a. Option 2

Income Statement		Balance Sheet	
Sales revenue	\$160,000	Assets	
Cost of goods sold ¹	(112,000)	Cash	\$170,000
Gross margin	48,000	Finished goods inv. ²	28,000
Gen., sell., & adm. exp.	0	Total assets	<u>\$198,000</u>
Net income	<u>\$ 48,000</u>		
		Equity	
		Common stock	\$150,000
		Retained earnings	48,000
		Total equity	<u>\$198,000</u>

¹Total product cost: \$120,000 + \$20,000 = \$140,000. Product cost per unit: \$140,000 ÷ 10,000 = \$14.00

Cost of goods sold: \$14.00 x 8,000 = \$112,000.

²Inventory: \$14.00 X 2,000 = \$28,000.

Problem 1-27B (continued)

- b. Option No. 2 results in financial statements that are more likely to leave a favorable impression on investors and creditors because the net income under option No. 2 is \$4,000 greater than that under option No. 1.

- c. President's bonus under option No. 1:
 $\$44,000 \times 10\% = \$4,400$

President's bonus under option No. 2:
 $\$48,000 \times 10\% = \$4,800$

Option No. 2 provides the president with a higher bonus.

- d. Income tax expense under option No. 1:
 $\$44,000 \times 35\% = \$15,400$

Income tax expense under option No. 2:
 $\$48,000 \times 35\% = \$16,800$

Option No. 1 minimizes the amount of the company's income tax expense.

- e. Option No. 2 provides the president with a higher bonus. However, option No. 1 minimizes the amount of the company's income tax expense. As a result, these two options reveal a conflict of interest between the company and its president. To avoid the conflict of interest, the company can offer a bonus plan that is tied to the company's stock price instead of net income on financial statements. To the extent that the market is efficient, it will reward performance that adds value to a company by bidding up the company's stock price. An efficient market is not deceived by accounting policies that are designed solely to manipulate financial statements.

Problem 1-28B

- a. Separation of duties failed to prevent the company's fraudulent reporting because collusion in the management team circumvented the control of separating duties.**
- b. The entire executive team was under pressure to report inflated earnings because their bonuses depended on it. They rationalized that the fraud could keep the company's stock price high and, thus, was good for both company management and stockholders. Furthermore, they convinced themselves that the company would perform better in the future and the earnings growth would allow them to correct fraudulent revenues they were currently reporting. The opportunity was available because company management had the power to override any internal control design.**
- c. The Sarbanes-Oxley act charges the chief executive officer and the chief financial officer with the ultimate responsibility for the accuracy of the company's financial statements and the accompanying notes. An intentional misrepresentation is punishable by a fine of up to \$5 million and imprisonment of up to 20 years. The penalty clause would have served as a strong deterrence against this type of fraudulent reporting.**
- d. The CFO violated the Statement of Ethical Professional Practice on two major items: integrity and objectivity. Regarding integrity, the officer's interests conflicted with the company's because the CFO, with other officers, reaped the bonus that he or she didn't deserve. Moreover, their actions certainly discredited the accounting profession. Regarding objectivity, the CFO knowingly allowed unfair information to be communicated.**

Managerial 9e – Chapter 1 – Exercises and Problems – Set B

Problem 1-29B

- a. The value-added activities include the doctor's weighing Ms. Watson, advising her to lose weight, taking her temperature, taking a throat culture and blood test, prescribing medicine, and advising Ms. Watson to get bed rest. The nonvalue-added activities include Ms. Watson's completing the same forms repeatedly, waiting for a long time again and again, answering the accounting clerk's unnecessary questions, and handling the billing error.
- b. Ms. Watson's personal information should have already been in her patient file when she walked in Dr. Holt's office. To eliminate the unnecessary repetition of completing personal information forms, the receptionist should ask the patient whether his or her personal information has changed since the last visit. If the answer is no, no additional forms should be given to the patient.

The office administrator should maintain a realistic schedule of patient appointments. Tight process control of a realistic schedule can reduce the time that patients must wait.

The patient file should accompany the patient to the accounting office. By consulting the personal information in the file, the accounting clerk would not have to ask the same personal questions that the patient has been asked repeatedly.

If the doctor hires qualified employees, trains them well, and establishes proper accounting controls, billing errors can be reduced or eliminated.