### **Cost management**

# Review of accounting for manufacturing operations [COST ACCOUNTING]

- Cost behavior
- **♣** Cost management
- Review of accounting for manufacturing operations

#### I. Theories

### **Multiple Choice**

Choose the letter of the best answer.

- 1. Cost behavior analysis is a study of how a firm's costs
  - A. relate to competitors' costs.
  - B. relate to general price level changes.
  - C. respond to changes in activity levels within the company.
  - D. respond to changes in the gross national product.
- 2. The term "relevant range" as used in cost accounting means the range over which
  - A. costs may fluctuate
  - B. cost relationships are valid
  - C. production may vary
  - D. relevant costs are incurred
- 3. An item or event that has a cause-effect relationship with the incurrence of a variable cost is called a
  - A. mixed cost.
  - B. predictor.
  - C. direct cost.
  - D. cost driver.
- 4. Which of the following describes the behavior of the variable cost per unit? Variable cost:
  - A. Varies in increasing proportion with changes in the activity level.
  - B. Varies in increasing proportion with changes in the activity level.
  - C. Remains constant with changes in the activity level.
  - D. Varies in direct proportion with the activity level.
- 5. A cost that remains constant on a per unit basis in a given period despite changes in the level of activity should be considered a(an):
  - A. variable cost.
  - B. prime cost.
  - C. fixed cost.
  - D. overhead cost.
- 6. When the number of units manufactured increases, the most significant change in unit cost will be reflected as a(n)
  - A. increase in the fixed element.
  - B. decrease in the variable element.
  - C. increase in the mixed element.
  - D. decrease in the fixed element.

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- 7. Which of the following best describes a fixed cost?
  - A. It may change in total when such change is unrelated to changes in production.
  - B. It may change in total when such change is related to changes in production.
  - C. It is constant per unit of change in production.
  - D. It may change in total when such change depends on production within the relevant range.
- 8. If activity increases, which of the following statements about cost behavior is true?
  - A. Fixed cost per unit will increase
  - B. Variable cost per unit will increase
  - C. Fixed cost per unit will decrease
  - D. Variable cost per unit will decrease
- 9. Which of the following statements regarding fixed costs is incorrect?
  - A. Expressing fixed costs on a per unit basis usually is the best approach for decision-making process.
  - B. Fixed costs expressed on a per unit basis will react inversely with changes in activity.
  - C. Assumptions by accountants regarding the behavior of fixed costs rest heavily on the concept of the relevant range.
  - D. Fixed costs frequently represent long-term investments in property, plant, and equipment.
- 10. The increased use of automation and less use of the work force in companies has caused a trend towards an increase in
  - A. both variable and fixed costs.
  - B. fixed costs and a decrease in variable costs.
  - C. variable costs and a decrease in fixed costs.
  - D. variable costs and no change in fixed costs.
- 11. Costs that increase as the volume of activity decreases within the relevant range are
  - A. Average cost per unit.
  - B. Average variable cost per unit.
  - C. Total fixed costs.
  - D. Total variable costs.
- 12. Which costs will change with an increase in activity within the relevant range?
  - A. Total fixed costs and total variable cost.
  - B. Per unit fixed costs and total variable cost.
  - C. Per unit variable cost and per unit fixed cost.
  - D. Per unit fixed cost and total fixed cost.
- 13. Which of the following best describes the relationship between fixed costs per unit and variable costs per unit, as total volume increases?
  - A. Fixed cost per unit stays the same and variable cost per unit stays the same.
  - B. Fixed cost per unit stays the same and variable cost per unit increases.
  - C. Fixed cost per unit increases and variable cost per unit increases.
  - D. Fixed cost per unit decreases and variable cost per unit stays the same.

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- 14. Within the relevant range, the difference between variable costs and fixed costs is:
  - A. variable costs per unit fluctuate and fixed cost per unit remains constant.
  - B. variable cost per unit is constant and fixed cost per unit fluctuates.
  - C. both total variable cost and total fixed cost are constant.
  - D. both total variable cost and total fixed cost fluctuate.
- 15. Classifying costs by behavior is
  - a. associated primarily with financial accounting.
  - b. not relevant to a company that has only selling expenses.
  - c. common in reports prepared for external readers.
  - d. none of the above.
- 16. Which is not a common accounting classification of costs?
  - a. By the method of payment for the expenditure.
  - b. By the objective of expenditure.
  - c. By behavior.
  - d. By the function incurring the expenditure.
- 17. Which classification of costs is most relevant for income statements to be used internally?
  - a. Behavior.
  - b. Function.
  - c. Method of payment.
  - d. Object.
- 18. Income statements classifying costs by object show such items as
  - a. tax expense, wages expense, depreciation expense.
  - b. cost of goods sold, selling expenses, administrative expenses.
  - c. assets, liabilities, owners' equity.
  - d. all of the above.
- 19. The period that begins with the arrival of materials and ends with the shipment of a completed good is the
  - a. cycle time.
  - b. manufacturing cell.
  - c. computer-integrated manufacturing.
  - d. performance period.
- 20. In contrast to a balance sheet, an income statement
  - a. is for a period of time, a balance sheet is at a point in time.
  - b. gives information about cash and a balance sheet does not.
  - c. is prepared after the statement of retained earnings.
  - d. has two columns, while a balance sheet has more than two.
  - 21. Product costing in a manufacturing firm is the process of:
    - A. accumulating the company's period costs.
    - B. allocating costs among the firm's departments.
    - C. placing a value on the company's fixed assets.
    - D. assigning costs to the firm's inventory.
    - E. assigning costs to the company's managers.

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- 22. Which of the following statements is true?
  - A. Service firms have little need for determining the cost of their services.
  - B. The concept of product costing is relevant only for manufacturing firms.
  - C. The cost of year-end inventory appears on the balance sheet as an expense.
  - D. Service companies use cost information for planning and control purposes.
  - E. Mining and petroleum companies have no inventoriable costs.
- 23. Pruitt Company has developed an integrated system that coordinates the flow of all goods, services, and information into and out of the organization, working with raw material vendors as well as customers to improve service and reduce costs. The firm is said to be using:
  - A. participative management.
  - B. top-down management.
  - C. strategic cost management.
  - D. supply chain management.
  - E. management by objectives (MBO).
- 24. Manufacturing overhead:
  - A. includes direct materials, indirect materials, indirect labor, and factory depreciation.
  - B. is easily traced to jobs.
  - C. includes all selling costs.
  - D. should not be assigned to individual jobs because it bears no obvious relationship to them.
  - E. is a pool of indirect production costs that must somehow be attached to each unit manufactured.
- 25. As production takes place, all manufacturing costs are added to the:
  - A. Work-in-Process Inventory account.
  - B. Manufacturing-Overhead Inventory account.
  - C. Cost-of-Goods-Sold account.
  - D. Finished-Goods Inventory account.
  - E. Production Labor account.
- 26. Which of the following statements regarding work in process is not correct?
  - A. Work in process is partially completed inventory.
  - B. Work in process consists of direct labor, direct material, and manufacturing overhead.
  - C. Work-in-Process Inventory is debited to record direct material used and direct labor incurred.
  - D. Work-in-Process Inventory appears on the year-end balance sheet.
  - E. Work-in-Process Inventory is credited when goods are sold.
- 27. Which of the following statements about manufacturing cost flows is false?
  - A. Direct materials, direct labor, and manufacturing overhead are entered in the Work-in-Process Inventory account.
  - B. The Finished-Goods Inventory account will contain entries that reflect the cost of goods sold during the period.
  - C. The cost of units sold during the period will typically appear on the income statement.
  - D. When a company sells goods that cost P54,000 for P60,000, the firm will enter P6,000

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in an account entitled Profit on Sale.

- E. Units are normally transferred from Work-in-Process Inventory to Finished-Goods Inventory.
- 28. Which of the following statements about materials is false?
  - A. Acquisitions of materials are normally charged to the Purchases account.
  - B. The use of direct materials gives rise to a debit to Work-in-Process Inventory.
  - C. The use of indirect materials gives rise to a debit to Manufacturing Overhead.
  - D. The use of indirect materials gives rise to a credit to Manufacturing Supplies Inventory.
  - E. Direct materials are accounted for in a different manner than indirect materials.
- 29. Longview Corporation recently used P72,000 of direct materials and P3,000 of indirect materials in production activities. The journal entries reflecting these transactions would include:
  - A. a debit to Raw-Material Inventory for P72,000.
  - B. a debit to Manufacturing Overhead for P3,000.
  - C. a credit to Manufacturing Overhead for P3,000.
  - D. a debit to Work-in-Process Inventory for P75,000.
  - E. a debit to Manufacturing Overhead for P75,000.
- 30. A review of a company's Work-in-Process Inventory account found a debit for materials of P67,000. If all procedures were performed in the correct manner, this means that the firm:
  - A. also recorded a credit to Raw-Material Inventory.
  - B. also recorded a credit to Manufacturing Supplies Inventory.
  - C. was accounting for the usage of direct materials.
  - D. was accounting for the usage of indirect materials.
  - E. was accounting for the usage of direct materials by also crediting the Raw-Material Inventory account.
- 31. Oregon Manufacturing incurred P106,000 of direct labor and P11,000 of indirect labor. The proper journal entry to record these events would include a debit to Work in Process for:
  - A. P0 because Work in Process should be credited.
  - B. P0 because Work in Process is not affected.
  - C. P11,000.
  - D. P106,000.
  - E. P117.000.
  - 32. The following information relates to October:

Production supervisor's salary: P2,500

Factory maintenance wages: 250 hours at P8 per hour

The journal entry to record the preceding information is:

A.	Manufacturing Overhead	4,500	
	Wages Payable		4,500
B.	Wages Payable	4,500	
	Manufacturing Overhead		4,500
C.	Work-in-Process Inventory	4,500	
	Wages Payable		4,500

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D.	Wages Payable	4,500	
	Work-in-Process Inventory		4,500
E.	Work-in-Process Inventory	2,500	
	Manufacturing Overhead	2,000	
	Wages Payable		4,500

- 33. Electricity costs that were incurred by a company's production processes should be debited to:
  - A. Utilities Expense.
  - B. Accounts Payable.
  - C. Cash.
  - D. Manufacturing Overhead.
  - E. Work-in-Process Inventory.
- 34. The journal entry needed to record P5,000 of advertising for Westwood Manufacturing would include:
  - A. a debit to Advertising Expense.
  - B. a credit to Advertising Expense.
  - C. a debit to Manufacturing Overhead.
  - D. a credit to Manufacturing Overhead.
  - E. a debit to Projects-in-Process.
- 35. Regency Company incurred P90,000 of depreciation for the year. Eighty percent relates to the firm's production facilities, and 20% relates to sales and administrative offices. If all items are handled in the proper manner, a review of the company's accounting records should reveal a:
  - A. debit to Depreciation Expense for P90,000.
  - B. debit to Manufacturing Overhead for P90,000.
  - C. debit to Manufacturing Overhead for P72,000.
  - D. debit to Work-in-Process Inventory for P18,000.
  - E. credit to Cash for P90,000.
- 36. The final step in recognizing the completion of production requires a company to:
  - A. debit Finished-Goods Inventory and credit Work-in-Process Inventory.
  - B. debit Work-in-Process Inventory and credit Finished-Goods Inventory.
  - C. add direct labor to Work-in-Process Inventory.
  - D. add direct materials, direct labor, and manufacturing overhead to Work-in-Process Inventory.
  - E. add direct materials to Finished-Goods Inventory.
- 37. If a company sells goods that cost P70,000 for P82,000, the firm will:
  - A. reduce Finished-Goods Inventory by P70,000.
  - B. reduce Finished-Goods Inventory by P82,000.
  - C. report sales revenue on the balance sheet of P82,000.
  - D. reduce Cost of Goods Sold by P70,000.
  - E. follow more than one of the above procedures.
- 38. A computer manufacturer recently shipped several laptops to a customer (cost: P25,000) and billed the customer P30,000. Which of the following options correctly expresses the

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accounts that are debited and credited to record this transaction?

- A. Debits: Accounts Receivable, Finished-Goods Inventory; credits: Sales Revenue, Cost of Goods Sold.
- B. Debits: Accounts Receivable, Cost of Goods Sold; credits: Sales Revenue, Finished-Goods Inventory.
- C. Debits: Sales Revenue, Cost of Goods Sold; credits: Accounts Receivable, Finished-Goods Inventory.
- D. Debits: Sales Revenue, Finished-Goods Inventory; credits: Accounts Receivable, Cost of Goods Sold.
- E. Debits: Accounts Receivable; credits: Finished-Goods Inventory, Profit on Sale.
- 39. Which cost is most likely to be mixed for a manufacturer?
  - a. Raw materials.
  - b. Direct labor.
  - c. Manufacturing overhead.
  - d. Insurance.
- 40. A cost is variable if it varies with the
  - a. number of units manufactured.
  - b. number of units sold.
  - c. level of some activity.
  - d. selling price of the product.
- 41. RST's average cost per unit is the same at all levels of volume. Which of the following is true?
  - a. RST must have only variable costs.
  - b. RST must have only fixed costs.
  - c. RST must have some fixed costs and some variable costs.
  - d. RST's cost structure cannot be determined from this information.

#### 42. A mixed cost

- a. increases in steps as volume increases.
- b. contains a fixed component and a variable component.
- c. varies with more than one measure of volume.
- d. cannot be accurately predicted.
- 43. The components of manufacturing cost are
  - a. variable costs, fixed costs, and overhead costs.
  - b. materials, direct labor, and overhead.
  - c. purchases, wages, and manufacturing overhead.
  - d. wages and salaries, maintenance and repairs, utilities, and depreciation.
- 44. As volume increases,
  - a. total fixed costs remain constant and per-unit fixed costs increase.
  - b. total fixed costs remain constant and per-unit fixed costs decrease.
  - c. total fixed costs remain constant and per-unit fixed costs remain constant.
  - d. total fixed costs increase and per-unit fixed costs increase.
- 45. Which cost is least likely to be direct to a particular product?
  - a. Salaries of salespeople who sell all of the company's products.

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- b. Advertising of the product.
- c. License fees paid to the designer of the product.
- d. Cost of materials used to make the product.
- 46. Which of the following defines variable cost behavior?

Total cost reaction Cost per unit reaction to increase in activity to increase in activity

a. remains constant remains constant

b. remains constant increasesc. increases increases

d. increases remains constant

- 47. When cost relationships are linear, total variable prime costs will vary in proportion to changes in
- a. direct labor hours.
- b. total material cost.
- c. total overhead cost.
- d. production volume.
- 48. Which of the following defines variable cost behavior?

Total cost reaction Cost per unit reaction to increase in activity to increase in activity

a. remains constant remains constant

b. remains constant increasesc. increases increases

d. increases remains constant

- 49. When cost relationships are linear, total variable prime costs will vary in proportion to changes in
- a. direct labor hours.
- b. total material cost.
- c. total overhead cost.
- d. production volume.
- 50. An example of a fixed cost is
- a. total indirect material cost.
- b. total hourly wages.
- c. cost of electricity.
- d. straight-line depreciation.
- 51. A cost that remains constant in total but varies on a per-unit basis with changes in activity is called a(n)
- a. expired cost.
- b. fixed cost.
- c. variable cost.

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- d. mixed cost.
- 52. A(n) \_\_\_\_\_ cost increases or decreases in intervals as activity changes.
- a. historical cost
- b. fixed cost
- c. step cost
- d. budgeted cost
- 53. When the number of units manufactured increases, the most significant change in unit cost will be reflected as a(n)
- a. increase in the fixed element.
- b. decrease in the variable element.
- c. increase in the mixed element.
- d. decrease in the fixed element.
- 54. Which of the following always has a direct cause-effect relationship to a cost?

# <u>Predictor</u> <u>Cost driver</u>

- a. yes yesb. yes noc. no yesd. no no
- 55. A cost driver
- a. causes fixed costs to rise because of production changes.
- b. has a direct cause-effect relationship to a cost.
- c. can predict the cost behavior of a variable, but not a fixed, cost.
- d. is an overhead cost that causes distribution costs to change in distinct increments with changes in production volume.
- 56. Product costs are deducted from revenue
- a. as expenditures are made.
- b. when production is completed.
- c. as goods are sold.
- d. to minimize taxable income.
- 57. A selling cost is a(n)

# <u>product cost</u> <u>period cost</u> <u>inventoriable cost</u>

a.	yes	yes	no
b.	yes	no	no
c.	no	yes	no
d.	no	yes	yes

- 58. Which of the following is not a product cost component?
- a. rent on a factory building
- b. indirect production labor wages

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- c. janitorial supplies used in a factory
- d. commission on the sale of a product
- 59. Period costs
- a. are generally expensed in the same period in which they are incurred.
- b. are always variable costs.
- c. remain unchanged over a given period of time.
- d. are associated with the periodic inventory method.
- 60. Period costs include

	distribution costs	outside processing costs	sales commission
a.	yes	no	yes
b.	no	yes	yes
c.	no	no	no
d.	yes	yes	yes

- 61. The three primary inventory accounts in a manufacturing company are
- a. Merchandise Inventory, Supplies Inventory, and Finished Goods Inventory.
- b. Merchandise Inventory, Work in Process Inventory, and Finished Goods Inventory.
- c. Supplies Inventory, Work in Process Inventory, and Finished Goods Inventory.
- d. Raw Material Inventory, Work in Process Inventory, and Finished Goods Inventory.
- 62. Cost of Goods Sold is an
- a. unexpired product cost.
- b. expired product cost.
- c. unexpired period cost.
- d. expired period cost.
- 63. The indirect costs of converting raw material into finished goods are called
- a. period costs.
- b. prime costs.
- c. overhead costs.
- d. conversion costs.
- 64. Which of the following would need to be allocated to a cost object?
- a. direct material
- b. direct labor
- c. direct production costs
- d. indirect production costs
- 65. Conversion cost does not include
- a. direct labor.
- b. direct material.
- c. factory depreciation.
- d. supervisors' salaries.
- 66. The distinction between direct and indirect costs depends on whether a cost

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- a. is controllable or non-controllable.
- b. is variable or fixed.
- c. can be conveniently and physically traced to a cost object under consideration.
- d. will increase with changes in levels of activity.
- 67. Broussard Company is a construction company that builds houses on special request. What is the proper classification of the carpenters' wages?

	<u>Product</u>	<u>Period</u>	<u>Direct</u>
	yes	yes	no
b.	yes	no	yes
c.	no	no	no
d.	no	yes	yes

68. Broussard Company is a construction company that builds houses on special request. What is the proper classification of the cost of the cement building slab used?

	<u>Direct</u>	<u>Fixed</u>
a.	no	no
b.	no	yes
c.	yes	yes
d.	yes	no

69. Broussard Company is a construction company that builds houses on special request. What is the proper classification of indirect material used?

	<u>Prime</u>	<u>Conversion</u>	<u>Variable</u>
a.	no	no	no
b.	no	yes	yes
c.	yes	yes	yes
d.	yes	no	no

- 70. Which of the following costs would be considered overhead in the production of chocolate chip cookies?
- a. flour
- b. chocolate chips
- c. sugar
- d. oven electricity
- 71. All costs related to the manufacturing function in a company are
- a. prime costs.
- b. direct costs.
- c. product costs.
- d. conversion costs.

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#### 72. Prime cost consists of

<u>dir</u>	ect material	<u>direct labor</u>	<u>overhead</u>
a.	no	yes	no
b.	yes	yes	no
c.	yes	no	yes
d.	no	yes	yes

#### 73. Plastic used to manufacture dolls is a

pri	me cost	product cost	direct cost	fixed cost
a.	no	yes	yes	yes
b.	yes	no	yes	no
c.	yes	yes	no	yes
d.	yes	yes	yes	no

- 74. The term "prime cost" refers to
- a. all manufacturing costs incurred to produce units of output.
- b. all manufacturing costs other than direct labor and raw material costs.
- c. raw material purchased and direct labor costs.
- d. the raw material used and direct labor costs.
- 75. Conversion of inputs to outputs is recorded in the
- a. Work in Process Inventory account.
- b. Finished Goods Inventory account.
- c. Raw Material Inventory account.
- d. both a and b.
- 76. In a perpetual inventory system, the sale of items for cash consists of two entries. One entry is a debit to Cash and a credit to Sales. The other entry is a debit to
- a. Work in Process Inventory and a credit to Finished Goods Inventory.
- b. Finished Goods Inventory and a credit to Cost of Goods Sold.
- c. Cost of Goods Sold and a credit to Finished Goods Inventory.
- d. Finished Goods Inventory and a credit to Work in Process Inventory.
- 77. The formula to compute cost of goods manufactured is
- a. beginning Work in Process Inventory plus purchases of raw material minus ending Work in Process Inventory.
- b. beginning Work in Process Inventory plus direct labor plus direct material used plus overhead incurred minus ending Work in Process Inventory.
- c. direct material used plus direct labor plus overhead incurred.
- d. direct material used plus direct labor plus overhead incurred plus beginning Work in Process Inventory.
- 78. The final figure in the Schedule of Cost of Goods Manufactured represents the
- a. cost of goods sold for the period.

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- b. total cost of manufacturing for the period.
- c. total cost of goods started and completed this period.
- d. total cost of goods completed for the period.
- 79. The formula for cost of goods sold for a manufacturer is
- a. beginning Finished Goods Inventory plus Cost of Goods Manufactured minus ending Finished Goods Inventory.
- b. beginning Work in Process Inventory plus Cost of Goods Manufactured minus ending Work in Process Inventory.
- c. direct material plus direct labor plus applied overhead.
- d. direct material plus direct labor plus overhead incurred plus beginning Work in Process Inventory.
- 80. Which of the following replaces the retailing component "Purchases" in computing Cost of Goods Sold for a manufacturing company?
- a. direct material used
- b. cost of goods manufactured
- c. total prime cost
- d. cost of goods available for sale
  - 81. Which of the following statements is true?
    - A. The word "cost" has the same meaning in all situations in which it is used.
    - B. Cost data, once classified and recorded for a specific application, are appropriate for use in any application.
    - C. Different cost concepts and classifications are used for different purposes.
    - D. All organizations incur the same types of costs.
    - E. Costs incurred in one year are always meaningful in the following year.
  - 82. Product costs are:
    - A. expensed when incurred.
    - B. inventoried.
    - C. treated in the same manner as period costs.
    - D. treated in the same manner as advertising costs.
    - E. subtracted from cost of goods sold.
  - 83. Which of the following inventories would a discount retailer such as Wal-Mart report as an asset?
    - A. Raw materials.
    - B. Work in process.
    - C. Finished goods.
    - D. Merchandise inventory.
    - E. All of the above.
  - 84. Which of the following inventories would a company ordinarily hold for sale?
    - A. Raw materials.
    - B. Work in process.
    - C. Finished goods.
    - D. Raw materials and finished goods.
    - E. Work in process and finished goods.

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- 85. Midwest Motors manufactures automobiles. Which of the following would not be classified as direct materials by the company?
  - A. Sheet metal used in the automobile's body.
  - B. Tires.
  - C. Interior leather.
  - D. CD player.
  - E. Wheel lubricant.
- 86. Which of the following employees of a commercial printer/publisher would be classified as direct labor?
  - A. Book binder.
  - B. Plant security guard.
  - C. Sales representative.
  - D. Plant supervisor.
  - E. Payroll supervisor.
- 87. Which of the following employees would not be classified as indirect labor?
  - A. Custodian.
  - B. Salesperson.
  - C. Assembler of wooden furniture.
  - D. Plant security guard.
  - E. Choices "B" and "C."
- 88. Depreciation of factory equipment would be classified as:
  - A. operating cost.
  - B. "other" cost.
  - C. manufacturing overhead.
  - D. depreciation expense.
  - E. administrative cost.
- 89. Which of the following costs is not a component of manufacturing overhead?
  - A. Indirect materials.
  - B. Factory utilities.
  - C. Factory equipment.
  - D. Indirect labor.
  - E. Property taxes on the manufacturing plant.
- 90. Which of the following statements is (are) correct?
  - A. Overtime premiums should be treated as a component of manufacturing overhead.
  - B. Overtime premiums should be treated as a component of direct labor.
  - C. Idle time should be treated as a component of direct labor.
  - D. Idle time should be accounted for as a special type of loss.
  - E. Both "B" and "C" are correct.
- 91. Conversion costs are:
  - A. direct material, direct labor, and manufacturing overhead.
  - B. direct material and direct labor.
  - C. direct labor and manufacturing overhead.

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- D. prime costs.
- E. period costs.
- 92. Prime costs are comprised of:
  - A. direct materials and manufacturing overhead.
  - B. direct labor and manufacturing overhead.
  - C. direct materials, direct labor, and manufacturing overhead.
  - D. direct materials and direct labor.
  - E. direct materials and indirect materials.
- 93. Which of the following statements is true?
  - A. Product costs affect only the balance sheet.
  - B. Product costs affect only the income statement.
  - C. Period costs affect only the balance sheet.
  - D. Period costs affect both the balance sheet and the income statement.
  - E. Product costs eventually affect both the balance sheet and the income statement.
- 94. In a manufacturing company, the cost of goods completed during the period would include which of the following elements?
  - A. Raw materials used.
  - B. Beginning finished goods inventory.
  - C. Marketing costs.
  - D. Depreciation of delivery trucks.
  - E. More than one of the above.
- 95. Which of the following equations is used to calculate cost of goods sold during the period?
  - A. Beginning finished goods + cost of goods manufactured + ending finished goods.
  - B. Beginning finished goods ending finished goods.
  - C. Beginning finished goods + cost of goods manufactured.
  - D. Beginning finished goods + cost of goods manufactured ending finished goods.
  - E. Beginning finished goods + ending finished goods cost of goods manufactured.
- 96. Work-in-process inventory is composed of:
  - A. direct material and direct labor.
  - B. direct labor and manufacturing overhead.
  - C. direct material and manufacturing overhead.
  - D. direct material only.
  - E. direct material, direct labor, and manufacturing overhead.
- 97. Pumpkin Enterprises began operations on January 1, 2011, with all of its activities conducted from a single facility. The company's accountant concluded that the year's building depreciation should be allocated as follows: selling activities, 20%; administrative activities, 35%; and manufacturing activities, 45%. If Pumpkin sold 60% of 2011 production during that year, what percentage of the depreciation would appear (either directly or indirectly) on the 2011 income statement?
  - A. 27%.
  - B. 45%.
  - C. 55%.
  - D. 82%.

### **Cost management**

- E. 100%.
- 98. An employee accidentally overstated the year's advertising expense by P50,000. Which of the following correctly depicts the effect of this error?
  - A. Cost of goods manufactured will be overstated by P50,000.
  - B. Cost of goods sold will be overstated by P50,000.
  - C. Both cost of goods manufactured and cost of goods sold will be overstated by P50,000.
  - D. Cost of goods sold will be overstated by P50,000, and cost of goods manufactured will be understated by P50,000.
  - E. None of the above.
- 99. Which of the following would likely be a cost driver for the amount of direct materials used?
  - A. The number of units sold.
  - B. The number of direct labor hours worked.
  - C. The number of machine hours worked.
  - D. The number of employees working in the factory.
  - E. The number of units produced.
- 100. Variable costs are those costs that:
  - A. vary inversely with changes in activity.
  - B. vary directly with changes in activity.
  - C. remain constant as activity changes.
  - D. decrease on a per-unit basis as activity increases.
  - E. increase on a per-unit basis as activity increases.
  - 101. As activity decreases, unit variable cost:
    - A. increases proportionately with activity.
    - B. decreases proportionately with activity.
    - C. remains constant.
    - D. increases by a fixed amount.
    - E. decreases by a fixed amount.
  - 102. Which of the following is not an example of a variable cost?
    - A. Straight-line depreciation on a machine that has a five-year service life.
    - B. Wages of manufacturing workers whose pay is based on hours worked.
    - C. Tires used in the production of tractors.
    - D. Aluminum used to make patio furniture.
    - E. Commissions paid to sales personnel.
  - 103. Fixed costs are those costs that:
    - A. vary directly with changes in activity.
    - B. vary inversely with changes in activity.
    - C. remain constant on a per-unit basis.
    - D. increase on a per-unit basis as activity increases.
    - E. remain constant as activity changes.
  - 104. The fixed cost per unit:
    - A. will increase as activity increases.
    - B. will increase as activity decreases.

### **Cost management**

### Review of accounting for manufacturing operations

- C. will decrease as activity increases.
- D. will remain constant.
- E. will exhibit the behavior described in choices "B" and "C."
- 105. Which of the following is an example of a fixed cost?
  - A. Paper used in the manufacture of textbooks.
  - B. Property taxes paid by a firm to the City of Los Angeles.
  - C. The wages of part-time workers who are paid P8 per hour.
  - D. Gasoline consumed by salespersons' cars.
  - E. Surgical supplies used in a hospital's operating room.
- 106. Which of the following would not be characterized as a cost object?
  - A. An automobile manufactured by General Motors.
  - B. The New York Fire Department.
  - C. A Burger King restaurant located in Cleveland, Ohio.
  - D. A Delta Airlines flight from Atlanta to Miami.
  - E. All of the above are examples of cost objects.
- 107. Costs that can be easily traced to a specific department are called:
  - A. direct costs.
  - B. indirect costs.
  - C. product costs.
  - D. manufacturing costs.
  - E. processing costs.
- 108. Which of the following would not be considered a direct cost with respect to the service department of a new car dealership?
  - A. Wages of repair techniques.
  - B. Property taxes paid by the dealership.
  - C. Repair parts consumed.
  - D. Salary of the department manager.
  - E. Depreciation on new equipment used to analyze engine problems.
- 109. Indirect costs:
  - A. can be traced to a cost object.
  - B. cannot be traced to a particular cost object.
  - C. are not important.
  - D. are always variable costs.
  - E. may be indirect with respect to Disney World but direct with respect to one its major components, Epcot Center.

#### **True-False**

Write T if the statement is true otherwise, Write F.

- 1. The portion of an asset's value on the balance sheet is referred to as an expired cost.
- 2. The portion of an asset that was consumed during a period is referred to an expired cost.
- 3. A variable cost remains constant on a per-unit basis as production increases
- 4. A fixed cost remains constant on a per-unit basis as production changes.
- 5. The relevant range is valid for all levels of activity

### **Cost management**

### Review of accounting for manufacturing operations

- 6. An indirect cost can be easily traced to a cost object.
- 7. Both accountants and economists view variable costs as linear in nature.
- 8. Fixed cost per unit varies directly with production.
- 9. Variable cost per unit remains constant within the relevant range.
- 10. A cost that shifts upward or downward when activity changes by a certain interval is referred to as a mixed cost.
- 11. A cost that shifts upward or downward when activity changes by a certain interval is referred to as a step cost.
- 12. If the cost of an additive is \$5,000 + \$0.50 for every unit of solvent produced, the cost is classified as a mixed cost.
- 13. If the cost of an additive is \$5,000 + \$0.50 for every unit of solvent produced, the cost is classified as a step cost.
- 14. A predictor which has an absolute cause and effect relationship to a cost is referred to a cost driver.
- 15. A mixed cost will be an effective cost driver.
- 16. A variable cost will be an effective cost driver.
- 17. Unexpired costs are reflected on the balance sheet.
- 18. Expired costs are reflected on the balance sheet.
- 19. Distribution costs are an example of product costs
- 20. Distribution costs are an example of period costs.
- 21. Retailers generally have a much high degree of conversion than do manufacturing or professional firms.
- 22. Retailers generally have a much lower degree of conversion than do manufacturing or professional firms.
- 23. In a service industry, direct materials are usually insignificant in amount and cannot easily be traced to a cost object.
- 24. In a service industry, direct materials are usually significant in amount and can be easily traced to a cost object.
- 25. There is an inverse relationship between prevention costs and failure costs.
- 26. There is a direct relationship between prevention costs and failure costs.
- 27. In an actual cost system, actual production overhead costs are accumulated in an Overhead Control account and assigned to Work in Process at the end of the period.
- 28. In an normal cost system, actual production overhead costs are accumulated in an Overhead Control account and assigned to Work in Process at the end of the period.
- 29. In a normal cost system, factory overhead is applied to Work in Process using a predetermined overhead rate.
- 30. In an actual cost system, factory overhead is applied to Work in Process using a predetermined overhead rate.
- 31. In an actual cost system, overhead is assigned to Work in Process Inventory with a debit entry to the account.
- 32. In an actual cost system, overhead is assigned to Work in Process Inventory with a credit entry to the account.
- 33. It is not necessary to prepare the Cost of Goods Manufactured statement prior to preparing the Cost of Goods Sold statement.

#### **Problems**

#### Problem I

The accounting records of Westcott Company revealed the following costs:

### **Cost management**

### Review of accounting for manufacturing operations

Factory utilities	P35,000
Wages of assembly-line personnel	170,000
Customer entertainment	45,000
Indirect materials used	19,000
Depreciation on salespersons' cars	51,000
Production equipment rental costs	110,000

1. Costs that would be considered in the calculation of manufacturing overhead total?

#### **Problem II**

2. Kansas Plating Company reported a cost of goods manufactured of P260,000, with the firm's year-end balance sheet revealing work in process and finished goods of P35,000 and P67,000, respectively. If supplemental information disclosed raw materials used in production of P40,000, direct labor of P70,000, and manufacturing overhead of P120,000, the company's beginning work in process must have been?

#### Problem III

3. Baxter Company, which pays a 10% commission to its salespeople, reported sales revenues of P210,000 for the period just ended. If fixed and variable sales expenses totaled P56,000, what would these expenses total at sales of P168,000?

#### **Problem IV**

Panama Manufacturing had the following data for the period just ended:

Work in process, Jan. 1	P 21,000
Work in process, Dec. 31	40,000
Finished goods, Jan. 1	70,000
Finished goods, Dec. 31	61,000
Direct materials used	126,000
Direct labor	260,000
Factory depreciation	80,000
Sales	945,000
Advertising expense	52,000
Factory utilities	27,000
Indirect materials	19,000
Indirect labor	35,000

<sup>4.</sup> Calculate Panama's cost of goods manufactured.

#### **Problem V**

Hampton Company had the following inventory balances at the beginning and end of the year:

	<u>January 1</u>	<u>December 31</u>
Raw material	P 50,000	P 35,000
Work in process	130,000	170,000
Finished goods	280,000	255,000

<sup>5.</sup> Calculate Panama's cost of goods sold.

### **Cost management**

### Review of accounting for manufacturing operations

During the year, the company purchased P100,000 of raw material and spent P340,000 on direct labor. Other data: manufacturing overhead incurred, P450,000; sales, P1,560,000; selling and administrative expenses, P90,000; income tax rate, 30%.

- 6. Calculate cost of goods manufactured.
- 7. Calculate cost of goods sold.
- 8. Determine Hampton's net income.

#### **Problem VI**

The following selected information was extracted from the 2013 accounting records of Miami Products:

Raw materials used	P284,000
Direct labor	178,000
Indirect labor	35,000
Selling and administrative salaries	250,000
Building depreciation*	330,000
Other selling and administrative expenses	80,000
Other factory costs	620,000

<sup>\*</sup>Seventy percent of the company's building was devoted to production activities; the remaining 30% was used for selling and administrative functions.

Miami's beginning and ending work-in-process inventories amounted to P306,000 and P245,000, respectively. The company's beginning and ending finished-goods inventories were P450,000 and P440,000, respectively.

- 9. Calculate Miami's manufacturing overhead for the year.
- 10. Calculate Miami's cost of goods manufactured.
- 11. Compute the company's cost of goods sold.

#### **Problem VII**

The Morton Company recorded the following transactions for February 20x1:

	<u>Materials</u>	Work in Process	Finished Goods
Purchases	P100,000		
Beginning inventory	18,000	P 8,000	РЕ
Ending inventory	Α	20,000	30,000
Direct materials used		90,000	
Direct labor		В	
Manufacturing overhead			
(includes indirect materials			
used of P10,000)		115,000	
Transferred to finished goods		С	
Cost of goods sold			D

Sales were P560,000, with sales prices determined by adding a 40% markup to the firm's manufacturing cost. The total cost of direct materials used, direct labor, and manufacturing overhead during the month was P285,000.

### **Cost management**

### Review of accounting for manufacturing operations

12. Calculate the missing values.

#### Problem VIII

KC Manufacturing, which began operations on January 1 of the current year, produces an industrial scraper that sells for P325 per unit. Information related to the current year's activities follows.

Number of scrapers produced	20,000
Number of scrapers sold	17,000
Variable costs per unit:	
Direct materials	P25
Direct labor	35
Manufacturing overhead	60
Annual fixed costs:	
Manufacturing overhead	P400,000
Selling and administrative	140,000

KC carries its finished-goods inventory at the average unit cost of production. There was no work in process at year-end.

- 13. Compute the company's average unit cost of production.
- 14. Determine the cost of the December 31 finished-goods inventory.
- 15. Compute the company's cost of goods sold.

#### **Problem IX**

The following information has been taken from the cost records of Wilson Company for the past year:

Raw material used in production	P326
Total manufacturing costs charged to production during the year (includes direct	686
material, direct labor, and overhead equal to 60% of direct labor cost)	
Cost of goods available for sale	826
Selling and Administrative expenses	25

<u>Inventories</u>	<u>Beginning</u>	<b>Ending</b>
Raw Material	P75	P 85
Work in Process	80	30
Finished Goods	90	110

- 16. The cost of raw material purchased during the year was?
- 17. Direct labor cost charged to production during the year was?
- 18. Cost of Goods Manufactured was?
- 19. Cost of Goods Sold was?

### **Problem X**

Brandt Company manufactures wood file cabinets. The following information is available for June 2001:

### **Cost management**

### Review of accounting for manufacturing operations

	<u>Beginning</u>	<u>Ending</u>
Raw Material Inventory	P 6,000	P 7,500
Work in Process Inventory	17,300	11,700
Finished Goods Inventory	21,000	16,300

Direct labor is P9.60 per hour and overhead for the month was P9,600. There were 1,500 direct labor hours and P21,000 of raw material was purchased.

- 20. Compute total manufacturing costs for June.
- **21**. *Prime cost & conversion cost would amount to?*
- 22. Cost of Goods Manufactured is?
- 23. How much is Cost of Goods Sold?

#### **Problem XI**

24. Putnam Company manufacturers computer stands. What is the beginning balance of Finished Goods Inventory if Cost of Goods Sold is P107,000; the ending balance of Finished Goods Inventory is P20,000; and Cost of Goods Manufactured is P50,000 less than Cost of Goods Sold?

### **Problem XII**

1 1 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
<u>Inventories</u> :	March 1	March 31
Raw material	P18,000	P15,000
Work in process	9,000	6,000
Finished goods	27,000	36,000
Additional information for March:		
Raw material purchased	P42,000	
Direct labor payroll	30,000	
Direct labor rate per hour	P7.50	
Overhead rate per direct labor hour	10.00	

- 25. For March, prime cost incurred was?
- **26**. For March, conversion cost incurred was?
- 27. For March, Cost of Goods Manufactured was?

### **Problem XIII**

The following information is for the Rayne Manufacturing Company for November.

<u>Inventories</u>	<b>Beginning</b>	<b>Ending</b>
Raw Material	P17,400	P13,200
Work in Process	31,150	28,975
Finished Goods	19,200	25,500

### Direct Labor (21,000 DLH @ P13)

Raw Material Purchases	P120,000	Insurance-Office	2,570
Indirect Labor	11,200	Office Supplies Expense	900
Factory Supplies Used	350	Insurance-Factory	1,770
Other Expenses:		Depr. Office Equipment	3,500

### **Cost management**

### Review of accounting for manufacturing operations

Depr.-Factory Equipment 17,300 Repair/Maintenance- 7,400

Factory

Calculate:

28. Total manufacturing costs.

29. Cost of goods manufactured

*30. Cost of sales* 

#### **Problem XIV**

Reyes Company has the following data on July 31, 2013:

Manufacturing Overhead P 30,101.80

Decrease in inventories:

Materials 2,430.00 Goods in Process 590.00

Increase in inventories:

Finished goods 1,320.40

The manufacturing overhead amounts to 50% of the direct labor and the direct labor and manufacturing overhead combined equal 50% of the total cost of manufacturing. All materials are purchased FOB Shipping point.

Compute for the:

- 31. Material purchases
- 32. Cost of goods manufactured
- 33. Cost of goods sold

#### **Problem XV**

The following data are obtained from Captain CoCo Co.:

- Cost of goods manufactured is P187,500
- Inventory valuation are as follows: raw materials ending inventory is  $\frac{1}{3}$  based on raw materials, beginning; no initial inventory of work in progress, but at the end of period P12,500 was on hand; finished goods inventory was four times as large at end of period as at the start.
- Net income after taxes amounted to P26,000, income tax rate is 35%.
- Purchase of raw materials amounted to net income before taxes.
- Breakdown of costs incurred in manufacturing cost was as follows:

Raw materials consumed 50%
Direct labor 30%
Factory expenses 20%

### Compute for the:

34. Amount of raw materials beginning inventory

#### **Problem XVI**

The following data represent transactions and balances for December 2013, the De Vera Company's first month of operations.

### **Cost management**

### Review of accounting for manufacturing operations

Purchased direct material on account	P248,000
Issued direct material to production	186,000
Accrued direct labor payroll	134,000
Paid factory rent	3,600
Accrued factory utilities	16,200
Recorded factory equipment depreciation	15,800
Paid factory supervisor salary	6,400
Ending work-in-process (6,000 units)	35,000
Ending finished goods inventory (3,000 units)	?
Sales on account (P24 per unit)	648,000

### *Compute for the:*

- 35. Number of units sold in December
- 36. Number of units completed in December
- 37. Cost of goods manufactured in December
- 38. Per unit cost of goods manufactured in December

#### **Problem XVII**

Judith Co. showed cost of goods sold of P4,320,000 in its statement of comprehensive income after the first year of operations. The total manufacturing cost comprised 50% materials used, 30% direct labor incurred, and 20% manufacturing overhead. Goods in process at year-end were 10% of the total manufacturing cost. Finished goods at year-end amounted to 20% of the cost of goods manufactured.

### *Compute for the:*

- 39. Amount of direct labor cost.
- 40. Finished goods, end.

#### Problem XVIII

Guevarra mugs produces and sells various types of ceramic mugs. The business began operations on January 1, 2013. The cost incurred during the year follow:

Direct Material cost	P100,800
Direct Labor	89,600
Indirect Manufacturing costs	112,000
Administrative and Marketing	133,200

On December 31, 2013, direct materials inventory consisted of 7,500 pounds of materials. Production in that year was 56, 000 mugs. Sales for the year were P436,500. Finished goods inventory was P40,500 on December 31. Each finished mug contained 1.5 pounds of material.

- 41. How much is the direct materials inventory cost, December 31?
- 42. How many units are there in the finished goods ending inventory as of December 31?
- 43. How much is the profit for 2013?

#### **Problem XIX**

The following information was taken from the records of Johann Manufacturing INC.

Increase in Finished Goods

20,000

### **Cost management**

### Review of accounting for manufacturing operations

Decrease in Work-in-Process	18,000
Decrease in Raw Materials	9,000
Total Costs to account for	310,000
Purchases	70,000
Direct Labor	90,000
Work in Process, beginning	64,000

- 44. How much is the amount of cost of goods sold?
- 45. How much is the amount of factory overhead?

#### Problem XX

For the year 2007, the gross margin of Mondala Co. was P96,000; the cost of goods manufactured was P340,000; the beginning inventories of work in process and finished goods were P28,000 and P45,000, respectively and the ending inventories of finished goods and work in process were P52,000 and P38,000, respectively.

### 46. Compute for the sales

#### Problem XXI

The following accounts of Sebastian Manufacturing Co. appeared in its balance sheets on December 31, 2012 and December 31, 2013:

	2012	2013
Materials	P60,000	P90,000
Work in process	34,000	35,000
Finished goods	46,000	36,000
Accrued factory wages	6,200	7,000

The following amounts appeared in the company's income statement for 2013:

Materials used P 600,000 Cost of sales 1,840,000 direct labor 410,000 Indirect labor 140,000

#### *Compute for the*

- 47. Amount of raw materials purchased
- 48. Total cost of manufacturing
- 49. Cost of goods manufactured
- 50. Payment of factory wages

"Our greatest weakness lies in giving up. The most certain way to succeed is always to try just one more time." ~ Thomas A. Edison

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## Cost behavior Cost management

| Review of accounting for manufacturing operations  Answer Key |               |       |  |  |
|---------------------------------------------------------------|---------------|-------|--|--|
| Multiple Choice                                               |               |       |  |  |
| 1. C                                                          | 38. B         | 75.A  |  |  |
| 2. B                                                          | 39. C         | 76.C  |  |  |
| 3. D                                                          | 40. C         | 77.B  |  |  |
| 4. C                                                          | 41. A         | 78.D  |  |  |
| 5. A                                                          | 42.B          | 79.A  |  |  |
| 6. D                                                          | 43.B          | 80.B  |  |  |
| 7. A                                                          | 44.B          | 81.C  |  |  |
| 8. C                                                          | 45.A          | 82.B  |  |  |
| 9. A                                                          | 46.D          | 83.D  |  |  |
| 10. B                                                         | 47.D          | 84.C  |  |  |
| 11. A                                                         | 48.D          | 85.E  |  |  |
| 12. B                                                         | 49.D          | 86.A  |  |  |
| 13. D                                                         | 50.D          | 87.E  |  |  |
| 14. B                                                         | 51.B          | 88.C  |  |  |
| 15. D                                                         | 52.C          | 89.C  |  |  |
| 16. A                                                         | 53.D          | 90.A  |  |  |
| 17. A                                                         | 54.C          | 91.C  |  |  |
| 18. A                                                         | 55.B          | 92.D  |  |  |
| 19. A                                                         | 56.C          | 93.E  |  |  |
| 20. A                                                         | 57.C          | 94.A  |  |  |
| 21. D                                                         | 58.D          | 95.D  |  |  |
| 22. D                                                         | 59.A          | 96.E  |  |  |
| 23. D                                                         | 60.A          | 97.D  |  |  |
| 24. E                                                         | 61.D          | 98. E |  |  |
| 25. A                                                         | 62.B          | 99.E  |  |  |
| 26. E                                                         | 63.C          | 100.B |  |  |
| 27. D                                                         | 64.D          | 101.C |  |  |
| 28. A                                                         | 65.B          | 102.A |  |  |
| 29. B                                                         | 66.C          | 103.E |  |  |
| 30. E                                                         | 67.B          | 104.E |  |  |
| 31. D                                                         | 68.D          | 105.B |  |  |
| 32. A                                                         | 69.B          | 106.E |  |  |
| 33. D                                                         | 70.D          | 107.A |  |  |
| 34. A                                                         | 71.C          | 108.B |  |  |
| 35. C                                                         | 72.B          | 109.B |  |  |
| 36. A                                                         | 73.D          |       |  |  |
| 37. A                                                         | 74.D          |       |  |  |
|                                                               |               |       |  |  |
|                                                               | True or False |       |  |  |
| 1. F                                                          | 12. T         | 23. T |  |  |
| 2. T                                                          | 13. F         | 24. F |  |  |
| 3. T                                                          | 14. T         | 25. T |  |  |
| 4. F                                                          | 15. F         | 26. F |  |  |
| 5. F                                                          | 16. T         | 27. T |  |  |
| 6. F                                                          | 17. T         | 28. F |  |  |
| 7. F                                                          | 18. F         | 29. T |  |  |

## Cost behavior Cost management

| Review of accounting for manufacturing operations |                              |                  |  |  |
|---------------------------------------------------|------------------------------|------------------|--|--|
| 8. F                                              | 19. F                        | 30. F            |  |  |
| 9. T                                              | 20. T                        | 31. T            |  |  |
| 10. F                                             | 21.F                         | 32. F            |  |  |
| 11. T                                             | 22.T                         | 33. F            |  |  |
|                                                   |                              |                  |  |  |
| Problems                                          |                              |                  |  |  |
| 1. 164,000                                        | 18. 736                      | 35. 27,000 units |  |  |
| 2. 65,000.                                        | 19. 716.                     | 36. 30,000 units |  |  |
| 3. 51,800                                         | 20. 43,500                   | 37. 327,000      |  |  |
| 4. 528,000                                        | 21. PC =33,900 and CC=24,000 | 38. 10.90/unit   |  |  |
| 5. 537,000                                        | 22. 49,100.                  | 39. 1,800,000    |  |  |
| 6. 865,000                                        | 23. 53,800.                  | 40. 1,080,000    |  |  |
| 7. 890,000                                        | 24. 70,000                   | 41. 9,000        |  |  |
| 8. 406,000                                        | 25. 75,000.                  | 42. 7,500 units  |  |  |
| 9. 886,000                                        | 26. 70,000.                  | 43. 41,400       |  |  |
| 10. 1,409,000                                     | 27. 118,000.                 | 44. 244,000      |  |  |
| 11. 1,419,000                                     | 28. 435,220                  | 45. 77,000       |  |  |
| 12.                                               | 29. 437,395                  | 46. 429,000      |  |  |
| A. 18,000                                         |                              |                  |  |  |
| B. 80,000                                         |                              |                  |  |  |
| C. 273,000                                        |                              |                  |  |  |
| D. 400,000                                        |                              |                  |  |  |
| E. 157,000                                        |                              |                  |  |  |
| 13. 140                                           | 30. 431,095                  | 47. 630,000      |  |  |
| 14. 420,000                                       | 31. 87,875.40                | 48. 1,831,000    |  |  |
| 15. 2,380,000                                     | 32. 181,200.80               | 49. 1,830,000    |  |  |
| 16. 336                                           | 33. 179,880.40               | 50. 549,200      |  |  |
| 17. 225.                                          | 34. 90,000                   |                  |  |  |