

1. **Missing Data; Statements; Inventory Computation** "I know I'm a pretty good scientist, but I guess I still have some things to learn about running a business," said Staci Morales, founder and president of Medical Technology, Inc. "Demand has been so strong for our heart monitor that I was sure we'd be profitable immediately, but just look at the gusher of red ink for the first quarter." The data to which Staci was referring are shown below:

MEDICAL TECHNOLOGY, INC.
Income Statement
For the Quarter Ended June 30

Sales (16,000 monitors)	\$ 975,000
Less operating expenses:	
Selling and administrative salaries	\$ 90,000
Advertising	200,000
Cleaning supplies, production	6,000
Indirect labor cost	135,000
Depreciation, office equipment	18,000
Direct labor cost	80,000
Raw materials purchased	330,000
Maintenance, production	47,000
Rental cost, facilities	65,000
Insurance, production	9,000
Utilities	40,000
Depreciation, production equipment	75,000
Travel, salespersons	60,000
Total operating expenses	<u>1,135,000</u>
Net loss	<u>\$ (160,000)</u>

"At this rate we'll be out of business in a year," said Derek Louganis, the company's accountant. "But I've double-checked these figures, so I know they're right."

Medical Technology was organized on April 1 of the current year to produce and market a revolutionary new heart monitor. The company's accounting system was set up by Herb Stienbeck, an experienced accountant who recently left the company. The statement above was prepared by Louganis, his assistant.

"We may not last a year if the insurance company doesn't pay the \$227,000 it owes us for the 4,000 monitors lost in the truck accident last week," said Staci. "The agent says our claim is inflated, but that's a lot of baloney."

Just after the end of the quarter, a truck carrying 4,000 monitors wrecked and burned, destroying the entire load. The monitors were a part of the 20,000 units completed during the quarter ended June 30. They were in a warehouse awaiting sale at quarter-end and were sold and shipped on July 3 (this sale is *not* included on the income statement above). The trucking company's insurer is liable for the cost of the goods lost. Louganis has determined this cost as follows:

$$\frac{\text{Total costs for the quarter, } \$1,135,000}{\text{Monitors produced during the quarter, } 20,000} = \$56.75 \text{ per unit}$$

$$4,000 \text{ monitors} \times \$56.75 = \$227,000$$

The following additional information is available on the company's activities during the quarter ended June 30:

a. Inventories at the beginning and end of the quarter were as follows:

	April 1	June 30
Raw materials	0-	\$40,000
Work in process	0-	30,000
Finished goods	0-	?

b. Eighty percent of the rental cost for facilities and 90% of the utilities cost relate to manufacturing operations. The remaining amounts relate to selling and administrative activities.

1. What conceptual errors, if any, were made in preparing the income statement above?
2. Prepare a schedule of cost of goods manufactured for the quarter.
3. Prepare a corrected income statement for the quarter. Your statement should show in detail how the cost of goods sold is computed.

(每小題 10 分 共 30 分)
 (背面仍有題目,請繼續作答)

2. Stanco, Inc., is a decentralized organization containing five divisions. The company's Electronics Division produces a variety of electronics items, including an XLS circuit board. The division (which is operating at capacity) sells the XLS circuit board to regular customers for \$12.50 each. The circuit boards have a variable production cost of \$8.25 each.

The company's Clock Division has asked the Electronics Division to supply it with a large quantity of XLS circuit boards for only \$9 each. The Clock Division, which is operating at only 60% of capacity, will put the circuit boards into a timing device that it will produce and sell to a large oven manufacturer. The cost of the timing device being manufactured by the Clock Division follows:

XLS circuit board (desired cost)	\$ 9.00
Other purchased parts (from outside vendors)	30.00
Direct labor	16.50
Variable overhead	4.25
Fixed overhead and administrative costs	10.00
Total cost per timing device	<u>\$69.75</u>

The manager of the Clock Division feels that she can't quote a price greater than \$70 per timing device to the oven manufacturer if her division is to get the job. As shown above, in order to keep the price at \$70 or less, she can't pay more than \$9 per unit to the Electronics Division for the XLS circuit boards. Although the \$9 price for the XLS circuit boards represents a substantial discount from the normal \$12.50 price, she feels that the price concession is necessary for her division to get the oven manufacturer contract and thereby keep its core of highly trained people.

The company uses ROI and dollar profits in measuring divisional performance.

1. Assume that you are the manager of the Electronics Division. Would you recommend that your division supply the XLS circuit boards to the Clock Division for \$9 each as requested? Why or why not? Show all computations.
2. Would it be to the short-run economic advantage of the company as a whole for the Electronics Division to supply the Clock Division with the circuit boards for \$9 each? Explain your answer.

(每小題 10 分 共 20 分)

3. Michael Lee was hired as chief executive officer (CEO) in late November by the board of directors of Hunter Electronics, a company that produces a state-of-the-art CD-ROM drive for personal computers. The previous CEO had been fired by the board due to a series of questionable business practices including prematurely recording revenues on products that had not yet been shipped to customers.

Michael felt that his first priority on the job was to restore employee morale—which had suffered during the previous CEO's reign. He was particularly anxious to build a sense of trust between himself and the company's employees. His second priority was to prepare the budget for the coming year, which the board of directors wanted to review in their December 15 meeting.

After hammering out the details in meetings with key managers, Michael was able to put together a budget that he felt the company could realistically meet during the coming year. That budget appears below:

Basic Budget Data	
Units in beginning inventory	-0-
Units produced	200,000
Units sold	200,000
Units in ending inventory	-0-
Variable costs per unit:	
Direct materials	\$ 50
Direct labor	40
Variable manufacturing overhead	20
Variable selling and administrative	10
Total variable cost per unit	<u>\$120</u>

Fixed costs:	
Fixed manufacturing overhead	\$ 8,400,000
Fixed selling and administrative	3,600,000
Total fixed costs	<u>\$12,000,000</u>

HUNTER ELECTRONICS
Budgeted Income Statement
(absorption method)

Sales (200,000 units)		\$40,000,000
Cost of goods sold:		
Beginning inventory	\$ -0-	
Cost of goods manufactured (200,000 units × \$152)	<u>20,400,000</u>	
Goods available for sale	30,400,000	
Less ending inventory	<u>-0-</u>	30,400,000
Gross margin		<u>9,600,000</u>
Less selling and administrative expenses:		
Variable selling and administrative	2,000,000	
Fixed selling and administrative	<u>3,600,000</u>	5,600,000
Net income		<u>\$ 4,000,000</u>

While the board of directors did not oppose the budget, they made it clear that the budget was not as ambitious as they had hoped. The most influential member of the board stated that "our top managers should have to really stretch to meet profit goals." After some discussion, the board decided to set a profit goal of \$4,800,000 for the coming year. To provide strong incentives and a win-win situation, the board agreed to pay out bonuses to top managers of \$200,000 if this profit goal were met. Michael's share of the bonus pool would be \$50,000. The bonus would be all-or-nothing. If actual net income turned out to be \$4,800,000 or more, the bonus would be paid. Otherwise, no bonus would be allowed.

1. Assuming that the company does not build up its inventory (i.e., production equals sales) and its selling price and cost structure remain the same, how many units of the CD-ROM drive would have to be sold to meet the target net income of \$4,800,000?
2. Verify your answer to (1) above by constructing a revised budget and budgeted income statement that yields a net income of \$4,800,000. Use the absorption costing method.
3. Unfortunately, by October of the next year it had become clear that the company would not be able to make the \$4,800,000 target profit. In fact, it looked like the company would wind up the year as originally planned, with sales of 200,000 units, no ending inventories, and a profit of \$4,000,000.

Several managers who were reluctant to lose their year-end bonuses approached Michael and suggested that the company could still show a profit of \$4,800,000. The managers argued that at the present rate of sales, there was enough capacity by working overtime to produce tens of thousands of additional CD-ROM drives for the warehouse. Overtime cost might have to be incurred, but all of this additional cost would be assigned to the CD-ROM drives in ending inventory.

If sales are 200,000 units for the year and the selling price and cost structure remain the same, how many units would have to be produced to show a profit of at least \$4,800,000 under absorption costing? (Round your answer up to the nearest whole unit.)

4. Verify your answer to (3) above by constructing an income statement. Use the absorption costing method.
5. Do you think Michael Lee should approve the plan to build ending inventories in order to attain the target profit?

(每小題 10 分 共 50 分)