Student name:\_\_\_\_\_\_\_\_\_\_

**TRUE/FALSE - Write 'T' if the statement is true and 'F' if the statement is false.  
1)** The cost of an item is a sacrifice of resources.

⊚ true  
 ⊚ false

**2)** An expense is a cost charged against revenue in an accounting period.

⊚ true  
 ⊚ false

**3)** If a cost is recorded as an asset (for example, prepaid rent for an office building), it becomes an expense when the asset has been consumed.

⊚ true  
 ⊚ false

**4)** Accounting systems typically record opportunity costs as assets and treat them as intangible items on the financial statements.

⊚ true  
 ⊚ false

**5)** Total cost of goods purchased minus beginning merchandise inventory plus ending merchandise inventory equals cost of goods sold.

⊚ true  
 ⊚ false

**6)** Cost of goods sold includes the actual costs of the goods sold and the costs required to sell them to the customer.

⊚ true  
 ⊚ false

**7)** Nonmanufacturing costs are expensed as they are incurred.

⊚ true  
 ⊚ false

**8)** Only direct costs can be classified as product costs; indirect costs are classified as period costs.

⊚ true  
 ⊚ false

**9)** The three categories of product costs are direct materials, direct labor, and manufacturing overhead.

⊚ true  
 ⊚ false

**10)** The first step in determining whether a cost is direct or indirect is to specify the cost allocation rule.

⊚ true  
 ⊚ false

**11)** Total work-in-process during the period is the sum of the beginning work-in-process inventory and the total manufacturing costs incurred during the period.

⊚ true  
 ⊚ false

**12)** Cost of goods sold plus the ending finished goods inventory minus the beginning finished goods inventory equals the cost of goods manufactured.

⊚ true  
 ⊚ false

**13)** If the cost of goods manufactured during the period exceeds the cost of goods sold, the ending balance of Finished Goods Inventory account increased.

⊚ true  
 ⊚ false

**14)** Total variable costs change inversely with changes in the volume of activity.

⊚ true  
 ⊚ false

**15)** Fixed costs per unit change inversely with changes in the volume of activity.

⊚ true  
 ⊚ false

**16)** The range within which fixed costs remain constant as volume of activity varies is known as the relevant range.

⊚ true  
 ⊚ false

**17)** The term full cost refers to the cost of manufacturing and selling a unit of product and includes both fixed and variable costs.

⊚ true  
 ⊚ false

**18)** Variable marketing and administrative costs are included in determining full absorption costs.

⊚ true  
 ⊚ false

**19)** Revenue minus cost of goods sold equals contribution margin.

⊚ true  
 ⊚ false

**20)** The primary goal of the cost accounting system is to provide managers with information to prepare their annual financial statements.

⊚ true  
 ⊚ false

**MULTIPLE CHOICE - Choose the one alternative that best completes the statement or answers the question.  
21)** An opportunity cost is:

A) a cost that is charged against revenue in an accounting period.   
 B) the foregone benefit from the best alternative course of action.  
 C) the excess of operating revenues over operating costs.  
 D) the cost assigned to the products sold during the period.

**22)** Which of the following describes an outlay cost?

A) Past, present, or future cash outflow.   
 B) Forgone benefit from the best alternative course of action.  
 C) Cost charged against revenue in an accounting period.  
 D) Expense assigned to products sold during a period.

**23)** Which of the following statements is **false**?

A) In general, the term expense is used for managerial purposes, while the term cost refers to external financial reports.   
 B) An opportunity cost is the benefit forgone by selecting one alternative over another.  
 C) An outlay cost is a past, present, or future cash outflow.  
 D) A cost is a sacrifice of resources.

**24)** Which of the following best distinguishes an opportunity cost from an outlay cost?

A) Opportunity costs are recorded, whereas outlay costs are not.   
 B) Outlay costs are speculative in nature, whereas opportunity costs are easily traceable to products.  
 C) Opportunity costs have very little utility in practical applications, whereas outlay costs are always relevant.  
 D) Opportunity costs are sacrifices from foregone alternative uses of resources, whereas outlay costs are cash outflows.

**25)** Which of the following accounts would be a period cost rather than a product cost?

A) Depreciation on manufacturing machinery.   
 B) Maintenance on factory machines.  
 C) Production manager's salary.  
 D) Freight out.

**26)** A company that manufactures custom-made machinery routinely incurs sizable telephone costs in the process of taking sales orders from customers. Which of the following is a proper classification of this cost?

A) Product cost   
 B) Period cost  
 C) Conversion cost  
 D) Prime cost

**27)** For a manufacturing company, which of the following is an example of a period cost rather than a product cost?

A) Wages of salespersons.   
 B) Salaries of machine operators.  
 C) Insurance on factory equipment.  
 D) Depreciation of factory equipment.

**28)** Tallon Company manufactures a single product. The product's prime costs consist of:

A) direct materials and direct labor.   
 B) direct materials and manufacturing overhead.  
 C) direct labor and manufacturing overhead.  
 D) direct materials, direct labor and manufacturing overhead.

**29)** The cost of fire insurance for a manufacturing plant is generally considered to be a:

A) product cost.   
 B) period cost.  
 C) variable cost.  
 D) prime cost.

**30)** An example of a period cost is:

A) fire insurance on a factory building.   
 B) salary of a factory supervisor.  
 C) direct materials.  
 D) rent on a headquarters building.

**31)** Transportation costs incurred by a manufacturing company to ship its product to its customers would be classified as which of the following?

A) Product cost   
 B) Manufacturing overhead  
 C) Period cost  
 D) Administrative cost

**32)** Doran Technical Company has set up a toll-free telephone line for customer inquiries regarding computer hardware produced by the company. The cost of this toll-free line would be classified as which of the following?

A) Product cost   
 B) Manufacturing overhead  
 C) Direct labor  
 D) Period cost

**33)** Which of the following costs is both a prime cost and a conversion cost?

A) Direct materials   
 B) Direct labor  
 C) Manufacturing overhead  
 D) Administrative costs

**34)** Marketing costs include all of the following **except**:

A) Advertising.   
 B) Shipping costs.  
 C) Sales commissions.  
 D) Legal and accounting fees.

**35)** Property taxes on the manufacturing facility are an element of:

|  |  |  |
| --- | --- | --- |
|  | **Conversion Cost** | **Period Cost** |
| **a.** | No | No |
| **b.** | No | Yes |
| **c.** | Yes | No |
| **d.** | Yes | Yes |

A) Option A   
 B) Option B  
 C) Option C  
 D) Option D

**36)** The cost of direct labor will be treated as an expense on the income statement when the resulting:

A) payroll costs are paid.   
 B) payroll costs are incurred.  
 C) products are completed.  
 D) products are sold.

**37)** Calculate the conversion costs from the following information:

|  |  |
| --- | --- |
| **Fixed manufacturing overhead** | $ 3,400 |
| **Variable manufacturing overhead** | 1,800 |
| **Direct materials** | 3,900 |
| **Direct labor** | 2,300 |

A) $5,200   
 B) $6,200  
 C) $7,500  
 D) $8,000

**38)** Calculate the conversion costs from the following information:

|  |  |
| --- | --- |
| **Fixed manufacturing overhead** | $ 2,000 |
| **Variable manufacturing overhead** | 1,000 |
| **Direct materials** | 2,500 |
| **Direct labor** | 1,500 |

A) $3,000   
 B) $4,000  
 C) $4,500  
 D) $5,000

**39)** The corporate controller's salary would be considered a(n):

A) manufacturing cost.   
 B) product cost.  
 C) administrative cost.  
 D) selling expense.

**40)** The costs of direct materials are classified as:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Conversion cost** | **Manufacturing cost** | **Prime cost** |
| **A** | Yes | Yes | Yes |
| **B** | No | No | No |
| **C** | Yes | Yes | No |
| **D** | No | Yes | Yes |

A) Choice A   
 B) Choice B  
 C) Choice C  
 D) Choice D

**41)** Grover Company has the following data for the production and sale of 2,200 units.

|  |  |  |
| --- | --- | --- |
| **Sales price per unit** | $ 700 | per unit |
| **Fixed costs:** |  |  |
| **Marketing and administrative** | $ 490,000 | per period |
| **Manufacturing overhead** | $ 308,000 | per period |
| **Variable costs:** |  |  |
| **Marketing and administrative** | $ 60 | per unit |
| **Manufacturing overhead** | $ 85 | per unit |
| **Direct labor** | $ 105 | per unit |
| **Direct Materials** | $ 290 | per unit |

What is the conversion cost per unit?

A) $105   
 B) $190  
 C) $330  
 D) $480

**42)** Grover Company has the following data for the production and sale of 2,000 units.

|  |  |  |
| --- | --- | --- |
| **Sales price per unit** | $ 800 | per unit |
| **Fixed costs:** |  |  |
| **Marketing and administrative** | $ 400,000 | per period |
| **Manufacturing overhead** | $ 200,000 | per period |
| **Variable costs:** |  |  |
| **Marketing and administrative** | $ 50 | per unit |
| **Manufacturing overhead** | $ 80 | per unit |
| **Direct labor** | $ 100 | per unit |
| **Direct Materials** | $ 200 | per unit |

What is the conversion cost per unit?

A) $100   
 B) $180  
 C) $280  
 D) $380

**43)** Grover Company has the following data for the production and sale of 2,200 units.

|  |  |  |
| --- | --- | --- |
| **Sales price per unit** | $ 700 | per unit |
| **Fixed costs:** |  |  |
| **Marketing and administrative** | $ 490,000 | per period |
| **Manufacturing overhead** | $ 308,000 | per period |
| **Variable costs:** |  |  |
| **Marketing and administrative** | $ 60 | per unit |
| **Manufacturing overhead** | $ 85 | per unit |
| **Direct labor** | $ 105 | per unit |
| **Direct Materials** | $ 290 | per unit |

What is the prime cost per unit?

A) $105   
 B) $375  
 C) $395  
 D) $620

**44)** Grover Company has the following data for the production and sale of 2,000 units.

|  |  |  |
| --- | --- | --- |
| **Sales price per unit** | $ 800 | per unit |
| **Fixed costs:** |  |  |
| **Marketing and administrative** | $ 400,000 | per period |
| **Manufacturing overhead** | $ 200,000 | per period |
| **Variable costs:** |  |  |
| **Marketing and administrative** | $ 50 | per unit |
| **Manufacturing overhead** | $ 80 | per unit |
| **Direct labor** | $ 100 | per unit |
| **Direct Materials** | $ 200 | per unit |

What is the prime cost per unit?

A) $100   
 B) $280  
 C) $300  
 D) $480

**45)** Which one of the following costs is classified as a period cost? (CIA adapted)

A) The wages of the workers on the shipping docks who load completed products onto outgoing trucks.   
 B) The wages of a worker paid for idle time resulting from a machine breakdown in the molding department.  
 C) The payments for employee (fringe) benefits paid on behalf of the workers in the manufacturing plant.  
 D) The wages paid to workers for reworking defective products that failed the quality inspection upon completion.

**46)** The following cost data for the month of May were taken from the records of the Terrence Manufacturing Company: (CIA adapted)

|  |  |
| --- | --- |
| **Depreciation on factory equipment** | $ 1,800 |
| **Depreciation on sales office** | 900 |
| **Advertising** | 7,800 |
| **Wages of production workers** | 28,500 |
| **Raw materials used** | 42,000 |
| **Sales salaries and commissions** | 10,800 |
| **Factory rent** | 2,800 |
| **Factory insurance** | 900 |
| **Materials handling** | 2,300 |
| **Administrative salaries** | 2,800 |

Based upon this information, the manufacturing cost incurred during the month was:

A) $76,000.   
 B) $78,300.  
 C) $79,200.  
 D) $80,100.

**47)** The following cost data for the month of May were taken from the records of the Terrence Manufacturing Company: (CIA adapted)

|  |  |
| --- | --- |
| **Depreciation on factory equipment** | $ 1,000 |
| **Depreciation on sales office** | 500 |
| **Advertising** | 7,000 |
| **Wages of production workers** | 28,000 |
| **Raw materials used** | 47,000 |
| **Sales salaries and commissions** | 10,000 |
| **Factory rent** | 2,000 |
| **Factory insurance** | 500 |
| **Materials handling** | 1,500 |
| **Administrative salaries** | 2,000 |

Based upon this information, the manufacturing cost incurred during the month was:

A) $78,500.   
 B) $80,000.  
 C) $80,500.  
 D) $83,000.

**48)** Which of the following is **not** a name for indirect resources?

A) Overhead costs   
 B) Burden  
 C) Direct costs  
 D) Common costs

**49)** Which of the following should be considered part of a manufacturing company's direct labor cost?

A) Factory supervisor's salary   
 B) Forklift operator's hourly wages  
 C) Employer-paid health insurance on factory assemblers' wages  
 D) Cost of idle time

**50)** Tulsa Company, (a merchandising company) has the following data pertaining to the year ended December 31, 2022: (CPA adapted)

|  |  |
| --- | --- |
| **Purchases** | $ 600,000 |
| **Beginning inventory** | 200,000 |
| **Ending inventory** | 225,000 |
| **Freight-in** | 65,000 |
| **Freight-out** | 82,500 |

What is the cost of goods sold for the year?

A) $557,500   
 B) $640,000  
 C) $657,500  
 D) $722,500

**51)** Tulsa Company, (a merchandising company) has the following data pertaining to the year ended December 31, 2022: (CPA adapted)

|  |  |
| --- | --- |
| **Purchases** | $ 450,000 |
| **Beginning inventory** | 170,000 |
| **Ending inventory** | 210,000 |
| **Freight-in** | 50,000 |
| **Freight-out** | 75,000 |

What is the cost of goods sold for the year?

A) $385,000   
 B) $460,000  
 C) $485,000  
 D) $536,000

**52)** The Shoal Company's manufacturing costs for the third quarter of 2022 were as follows: (CPA adapted)

|  |  |
| --- | --- |
| **Direct materials and direct labor** | $ 750,000 |
| **Other variable manufacturing costs** | 125,000 |
| **Depreciation of factory building and manufacturing equipment** | 85,000 |
| **Other fixed manufacturing costs** | 23,000 |

What amount should be considered product costs for external reporting purposes?

A) $750,000   
 B) $875,000  
 C) $960,000  
 D) $983,000

**53)** The Shoal Company's manufacturing costs for the third quarter of 2022 were as follows: (CPA adapted)

|  |  |
| --- | --- |
| **Direct materials and direct labor** | $ 700,000 |
| **Other variable manufacturing costs** | 100,000 |
| **Depreciation of factory building and manufacturing equipment** | 80,000 |
| **Other fixed manufacturing costs** | 18,000 |

What amount should be considered product costs for external reporting purposes?

A) $700,000   
 B) $800,000  
 C) $880,000  
 D) $898,000

**54)** The three basic elements of manufacturing cost are direct materials, direct labor, and:

A) cost of goods manufactured.   
 B) cost of goods sold.  
 C) work in process.  
 D) manufacturing overhead.

**55)** Prime cost consists of direct materials combined with:

A) direct labor.   
 B) manufacturing overhead.  
 C) indirect materials.  
 D) cost of goods manufactured.

**56)** Classifying a cost as either direct or indirect depends upon:

A) whether an expenditure is unavoidable because it cannot be changed regardless of any action taken.   
 B) whether the cost is expensed in the period in which it is incurred.  
 C) the behavior of the cost in response to volume changes.  
 D) the cost object to which the cost is being related.

**57)** The process of assigning indirect costs to products, services, people, business units, etc., is:

A) cost object.   
 B) cost pool.  
 C) cost allocation.  
 D) opportunity cost.

**58)** A(n) \_\_\_\_\_\_\_\_\_\_ is any end to which a cost is assigned.

A) cost object   
 B) cost pool  
 C) cost allocation  
 D) opportunity cost

**59)** A cost allocation rule is the method or process used to assign the costs in the \_\_\_\_\_\_\_\_\_\_ to the \_\_\_\_\_\_\_\_\_\_.

A) cost allocation; cost pool   
 B) cost pool; opportunity cost  
 C) cost object; cost pool  
 D) cost pool; cost object

**60)** The beginning Work-in-Process Inventory plus the total of the manufacturing costs equals:

A) total finished goods during the period.   
 B) cost of goods sold for the period.  
 C) total work-in-process during the period.  
 D) cost of goods manufactured for the period.

**61)** A product cost is deducted from revenue when:

A) the finished goods are sold.   
 B) the expenditure is incurred.  
 C) the production process takes place.  
 D) the production process is completed.

**62)** The amount of direct materials issued to production is found by:

A) subtracting ending work in process from total work in process during the period.   
 B) adding beginning direct materials inventory and the delivered cost of direct materials.  
 C) subtracting ending direct materials from direct materials available for production.  
 D) adding delivered cost of materials, labor, and manufacturing overhead.

**63)** The beginning Finished Goods Inventory plus the cost of goods manufactured equals:

A) ending finished goods inventory.   
 B) cost of goods sold for the period.  
 C) total work-in-process during the period.  
 D) cost of goods available for sale for the period.

**64)** Direct labor would be part of the cost of the ending inventory for which of these accounts?

A) Work-in-Process.   
 B) Finished Goods.  
 C) Direct Materials and Work-in-Process.  
 D) Work-in-Process and Finished Goods.

**65)** The Work-in-Process Inventory of the Model Fabricating Corporation was $3,000 higher on December 31, 2022, than it was on January 1, 2022. This implies that in 2022:

A) cost of goods manufactured was higher than cost of goods sold.   
 B) cost of goods manufactured was less than total manufacturing costs.  
 C) manufacturing costs were higher than cost of goods sold.  
 D) total manufacturing costs were less than cost of goods manufactured.

**66)** Which of the following is **not** a product cost under full-absorption costing?

A) Direct materials used in the current period.   
 B) Rent for the warehouse used to store direct materials.  
 C) Salaries paid to the top management in the company.  
 D) Vacation pay accrued for the production workers.

**67)** The term "gross margin" for a manufacturing firm refers to the excess of sales over:

A) cost of goods sold, excluding fixed indirect manufacturing costs.   
 B) all variable costs, including variable marketing and administrative costs.  
 C) cost of goods sold, including fixed indirect manufacturing costs.  
 D) variable costs, excluding variable marketing and administrative costs.

**68)** Given the following information for a retail company, what is the total cost of goods purchased for the period?

|  |  |
| --- | --- |
| **Purchases discounts** | $ 4,400 |
| **Transportation-in** | 7,400 |
| **Ending inventory** | 44,000 |
| **Gross merchandise cost** | 334,000 |
| **Purchases returns** | 9,400 |
| **Beginning inventory** | 34,500 |
| **Sales discounts** | 11,400 |

A) $327,600   
 B) $318,100  
 C) $310,200  
 D) $334,000

**69)** Given the following information for a retail company, what is the total cost of goods purchased for the period?

|  |  |
| --- | --- |
| **Purchases discounts** | $ 3,500 |
| **Transportation-in** | 6,700 |
| **Ending inventory** | 35,000 |
| **Gross merchandise cost** | 304,000 |
| **Purchases returns** | 8,400 |
| **Beginning inventory** | 27,000 |
| **Sales discounts** | 10,300 |

A) $298,800   
 B) $290,800  
 C) $282,100  
 D) $304,000

**70)** A company had beginning inventories as follows: Direct Materials, $600; Work-in-Process, $800; Finished Goods, $1,000. It had ending inventories as follows: Direct Materials, $700; Work-in-Process, $900; Finished Goods, $1,100. Material Purchases, net were $1,850, Direct Labor $1,950, and Manufacturing Overhead $2,050. What is the Cost of Goods Sold for the period?

A) $5,450.   
 B) $5,550.  
 C) $5,650.  
 D) $5,750.

**71)** A company had beginning inventories as follows: Direct Materials, $300; Work-in-Process, $500; Finished Goods, $700. It had ending inventories as follows: Direct Materials, $400; Work-in-Process, $600; Finished Goods, $800. Material Purchases net were $1,400, Direct Labor $1,500, and Manufacturing Overhead $1,600. What is the Cost of Goods Sold for the period?

A) $4,100.   
 B) $4,200.  
 C) $4,300.  
 D) $4,400.

**72)** Compute the Cost of Goods Sold for 2022 using the following information:

|  |  |
| --- | --- |
| **Direct Materials, January 1, 2022** | $ 44,500 |
| **Work-in-Process, December 31, 2022** | 69,000 |
| **Direct Labor** | 53,000 |
| **Finished Goods, December 31, 2022** | 114,000 |
| **Finished Goods, January 1, 2022** | 141,500 |
| **Manufacturing Overhead** | 74,000 |
| **Direct Materials, December 31, 2022** | 52,000 |
| **Work-in Process, January 1, 2022** | 96,000 |
| **Purchases of Direct Material** | 84,000 |

A) $260,000   
 B) $258,000  
 C) $230,500  
 D) $211,000

**73)** Compute the Cost of Goods Sold for 2022 using the following information:

|  |  |
| --- | --- |
| **Direct Materials, January 1, 2022** | $ 40,000 |
| **Work-in-Process, December 31, 2022** | 69,000 |
| **Direct Labor** | 48,500 |
| **Finished Goods, December 31, 2022** | 105,000 |
| **Finished Goods, January 1, 2022** | 128,000 |
| **Manufacturing Overhead** | 72,500 |
| **Direct Materials, December 31, 2022** | 43,000 |
| **Work-in Process, January 1, 2022** | 87,000 |
| **Purchases of Direct Material** | 75,000 |

A) $244,000   
 B) $234,000  
 C) $211,000  
 D) $198,000

**74)** Foxburg Company has the following information:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Work-in-Process** | **Finished Goods** | **Materials** |
| **Beginning inventory** | $ 1,100 | $ 1,200 | $ 1,300 |
| **Ending inventory** | $ 2,300 | $ 2,500 | $ 3,100 |
| **Purchases of materials** | $ 10,900 |  |  |
| **Cost of Goods Sold** | $ 18,800 |  |  |
| **Manufacturing overhead** | $ 5,850 |  |  |

What was the direct labor for the period?

A) $6,350   
 B) $7,450  
 C) $7,900  
 D) $9,200

**75)** Foxburg Company has the following information:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Work-in-Process** | **Finished Goods** | **Materials** |
| **Beginning inventory** | $ 300 | $ 400 | $ 500 |
| **Ending inventory** | $ 700 | $ 900 | $ 1,500 |
| **Purchases of materials** | $ 7,700 |  |  |
| **Cost of Goods Sold** | $ 15,600 |  |  |
| **Manufacturing overhead** | $ 4,300 |  |  |

What was the direct labor for the period?

A) $5,500   
 B) $5,800  
 C) $6,300  
 D) $6,800

**76)** Foxburg Company has the following information:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Work-in-Process** | **Finished Goods** | **Materials** |
| **Beginning inventory** | $ 850 | $ 950 | $ 1,050 |
| **Ending inventory** | $ 1,800 | $ 2,000 | $ 2,600 |
| **Purchases of materials (net)** | $ 9,900 |  |  |
| **Cost of Goods Sold** | $ 17,800 |  |  |
| **Manufacturing overhead** | $ 5,350 |  |  |

What was the cost of goods available for sale for the period?

A) $20,650   
 B) $19,800  
 C) $18,850  
 D) $16,750

**77)** Foxburg Company has the following information:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Work-in-Process** | **Finished Goods** | **Materials** |
| **Beginning inventory** | $ 300 | $ 400 | $ 500 |
| **Ending inventory** | $ 700 | $ 900 | $ 1,500 |
| **Purchases of materials (net)** | $ 7,700 |  |  |
| **Cost of Goods Sold** | $ 15,600 |  |  |
| **Manufacturing overhead** | $ 4,300 |  |  |

What was the cost of goods available for sale for the period?

A) $16,800   
 B) $16,500  
 C) $16,100  
 D) $15,100

**78)** During the year, a manufacturing company had the following operating results:

|  |  |
| --- | --- |
| **Beginning work-in-process inventory** | $ 49,500 |
| **Beginning finished goods inventory** | $ 199,000 |
| **Direct materials used in production** | $ 326,000 |
| **Direct labor** | $ 520,000 |
| **Manufacturing overhead incurred** | $ 268,000 |
| **Ending work-in-process inventory** | $ 76,000 |
| **Ending finished goods inventory** | $ 93,500 |

What is the cost of goods manufactured for the year?

A) $1,087,500   
 B) $1,219,500  
 C) $1,114,000  
 D) $1,193,000

**79)** During the year, a manufacturing company had the following operating results:

|  |  |
| --- | --- |
| **Beginning work-in-process inventory** | $ 45,000 |
| **Beginning finished goods inventory** | $ 190,000 |
| **Direct materials used in production** | $ 308,000 |
| **Direct labor** | $ 475,000 |
| **Manufacturing overhead incurred** | $ 250,000 |
| **Ending work-in-process inventory** | $ 67,000 |
| **Ending finished goods inventory** | $ 89,000 |

What is the cost of goods manufactured for the year?

A) $1,011,000   
 B) $1,134,000  
 C) $1,033,000  
 D) $1,112,000

**80)** During April, the Meade Enterprises had the following operating results:

|  |  |
| --- | --- |
| **Sales revenue** | $ 1,590,000 |
| **Gross margin** | $ 645,000 |
| **Ending work-in-process inventory** | $ 54,500 |
| **Beginning work-in-process inventory** | $ 89,000 |
| **Ending finished goods inventory** | $ 104,500 |
| **Beginning finished goods inventory** | $ 134,000 |
| **Marketing costs** | $ 259,000 |
| **Administrative costs** | $ 159,000 |

What is the cost of goods manufactured for April?

A) $945,000   
 B) $915,500  
 C) $974,500  
 D) $950,000

**81)** During April, the Meade Enterprises had the following operating results:

|  |  |
| --- | --- |
| **Sales revenue** | $ 1,500,000 |
| **Gross margin** | $ 600,000 |
| **Ending work-in-process inventory** | $ 50,000 |
| **Beginning work-in-process inventory** | $ 80,000 |
| **Ending finished goods inventory** | $ 100,000 |
| **Beginning finished goods inventory** | $ 125,000 |
| **Marketing costs** | $ 250,000 |
| **Administrative costs** | $ 150,000 |

What is the cost of goods manufactured for April?

A) $900,000   
 B) $875,000  
 C) $925,000  
 D) $905,000

**82)** How would property taxes paid on a factory building be classified in a manufacturing company?

A) Fixed, period cost   
 B) Fixed, product cost  
 C) Variable, period cost  
 D) Variable, product cost

**83)** How would miscellaneous supplies used in assembling a product be classified for a manufacturing company?

A) Fixed, period cost.   
 B) Fixed, product cost.  
 C) Variable, period cost.  
 D) Variable, product cost.

**84)** How would a 5% sales commission paid to sales personnel be classified in a manufacturing company?

A) Fixed, period cost.   
 B) Fixed, product cost.  
 C) Variable, period cost.  
 D) Variable, product cost.

**85)** The student health center employs one doctor, three nurses, and several other employees. How would you classify (1) the nurses' salary and (2) film and other materials used in radiology to take X-rays? Assume the activity is the number of students visiting the health center.

|  |  |  |
| --- | --- | --- |
|  | **Nurse’s Salaries** | **Film and Other Materials Used in Radiology** |
| **a.** | Fixed cost | Fixed cost |
| **b.** | Fixed cost | Variable cost |
| **c.** | Variable cost | Fixed cost |
| **d.** | Variable cost | Variable cost |

A) Option A   
 B) Option B  
 C) Option C  
 D) Option D

**86)** Barton's Taco Tico has four taco makers and ten other employees who take orders from customers and perform other tasks. The four taco makers and the other employees are paid an hourly wage. How would you classify (1) the wages paid to the taco makers and other employees and (2) materials (e.g., cheeses, salsa, tomatoes, lettuce, taco shells, etc.) used to make the tacos? Assume the activity is the number of tacos made.

|  |  |  |
| --- | --- | --- |
|  | **Employees’ Wages** | **Materials to Make the Tacos** |
| **A.** | Fixed cost | Fixed cost |
| **B.** | Fixed cost | Variable cost |
| **C.** | Variable cost | Fixed cost |
| **D.** | Variable cost | Variable cost |

A) Choice A   
 B) Choice B  
 C) Choice C  
 D) Choice D

**87)** The difference between variable costs and fixed costs is: (CMA adapted)

A) Unit variable costs fluctuate and unit fixed costs remain constant.   
 B) Unit variable costs are fixed over the relevant range and unit fixed costs are variable.  
 C) Total variable costs are constant over the relevant range, while fixed costs change in the long term.  
 D) Total variable costs are variable over the relevant range but fixed in the long term, while fixed costs never change.

**88)** Which terms below correctly describe the cost of the black paint used to paint the dots on a pair of dice?

|  |  |  |
| --- | --- | --- |
|  | **Variable Cost** | **Administrative Cost** |
| **A)** | Yes | Yes |
| **B)** | Yes | No |
| **C)** | No | Yes |
| **D)** | No | No |

A) Choice A   
 B) Choice B  
 C) Choice C  
 D) Choice D

**89)** Manufacturing overhead:

A) can be either a variable cost or a fixed cost.   
 B) includes the costs of shipping finished goods to customers.  
 C) includes all factory labor costs.  
 D) includes all fixed costs.

**90)** The term “full cost” refers to:

A) the fixed and variable costs of manufacturing and selling a unit of product.   
 B) only the fixed costs of manufacturing and selling a unit of product.  
 C) the fixed and variable costs of manufacturing a unit of product only.  
 D) only the variable costs of manufacturing and selling a unit of product.

**91)** The estimated unit costs for a company to produce and sell a product at a level of 12,500 units per month are as follows:

|  |  |
| --- | --- |
| **Cost Item** | **Estimated Unit Cost** |
| **Direct material** | $ 34 |
| **Direct labor** | 33 |
| **Variable manufacturing overhead** | 28 |
| **Fixed manufacturing overhead** | 8 |
| **Variable selling expenses** | 3 |
| **Fixed selling expenses** | 4 |

What are the estimated conversion costs per unit?

A) $36   
 B) $69  
 C) $41  
 D) $61

**92)** The estimated unit costs for a company to produce and sell a product at a level of 12,000 units per month are as follows:

|  |  |
| --- | --- |
| **Cost Item** | **Estimated Unit Cost** |
| **Direct material** | $ 38 |
| **Direct labor** | 28 |
| **Variable manufacturing overhead** | 23 |
| **Fixed manufacturing overhead** | 4 |
| **Variable selling expenses** | 2 |
| **Fixed selling expenses** | 3 |

What are the estimated conversion costs per unit?

A) $27   
 B) $55  
 C) $32  
 D) $51

**93)** The estimated unit costs for a company to produce and sell a product at a level of 13,400 units per month are as follows:

|  |  |
| --- | --- |
| **Cost Item** | **Estimated Unit Cost** |
| **Direct material** | $ 33 |
| **Direct labor** | 23 |
| **Variable manufacturing overhead** | 18 |
| **Fixed manufacturing overhead** | 5 |
| **Variable selling expenses** | 3 |
| **Fixed selling expenses** | 4 |

What are the estimated prime costs per unit?

A) $79   
 B) $33  
 C) $74  
 D) $56

**94)** The estimated unit costs for a company to produce and sell a product at a level of 12,000 units per month are as follows:

|  |  |
| --- | --- |
| **Cost Item** | **Estimated Unit Cost** |
| **Direct material** | $ 32 |
| **Direct labor** | 20 |
| **Variable manufacturing overhead** | 15 |
| **Fixed manufacturing overhead** | 6 |
| **Variable selling expenses** | 3 |
| **Fixed selling expenses** | 4 |

What are the estimated prime costs per unit?

A) $73   
 B) $32  
 C) $67  
 D) $52

**95)** The estimated unit costs for a company to produce and sell a product at a level of 12,800 units per month are as follows:

|  |  |
| --- | --- |
| **Cost Item** | **Estimated Unit Cost** |
| **Direct material** | $ 37 |
| **Direct labor** | 28 |
| **Variable manufacturing overhead** | 23 |
| **Fixed manufacturing overhead** | 5 |
| **Variable selling expenses** | 3 |
| **Fixed selling expenses** | 4 |

What are the estimated variable costs per unit?

A) $91   
 B) $54  
 C) $88  
 D) $65

**96)** The estimated unit costs for a company to produce and sell a product at a level of 12,000 units per month are as follows:

|  |  |
| --- | --- |
| **Cost Item** | **Estimated Unit Cost** |
| **Direct material** | $ 32 |
| **Direct labor** | 20 |
| **Variable manufacturing overhead** | 15 |
| **Fixed manufacturing overhead** | 6 |
| **Variable selling expenses** | 3 |
| **Fixed selling expenses** | 4 |

What are the estimated variable costs per unit?

A) $70   
 B) $38  
 C) $67  
 D) $52

**97)** Grover Company has the following data for the production and sale of 1,700 units.

|  |  |  |
| --- | --- | --- |
| **Sales price per unit** | $ 950 | per unit |
| **Fixed costs:** |  |  |
| **Marketing and administrative** | $ 340,000 | per period |
| **Manufacturing overhead** | $ 314,500 | per period |
| **Variable costs:** |  |  |
| **Marketing and administrative** | $ 65 | per unit |
| **Manufacturing overhead** | $ 95 | per unit |
| **Direct labor** | $ 115 | per unit |
| **Direct Materials** | $ 220 | per unit |

What is the variable manufacturing cost per unit?

A) $430   
 B) $495  
 C) $615  
 D) $880

**98)** Grover Company has the following data for the production and sale of 2,000 units.

|  |  |  |
| --- | --- | --- |
| **Sales price per unit** | $ 800 | per unit |
| **Fixed costs:** |  |  |
| **Marketing and administrative** | $ 400,000 | per period |
| **Manufacturing overhead** | $ 200,000 | per period |
| **Variable costs:** |  |  |
| **Marketing and administrative** | $ 50 | per unit |
| **Manufacturing overhead** | $ 80 | per unit |
| **Direct labor** | $ 100 | per unit |
| **Direct Materials** | $ 200 | per unit |

What is the variable manufacturing cost per unit?

A) $380   
 B) $430  
 C) $480  
 D) $730

**99)** Grover Company has the following data for the production and sale of 1,100 units.

|  |  |  |
| --- | --- | --- |
| **Sales price per unit** | $ 955 | per unit |
| **Fixed costs:** |  |  |
| **Marketing and administrative** | $ 154,000 | per period |
| **Manufacturing overhead** | $ 170,500 | per period |
| **Variable costs:** |  |  |
| **Marketing and administrative** | $ 60 | per unit |
| **Manufacturing overhead** | $ 90 | per unit |
| **Direct labor** | $ 110 | per unit |
| **Direct Materials** | $ 160 | per unit |

What is the total manufacturing cost per unit?

A) $360   
 B) $420  
 C) $515  
 D) $715

**100)** Grover Company has the following data for the production and sale of 2,000 units.

|  |  |  |
| --- | --- | --- |
| **Sales price per unit** | $ 800 | per unit |
| **Fixed costs:** |  |  |
| **Marketing and administrative** | $ 400,000 | per period |
| **Manufacturing overhead** | $ 200,000 | per period |
| **Variable costs:** |  |  |
| **Marketing and administrative** | $ 50 | per unit |
| **Manufacturing overhead** | $ 80 | per unit |
| **Direct labor** | $ 100 | per unit |
| **Direct Materials** | $ 200 | per unit |

What is the total manufacturing cost per unit?

A) $380   
 B) $430  
 C) $480  
 D) $730

**101)** Grover Company has the following data for the production and sale of 2,200 units.

|  |  |  |
| --- | --- | --- |
| **Sales price per unit** | $ 950 | per unit |
| **Fixed costs:** |  |  |
| **Marketing and administrative** | $ 396,000 | per period |
| **Manufacturing overhead** | $ 308,000 | per period |
| **Variable costs:** |  |  |
| **Marketing and administrative** | $ 60 | per unit |
| **Manufacturing overhead** | $ 85 | per unit |
| **Direct labor** | $ 95 | per unit |
| **Direct Materials** | $ 290 | per unit |

What is the full cost per unit of making and selling the product?

A) $530   
 B) $610  
 C) $670  
 D) $850

**102)** Grover Company has the following data for the production and sale of 2,000 units.

|  |  |  |
| --- | --- | --- |
| **Sales price per unit** | $ 800 | per unit |
| **Fixed costs:** |  |  |
| **Marketing and administrative** | $ 400,000 | per period |
| **Manufacturing overhead** | $ 200,000 | per period |
| **Variable costs:** |  |  |
| **Marketing and administrative** | $ 50 | per unit |
| **Manufacturing overhead** | $ 80 | per unit |
| **Direct labor** | $ 100 | per unit |
| **Direct Materials** | $ 200 | per unit |

What is the full cost per unit of making and selling the product?

A) $430   
 B) $480  
 C) $530  
 D) $730

**103)** Grover Company has the following data for the production and sale of 1,000 units.

|  |  |  |
| --- | --- | --- |
| **Sales price per unit** | $ 850 | per unit |
| **Fixed costs:** |  |  |
| **Marketing and administrative** | $ 200,000 | per period |
| **Manufacturing overhead** | $ 150,000 | per period |
| **Variable costs:** |  |  |
| **Marketing and administrative** | $ 55 | per unit |
| **Manufacturing overhead** | $ 85 | per unit |
| **Direct labor** | $ 105 | per unit |
| **Direct Materials** | $ 150 | per unit |

What is the contribution margin per unit?

A) $105   
 B) $360  
 C) $455  
 D) $395

**104)** Grover Company has the following data for the production and sale of 2,000 units.

|  |  |  |
| --- | --- | --- |
| **Sales price per unit** | $ 800 | per unit |
| **Fixed costs:** |  |  |
| **Marketing and administrative** | $ 400,000 | per period |
| **Manufacturing overhead** | $ 200,000 | per period |
| **Variable costs:** |  |  |
| **Marketing and administrative** | $ 50 | per unit |
| **Manufacturing overhead** | $ 80 | per unit |
| **Direct labor** | $ 100 | per unit |
| **Direct Materials** | $ 200 | per unit |

What is the contribution margin per unit?

A) $70   
 B) $320  
 C) $370  
 D) $430

**105)** The following information was collected from the accounting records of the Part SX9 for 2,600 units:

|  |  |  |
| --- | --- | --- |
|  | **Per Unit** | **Per Period** |
| **Sales price** | $ 520 |  |
| **Direct Materials** | 95 |  |
| **Direct Labor** | 35 |  |
| **Overhead** | 55 | $ 78,000 |
| **Marketing** | 20 |  |
| **Administrative** |  | 52,000 |

What is Part SX9's total cost per unit?

A) $185   
 B) $205  
 C) $215  
 D) $255

**106)** The following information was collected from the accounting records of the Part SX9 for 3,000 units:

|  |  |  |
| --- | --- | --- |
|  | **Per Unit** | **Per Period** |
| **Sales price** | $ 350 |  |
| **Direct Materials** | 80 |  |
| **Direct Labor** | 40 |  |
| **Overhead** | 60 | $ 90,000 |
| **Marketing** | 20 |  |
| **Administrative** |  | 60,000 |

What is Part SX9's total cost per unit?

A) $180   
 B) $200  
 C) $210  
 D) $250

**107)** Mountainburg Industries has developed two new products but has only enough plant capacity to introduce one product during the current year. The following data will assist management in deciding which product should be selected.

|  |  |  |
| --- | --- | --- |
|  | **Product L** | **Product W** |
| **Direct materials** | $ 44 | $ 36 |
| **Machining labor ($12 per hour)** | 18 | 15 |
| **Assembly labor ($10 per hour)** | 30 | 10 |
| **Variable overhead ($8 per hour)** | 36 | 18 |
| **Fixed overhead ($4 per hour)** | 18 | 9 |
| **Total Manufacturing Cost** | $ 146 | $ 88 |
| **Estimated selling price per unit** | $ 170 | $ 100 |
| **Actual research and development costs** | $ 240,000 | $ 175,000 |
| **Estimated advertising costs** | $ 500,000 | $ 350,000 |

Mountainburg's fixed overhead includes rent and utilities, equipment depreciation, and supervisory salaries. Selling and administrative expenses are **not** allocated to individual products.  
 For Mountainburg's Product L, the costs for direct materials, machining labor, and assembly labor represent:

A) Conversion costs   
 B) Period costs  
 C) Prime costs  
 D) Common costs

**108)** Mountainburg Industries has developed two new products but has only enough plant capacity to introduce one product during the current year. The following data will assist management in deciding which product should be selected.

|  |  |  |
| --- | --- | --- |
|  | **Product L** | **Product W** |
| **Direct materials** | $ 44 | $ 36 |
| **Machining labor ($12 per hour)** | 18 | 15 |
| **Assembly labor ($10 per hour)** | 30 | 10 |
| **Variable overhead ($8 per hour)** | 36 | 18 |
| **Fixed overhead ($4 per hour)** | 18 | 9 |
| **Total Manufacturing Cost** | $ 146 | $ 88 |
| **Estimated selling price per unit** | $ 170 | $ 100 |
| **Actual research and development costs** | $ 240,000 | $ 175,000 |
| **Estimated advertising costs** | $ 500,000 | $ 350,000 |

Mountainburg's fixed overhead includes rent and utilities, equipment depreciation, and supervisory salaries. Selling and administrative expenses are **not** allocated to individual products.  
 The difference between the $100 estimated selling price for Mountainburg's Product W and its totalmanufacturing cost of $88 represents:

A) Contribution margin per unit   
 B) Gross margin per unit  
 C) Variable cost per unit  
 D) Operating profit per unit

**109)** Mountainburg Industries has developed two new products but has only enough plant capacity to introduce one product during the current year. The following data will assist management in deciding which product should be selected.

|  |  |  |
| --- | --- | --- |
|  | **Product L** | **Product W** |
| **Direct materials** | $ 44 | $ 36 |
| **Machining labor ($12 per hour)** | 18 | 15 |
| **Assembly labor ($10 per hour)** | 30 | 10 |
| **Variable overhead ($8 per hour)** | 36 | 18 |
| **Fixed overhead ($4 per hour)** | 18 | 9 |
| **Total Manufacturing Cost** | $ 146 | $ 88 |
| **Estimated selling price per unit** | $ 170 | $ 100 |
| **Actual research and development costs** | $ 240,000 | $ 175,000 |
| **Estimated advertising costs** | $ 500,000 | $ 350,000 |

Mountainburg's fixed overhead includes rent and utilities, equipment depreciation, and supervisory salaries. Selling and administrative expenses are **not** allocated to individual products.  
 The total overhead cost of $27 for Mountainburg's Product W is a(n):

A) Sunk cost   
 B) Opportunity cost  
 C) Variable cost  
 D) Mixed cost

**110)** Mountainburg Industries has developed two new products but has only enough plant capacity to introduce one product during the current year. The following data will assist management in deciding which product should be selected.

|  |  |  |
| --- | --- | --- |
|  | **Product L** | **Product W** |
| **Direct materials** | $ 44 | $ 36 |
| **Machining labor ($12 per hour)** | 18 | 15 |
| **Assembly labor ($10 per hour)** | 30 | 10 |
| **Variable overhead ($8 per hour)** | 36 | 18 |
| **Fixed overhead ($4 per hour)** | 18 | 9 |
| **Total Manufacturing Cost** | $ 146 | $ 88 |
| **Estimated selling price per unit** | $ 170 | $ 100 |
| **Actual research and development costs** | $ 240,000 | $ 175,000 |
| **Estimated advertising costs** | $ 500,000 | $ 350,000 |

Mountainburg's fixed overhead includes rent and utilities, equipment depreciation, and supervisory salaries. Selling and administrative expenses are **not** allocated to individual products.  
 Direct material costs for Mountainburg's two new products are:

A) Prime costs   
 B) Conversion costs  
 C) Opportunity costs  
 D) Period costs

**111)** Mountainburg Industries has developed two new products but has only enough plant capacity to introduce one product during the current year. The following data will assist management in deciding which product should be selected.

|  |  |  |
| --- | --- | --- |
|  | **Product L** | **Product W** |
| **Direct materials** | $ 44 | $ 36 |
| **Machining labor ($12 per hour)** | 18 | 15 |
| **Assembly labor ($10 per hour)** | 30 | 10 |
| **Variable overhead ($8 per hour)** | 36 | 18 |
| **Fixed overhead ($4 per hour)** | 18 | 9 |
| **Total Manufacturing Cost** | $ 146 | $ 88 |
| **Estimated selling price per unit** | $ 170 | $ 100 |
| **Actual research and development costs** | $ 240,000 | $ 175,000 |
| **Estimated advertising costs** | $ 500,000 | $ 350,000 |

Mountainburg's fixed overhead includes rent and utilities, equipment depreciation, and supervisory salaries. Selling and administrative expenses are **not** allocated to individual products.  
 The advertising costs for the product selected by Mountainburg will be:

A) Prime costs   
 B) Conversion costs  
 C) Period costs  
 D) Opportunity costs

**112)** Under full absorption costing, which of the following are included in product costs?

A) Only direct materials and direct labor   
 B) Only variable manufacturing costs  
 C) Only conversion costs  
 D) All fixed and variable manufacturing costs

**113)** Ramos Company has the following unit costs:

|  |  |
| --- | --- |
| **Variable manufacturing overhead** | $ 16 |
| **Direct materials** | 15 |
| **Direct labor** | 20 |
| **Fixed manufacturing overhead** | 13 |
| **Fixed marketing and administrative** | 11 |

What cost per unit would be used for product costs under full absorption costing?

A) $35   
 B) $51  
 C) $64  
 D) $75

**114)** Ramos Company has the following unit costs:

|  |  |
| --- | --- |
| **Variable manufacturing overhead** | $ 13 |
| **Direct materials** | 12 |
| **Direct labor** | 17 |
| **Fixed manufacturing overhead** | 10 |
| **Fixed marketing and administrative** | 8 |

What cost per unit would be used for product costs under full absorption costing?

A) $29   
 B) $42  
 C) $52  
 D) $60

**115)** Ramos Company has the following unit costs:

|  |  |
| --- | --- |
| **Variable manufacturing overhead** | $ 14 |
| **Direct materials** | 12 |
| **Direct labor** | 16 |
| **Fixed manufacturing overhead** | 11 |
| **Fixed marketing and administrative** | 10 |

What cost per unit would be used for product costs under variable costing?

A) $28   
 B) $42  
 C) $53  
 D) $63

**116)** Ramos Company has the following unit costs:

|  |  |
| --- | --- |
| **Variable manufacturing overhead** | $ 13 |
| **Direct materials** | 12 |
| **Direct labor** | 17 |
| **Fixed manufacturing overhead** | 10 |
| **Fixed marketing and administrative** | 8 |

What cost per unit would be used for product costs under variable costing?

A) $29   
 B) $42  
 C) $52  
 D) $60

**117)** Vegas Company has the following unit costs:

|  |  |
| --- | --- |
| **Variable manufacturing overhead** | $ 30 |
| **Direct materials** | 25 |
| **Direct labor** | 24 |
| **Fixed manufacturing overhead** | 17 |
| **Variable marketing and administrative** | 8 |

Vegas produced and sold 13,500 units. If the product sells for $115, what is the gross margin?

A) $148,500   
 B) $256,500  
 C) $378,000  
 D) $486,000

**118)** Vegas Company has the following unit costs:

|  |  |
| --- | --- |
| **Variable manufacturing overhead** | $ 25 |
| **Direct materials** | 20 |
| **Direct labor** | 19 |
| **Fixed manufacturing overhead** | 12 |
| **Variable marketing and administrative** | 7 |

Vegas produced and sold 10,000 units. If the product sells for $100, what is the gross margin?

A) $170,000   
 B) $240,000  
 C) $290,000  
 D) $360,000

**119)** Vegas Company has the following unit costs:

|  |  |
| --- | --- |
| **Variable manufacturing overhead** | $ 25 |
| **Direct materials** | 20 |
| **Direct labor** | 19 |
| **Fixed manufacturing overhead** | 12 |
| **Variable marketing and administrative** | 10 |

Vegas produced and sold 10,500 units. If the product sells for $105, what is the contribution margin?

A) $199,500   
 B) $304,500  
 C) $325,500  
 D) $430,500

**120)** Vegas Company has the following unit costs:

|  |  |
| --- | --- |
| **Variable manufacturing overhead** | $ 25 |
| **Direct materials** | 20 |
| **Direct labor** | 19 |
| **Fixed manufacturing overhead** | 12 |
| **Variable marketing and administrative** | 7 |

Vegas produced and sold 10,000 units. If the product sells for $100, what is the contribution margin?

A) $170,000   
 B) $240,000  
 C) $290,000  
 D) $360,000

**121)** Vegas Company has the following unit costs:

|  |  |
| --- | --- |
| **Variable manufacturing overhead** | $ 42 |
| **Direct materials** | 37 |
| **Direct labor** | 36 |
| **Fixed manufacturing overhead** | 29 |
| **Variable marketing and administrative** | 24 |

Vegas produced and sold 13,400 units. If the product sells for $202, what is the operating profit under full absorption costing?

A) $455,600   
 B) $777,200  
 C) $844,200  
 D) $1,165,800

**122)** Vegas Company has the following unit costs:

|  |  |
| --- | --- |
| **Variable manufacturing overhead** | $ 25 |
| **Direct materials** | 20 |
| **Direct labor** | 19 |
| **Fixed manufacturing overhead** | 12 |
| **Variable marketing and administrative** | 7 |

Vegas produced and sold 10,000 units. If the product sells for $100, what is the operating profit under full absorption costing?

A) $170,000   
 B) $240,000  
 C) $290,000  
 D) $360,000

**123)** Vegas Company has the following unit costs:

|  |  |
| --- | --- |
| **Variable manufacturing overhead** | $ 39 |
| **Direct materials** | 34 |
| **Direct labor** | 33 |
| **Fixed manufacturing overhead** | 26 |
| **Variable marketing and administrative** | 21 |

Vegas produced and sold 12,800 units. If the product sells for $184, what is the operating profit using a contribution margin income statement?

A) $396,800   
 B) $665,600  
 C) $729,600  
 D) $998,400

**124)** Vegas Company has the following unit costs:

|  |  |
| --- | --- |
| **Variable manufacturing overhead** | $ 25 |
| **Direct materials** | 20 |
| **Direct labor** | 19 |
| **Fixed manufacturing overhead** | 12 |
| **Variable marketing and administrative** | 7 |

Vegas produced and sold 10,000 units. If the product sells for $100, what is the operating profit using a contribution margin income statement?

A) $170,000   
 B) $240,000  
 C) $290,000  
 D) $360,000

**125)** The following information is available for Barnes Company for the fiscal year ended December 31:

|  |  |
| --- | --- |
| **Beginning finished goods inventory in units** | 0 |
| **Units produced** | 5,400 |
| **Units sold** | 4,300 |
| **Sales** | $ 559,000 |
| **Materials cost** | $ 108,000 |
| **Variable conversion cost used** | $ 54,000 |
| **Fixed manufacturing cost** | $ 162,000 |
| **Indirect operating costs (fixed)** | $ 86,000 |

Cost of goods sold using variable costing is:

A) $111,800   
 B) $129,000  
 C) $145,800  
 D) $41,800

**126)** The following information is available for Barnes Company for the fiscal year ended December 31:

|  |  |
| --- | --- |
| **Beginning finished goods inventory in units** | 0 |
| **Units produced** | 4,800 |
| **Units sold** | 4,000 |
| **Sales** | $ 400,000 |
| **Materials cost** | $ 96,000 |
| **Variable conversion cost used** | $ 48,000 |
| **Fixed manufacturing cost** | $ 72,000 |
| **Indirect operating costs (fixed)** | $ 80,000 |

Cost of goods sold using variable costing is:

A) $110,000   
 B) $120,000  
 C) $144,000  
 D) $40,000

**127)** The following information is available for Barnes Company for the fiscal year ended December 31:

|  |  |
| --- | --- |
| **Beginning finished goods inventory in units** | 0 |
| **Units produced** | 6,000 |
| **Units sold** | 4,600 |
| **Sales** | $ 598,000 |
| **Materials cost** | $ 120,000 |
| **Variable conversion cost used** | $ 60,000 |
| **Fixed manufacturing cost** | $ 270,000 |
| **Indirect operating costs (fixed)** | $ 92,000 |

Cost of goods sold using absorption costing is:

A) $411,667   
 B) $230,000  
 C) $345,000  
 D) $77,000

**128)** The following information is available for Barnes Company for the fiscal year ended December 31:

|  |  |
| --- | --- |
| **Beginning finished goods inventory in units** | 0 |
| **Units produced** | 4,800 |
| **Units sold** | 4,000 |
| **Sales** | $ 400,000 |
| **Materials cost** | $ 96,000 |
| **Variable conversion cost used** | $ 48,000 |
| **Fixed manufacturing cost** | $ 72,000 |
| **Indirect operating costs (fixed)** | $ 80,000 |

Cost of goods sold using absorption costing is:

A) $246,667   
 B) $120,000  
 C) $180,000  
 D) $40,000

**129)** The following information is available for Barnes Company for the fiscal year ended December 31:

|  |  |
| --- | --- |
| **Beginning finished goods inventory in units** | 0 |
| **Units produced** | 6,200 |
| **Units sold** | 4,700 |
| **Sales** | $ 1,128,000 |
| **Materials cost** | $ 124,000 |
| **Variable conversion cost used** | $ 62,000 |
| **Fixed manufacturing cost** | $ 310,000 |
| **Indirect operating costs (fixed)** | $ 83,500 |

The variable costing operating income is:

A) $585,500   
 B) $605,500  
 C) $569,500  
 D) $593,500

**130)** The following information is available for Barnes Company for the fiscal year ended December 31:

|  |  |
| --- | --- |
| **Beginning finished goods inventory in units** | 0 |
| **Units produced** | 4,800 |
| **Units sold** | 4,000 |
| **Sales** | $ 400,000 |
| **Materials cost** | $ 96,000 |
| **Variable conversion cost used** | $ 48,000 |
| **Fixed manufacturing cost** | $ 72,000 |
| **Indirect operating costs (fixed)** | $ 80,000 |

The variable costing operating income is:

A) $120,000   
 B) $140,000  
 C) $104,000  
 D) $128,000

**131)** The following information is available for Barnes Company for the fiscal year ended December 31:

|  |  |
| --- | --- |
| **Beginning finished goods inventory in units** | 0 |
| **Units produced** | 7,800 |
| **Units sold** | 5,500 |
| **Sales** | $ 1,100,000 |
| **Materials cost** | $ 156,000 |
| **Variable conversion cost used** | $ 78,000 |
| **Fixed manufacturing cost** | $ 702,000 |
| **Indirect operating costs (fixed)** | $ 110,000 |

The absorption costing operating income is:

A) $310,000   
 B) $330,000  
 C) $318,000  
 D) $302,000

**132)** The following information is available for Barnes Company for the fiscal year ended December 31:

|  |  |
| --- | --- |
| **Beginning finished goods inventory in units** | 0 |
| **Units produced** | 4,800 |
| **Units sold** | 4,000 |
| **Sales** | $ 400,000 |
| **Materials cost** | $ 96,000 |
| **Variable conversion cost used** | $ 48,000 |
| **Fixed manufacturing cost** | $ 72,000 |
| **Indirect operating costs (fixed)** | $ 80,000 |

The absorption costing operating income is:

A) $120,000   
 B) $140,000  
 C) $128,000  
 D) $112,000

**133)** The following information is available for Barnes Company for the fiscal year ended December 31:

|  |  |
| --- | --- |
| **Beginning finished goods inventory in units** | 0 |
| **Units produced** | 4,800 |
| **Units sold** | 4,000 |
| **Sales** | $ 400,000 |
| **Materials cost** | $ 96,000 |
| **Variable conversion cost used** | $ 48,000 |
| **Fixed manufacturing cost** | $ 72,000 |
| **Indirect operating costs (fixed)** | $ 80,000 |

The variable costing ending finished goods inventory is:

A) $36,000   
 B) $8,000  
 C) $40,000  
 D) $24,000

**134)** The following information is available for Barnes Company for the fiscal year ended December 31:

|  |  |
| --- | --- |
| **Beginning finished goods inventory in units** | 0 |
| **Units produced** | 4,800 |
| **Units sold** | 4,000 |
| **Sales** | $ 400,000 |
| **Materials cost** | $ 96,000 |
| **Variable conversion cost used** | $ 48,000 |
| **Fixed manufacturing cost** | $ 72,000 |
| **Indirect operating costs (fixed)** | $ 80,000 |

The variable costing ending finished goods inventory is:

A) $36,000   
 B) $8,000  
 C) $40,000  
 D) $24,000

**135)** The following information is available for Barnes Company for the fiscal year ended December 31:

|  |  |
| --- | --- |
| **Beginning finished goods inventory in units** | 0 |
| **Units produced** | 5,400 |
| **Units sold** | 4,300 |
| **Sales** | $ 559,000 |
| **Materials cost** | $ 108,000 |
| **Variable conversion cost used** | $ 54,000 |
| **Fixed manufacturing cost** | $ 162,000 |
| **Indirect operating costs (fixed)** | $ 86,000 |

The absorption costing ending inventory is:

A) $54,000   
 B) $70,000  
 C) $66,000  
 D) $38,000

**136)** The following information is available for Barnes Company for the fiscal year ended December 31:

|  |  |
| --- | --- |
| **Beginning finished goods inventory in units** | 0 |
| **Units produced** | 4,800 |
| **Units sold** | 4,000 |
| **Sales** | $ 400,000 |
| **Materials cost** | $ 96,000 |
| **Variable conversion cost used** | $ 48,000 |
| **Fixed manufacturing cost** | $ 72,000 |
| **Indirect operating costs (fixed)** | $ 80,000 |

The absorption costing ending inventory is:

A) $40,000   
 B) $24,000  
 C) $36,000  
 D) $8,000

**137)** The following information is available for Barnes Company for the fiscal year ended December 31:

|  |  |
| --- | --- |
| **Beginning finished goods inventory in units** | 0 |
| **Units produced** | 6,600 |
| **Units sold** | 4,900 |
| **Sales** | $ 637,000 |
| **Materials cost** | $ 132,000 |
| **Variable conversion cost used** | $ 66,000 |
| **Fixed manufacturing cost** | $ 396,000 |
| **Indirect operating costs (fixed)** | $ 98,000 |

The difference between the variable costing ending inventory and the absorption costing ending inventory is:

A) 1,700 units times $60 per unit fixed manufacturing cost   
 B) 1,700 units times $55 per unit materials cost  
 C) 1,700 units times $65 per unit variable conversion cost plus $60 per unit fixed manufacturing cost  
 D) 1,700 units times $65 per unit variable conversion cost plus $60 per unit fixed manufacturing cost plus $61.67 per unit indirect operating costs

**138)** The following information is available for Barnes Company for the fiscal year ended December 31:

|  |  |
| --- | --- |
| **Beginning finished goods inventory in units** | 0 |
| **Units produced** | 4,800 |
| **Units sold** | 4,000 |
| **Sales** | $ 400,000 |
| **Materials cost** | $ 96,000 |
| **Variable conversion cost used** | $ 48,000 |
| **Fixed manufacturing cost** | $ 72,000 |
| **Indirect operating costs (fixed)** | $ 80,000 |

The difference between the variablecosting ending inventory and the absorptioncosting ending inventory is:

A) 800 units times $15 per unit fixed manufacturing cost   
 B) 800 units times $10 per unit materials cost  
 C) 800 units times $20 per unit variable conversion cost plus $15 per unit fixed manufacturing cost  
 D) 800 units times $20 per unit variable conversion cost plus $15 per unitfixed manufacturing cost plus $16.67 per unit indirect operating costs

**139)** Absorption costing measures gross profit as:

A) Sales less unit level costs spent on goods sold.   
 B) Sales less variable cost of goods sold.  
 C) Sales less absorption cost of goods sold.  
 D) Sales less all costs including operating expenses.

**140)** Inventoriable costs:

A) include only the prime costs of manufacturing a product.   
 B) include only the conversion costs of providing a service.  
 C) exclude fixed manufacturing costs.  
 D) are treated as assets until the units are sold.

**ESSAY. Write your answer in the space provided or on a separate sheet of paper.  
141)** The following information is available for the Weston Consulting Company for the fiscal year ended December 31.

|  |  |
| --- | --- |
| **Gross margin** | $ 170,000 |
| **Operating profit** | $ 65,500 |
| **Revenues** | $ 809,000 |
| **Income tax rate** | 34% |

**Required:**  
 (a) Compute the cost of services sold.  
 (b) Compute the total marketing and administrative costs.  
 (c) Compute net income.

**142)** The following information is available for the Cherryville Enterprises, Incorporated for the fiscal year ended December 31.

|  |  |
| --- | --- |
| **Revenues** | $ 900,000 |
| **Gross margin** | $ 315,000 |
| **Operating profit** | 85,000 |
| **Income tax rate** | 32% |

**Required:**  
 (a) Compute the cost of goods sold.  
 (b) Compute the total marketing and administrative costs.  
 (c) Compute net income.

**143)** The following information is available for the Tenor Music Store for the fiscal year ended December 31.

|  |  |
| --- | --- |
| **Ending inventory** | $ 100,100 |
| **Transportation-in costs** | $ 8,900 |
| **Purchase discounts** | $ 15,000 |
| **Beginning inventory** | $ 79,000 |
| **Merchandise cost** | $ 450,000 |
| **Purchase returns and allowances** | $ 6,200 |
| **Sales revenue** | $ 800,000 |
| **Sales discounts** | $ 12,500 |

**Required:**  
 (a) Prepare a cost of goods sold statement for Tenor Music Store.  
 (b) Compute the gross margin for the fiscal year ended December 31.

**144) Required:**  
 Using the following table as a reference, describe whether the following costs incurred in a manufacturing company are (a) fixed or variable and (b) product or period. The first cost item is presented in the table as an example.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cost Item** | **Fixed** | **Variable** | **Product** | **Period** |
| **E. Annual audit and tax return fees** | X |  |  | X |
| **1. Costs (other than food) of running the cafeteria for factory personnel** |  |  |  |  |
| **2. Direct materials used** |  |  |  |  |
| **3. Clerical staff in administrative offices** |  |  |  |  |
| **4. Depreciation of factory machinery\*** |  |  |  |  |
| **5. Property taxes on the factory** |  |  |  |  |
| **6. Insurance premiums on delivery vans** |  |  |  |  |
| **7. Factory custodian pay** |  |  |  |  |
| **8. Sales commissions** |  |  |  |  |
| **9. Rent paid for corporate jet** |  |  |  |  |
| **10. Transportation-in costs for indirect material** |  |  |  |  |

\*Straight-line depreciation method used.

**145)** The Torchdown Company began operations several years ago. The company purchased a building, and since only half of the space was needed for operations, the remaining space was rented to another firm for rental revenue of $20,000 per year. The success of Torchdown Company's product has resulted in the company needing more space. The renter's lease will expire next month and Torchdown will **not** renew the lease in order to use the space to expand operations and meet demand.  
 The company's product requires direct materials that cost $25 per unit. The company employs a production supervisor whose salary is $2,000 per month. Production line workers are paid $15 per hour to manufacture and assemble the product. The company rents the equipment needed to produce the product at a rental cost of $1,500 per month. Additional equipment will be needed as production is expanded and the monthly rental charge for this equipment will be $900 per month. The building is depreciated on a straight-line basis at $9,000 per year.  
 The company spends $40,000 per year to market the product. Shipping costs for each unit are $20 per unit. The cost of electricity and other utilities used for product is $2 per unit. The company plans to liquidate several investments in order to expand production. These investments currently earn a return of $8,000 per year.  
 **Required:**  
 Using the following table as a reference, describe which cost headings best identify the costs listed in the first column. As more than one type of cost can be applicable, ensure to list all possibilities when entering your answers (e.g., a cost might be a variable cost, and an overhead cost).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Name of cost** | **Variable cost** | **Fixed cost** | **Direct materials** | **Direct labor** | **Manufacturing overhead** | **Period cost** | **Opportunity cost** |
| **1. Amount that can be earned renting building** |  |  |  |  |  |  |  |
| **2. Cost of direct materials** |  |  |  |  |  |  |  |
| **3. Salary of production supervisor** |  |  |  |  |  |  |  |
| **4. Cost of direct labor** |  |  |  |  |  |  |  |
| **5. Equipment rental cost** |  |  |  |  |  |  |  |
| **6. Depreciation on building** |  |  |  |  |  |  |  |
| **7. Marketing costs** |  |  |  |  |  |  |  |
| **8. Shipping costs** |  |  |  |  |  |  |  |
| **9. Electrical costs** |  |  |  |  |  |  |  |
| **10. Foregone investment income** |  |  |  |  |  |  |  |

**146)** The following cost and inventory data were taken from the records of the Flagstaff Company for the year:

|  |  |
| --- | --- |
| Costs incurred: |  |
| **Depreciation, factory equipment** | $ 30,000 |
| **Depreciation, office equipment** | 7,000 |
| **Supplies, factory** | 1,500 |
| **Maintenance, factory equipment** | 20,000 |
| **Utilities, factory** | 8,000 |
| **Sales commissions** | 30,000 |
| **Indirect labor** | 54,500 |
| **Rent, factory building** | 70,000 |
| **Purchases of direct materials (net)** | 124,000 |
| **Direct labor** | 80,000 |
| **Advertising expense** | 90,000 |

Inventories:

|  |  |  |
| --- | --- | --- |
|  | **January 1** | **December 31** |
| **Direct materials** | $ 9,000 | $ 11,000 |
| **Work in process** | 6,000 | 21,000 |
| **Finished goods** | 69,000 | 24,000 |

**Required:**  
 (a) Compute the cost of goods manufactured.  
 (b) Compute the cost of goods sold.

**147)** The Foxboro Manufacturing Company provided you with the following information for the fiscal year ended December 31.

|  |  |
| --- | --- |
| **Work-in-process inventory, 12/31** | $ 57,900 |
| **Finished goods inventory, 1/1** | 307,400 |
| **Direct labor costs incurred** | 1,004,300 |
| **Manufacturing overhead costs** | 2,693,400 |
| **Direct materials inventory, 1/1** | 250,800 |
| **Finished goods inventory, 12/31** | 511,000 |
| **Direct materials purchased** | 1,750,200 |
| **Work-in-process inventory, 1/1** | 101,000 |
| **Direct materials inventory, 12/31** | 169,400 |

**Required:**  
 (a) Compute the total manufacturing costs incurred during the year.  
 (b) Compute the total work-in-process during the year.  
 (c) Compute the cost of goods manufactured during the year.  
 (d) Compute the cost of goods sold during the year.  
 (e) Compute the total prime costs for the year.  
 (f) Compute the total conversion costs for the year.

**148)** The cost accountant for the Corner Manufacturing Company has provided you with the following information for the month of July:

|  |  |  |
| --- | --- | --- |
|  | **Variable costs Per unit** | **Total Fixed Costs** |
| **Direct labor** | $ 27.50 |  |
| **Direct materials** | 84.75 |  |
| **Manufacturing overhead** | 14.25 | $ 120,000 |
| **Marketing costs** | 5.30 | 50,000 |
| **Administrative costs** | 2.90 | 75,000 |

**Required:**  
 Compute the following *per* *unit* items, assuming the company produced and sold 5,000 units at a price of $210.00 per unit.  
 (a) Total variable cost.  
 (b) Variable inventoriable cost.  
 (c) Full absorption cost.  
 (d) Full cost.  
 (e) Contribution margin.  
 (f) Gross margin.  
 (g) Profit margin.

**149)** The cost accountant for the Friendly Manufacturing Company has provided you with the following information for the month of July:

|  |  |  |
| --- | --- | --- |
|  | **Variable costs Per unit** | **Total Fixed Costs** |
| **Direct labor** | $ 27.50 |  |
| **Direct materials** | 84.75 |  |
| **Manufacturing overhead** | 14.25 | $ 120,000 |
| **Marketing costs** | 5.30 | 50,000 |
| **Administrative costs** | 2.90 | 75,000 |
| **Selling price** | 210.00 |  |

**Required:**  
 Assuming the company produced and sold 5,000 units, and there were no units in inventory on July 1, prepare the following income statements for the month of July:  
 (a) Contribution margin income statement.  
 (b) Gross margin income statement.

**150)** Shuster Industries manufactures baseballs and identified the following costs associated with their manufacturing activity (V = Variable; F = Fixed). The following information is available for the month of June when 25,000 baseballs were produced, but only 23,500 baseballs were sold.

|  |  |
| --- | --- |
| **Power to run plant equipment (V)** | $ 25,000 |
| **Other selling costs (V)** | 149,150 |
| **Indirect labor (F)** | 50,000 |
| **Property taxes on factory building (F)** | 12,500 |
| **Marketing costs (V)** | 30,000 |
| **Factory Supervisor salaries (F)** | 125,000 |
| **Direct materials used (V)** | 500,000 |
| **Depreciation on plant equipment (F)** | 68,000 |
| **Shipping costs to customer (V)** | 48,800 |
| **Indirect material and supplies (V)** | 37,500 |
| **Direct labor (V)** | 250,000 |
| **Administrative salaries (F)** | 300,000 |
| **Insurance on factory building (F)** | 62,500 |
| **Utilities, factory (V)** | 50,000 |
| **General office costs (F)** | 48,000 |

**Required:**  
 Compute the following amounts for July, assuming 30,000 baseballs were produced and sold: (Assume normal production ranges from 15,000 to 40,000 baseballs)  
 (a) Total manufacturing costs.  
 (b) Total conversion costs.  
 (c) Period costs per unit.  
 (d) Full costs per unit.

**151)** Each column below is independent and for a different company. Use the data given, which refers to one year for each example, to find the unknown account balances.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Company** | | |
| **Southeast** | **Central** | **Northwest** |
| **Direct materials inventory, January 1** | (a) | $ 3,920 | $ 16,640 |
| **Direct materials inventory, December 31** | $ 4,850 | 3,248 | 14,664 |
| **Work-in-process inventory, January 1** | 2,700 | 7,526 | 85,696 |
| **Work-in-process inventory, December 31** | 3,800 | 3,472 | 79,800 |
| **Finished goods inventory, January 1** | 1,900 | (d) | 17,888 |
| **Finished goods inventory, December 31** | 300 | 4,928 | 29,536 |
| **Purchases of direct materials** | 16,100 | 13,440 | 66,768 |
| **Cost of goods manufactured during this year** | (b) | 30,486 | 326,320 |
| **Total manufacturing costs** | 55,550 | 26,432 | 320,424 |
| **Cost of goods sold** | 56,050 | 30,464 | 314,673 |
| **Gross margin** | (c) | 18,368 | 666,931 |
| **Direct labor** | 26,450 | 4,256 | 129,688 |
| **Direct materials used** | 15,300 | (e) | 68,744 |
| **Manufacturing overhead** | 13,800 | 8,064 | (g) |
| **Sales revenue** | 103,300 | (f) | 981,604 |

**152)** The following data appeared in Moline Company's records on December 31:

|  |  |
| --- | --- |
| **Direct Materials Inventory, December 31** | $ 535,500 |
| **Direct Materials purchased during the year** | 2,268,000 |
| **Finished Goods Inventory, December 31** | 567,000 |
| **Indirect labor** | 201,600 |
| **Direct labor** | 2,520,000 |
| **Factory heat, light, and power** | 234,360 |
| **Factory depreciation** | 396,900 |
| **Administrative salaries** | 323,820 |
| **Miscellaneous factory cost** | 200,970 |
| **Marketing costs** | 233,100 |
| **Other administrative costs** | 113,400 |
| **Maintenance on factory equipment** | 76,230 |
| **Insurance on factory equipment** | 119,700 |
| **Distribution costs** | 10,080 |
| **Taxes on manufacturing property** | 82,530 |
| **Legal fees on customer complaint** | 51,660 |
| **Direct materials put into production** | 2,407,230 |
| **Work-in-Process Inventory, December 31** | 154,980 |

On January 1, the Finished Goods Inventory account had a balance of $280,000, and the Work-in-Process Inventory account had a balance of $90,650. Sales revenue for the year was $6,687,500.  
 **Required:**  
 (a) Prepare a cost of goods manufactured statement.  
 (b) Prepare a cost of goods sold statement.  
 (c) Prepare a gross margin income statement.

**153)** The following information has been taken from the cost records of Gator Corporation for the past year:

|  |  |
| --- | --- |
| **Raw materials used in production** | $ 326 |
| **Total manufacturing costs charged to production during the year (includes $135 of factory overhead)** | 686 |
| **Cost of goods available for sale** | 826 |
| **Selling & administrative expenses** | 25 |

|  |  |  |
| --- | --- | --- |
| **Inventories:** | **Beginning** | **Ending** |
| **Direct materials** | 75 | 85 |
| **Work in process** | 80 | 30 |
| **Finished goods** | 90 | 110 |

**Required:**  
 (a) Calculate the cost of direct materials purchased during the year.  
 (b) Calculate the direct labor costs charged to production during the year.  
 (c) Calculate the cost of goods manufactured during the year.  
 (d) Calculate the cost of goods sold for the year.

**154)** Information from the records of the Shawnee Production Company for the month of January is as follows:

|  |  |
| --- | --- |
| **Purchases of direct materials** | $ 18,000 |
| **Indirect labor** | 5,000 |
| **Direct labor** | 10,400 |
| **Depreciation on factory machinery** | 3,000 |
| **Sales** | 55,300 |
| **Selling and administrative expenses** | 6,300 |
| **Rent on factory building** | 7,000 |

|  |  |  |
| --- | --- | --- |
| **Inventories:** | **January 1** | **January 31** |
| **Direct materials** | $ 8,000 | $ 8,700 |
| **Work-in-process** | 2,100 | 3,200 |
| **Finished goods** | 5,000 | 5,700 |

**Required:**  
 (a) Prepare a statement of cost of goods manufacturedand sold for the month of January.  
 (b) Prepare a gross margin income statement for the month of January.

**155)** The following information has been taken from the cost records of Toro Corporation for the past year:

|  |  |
| --- | --- |
| **Raw materials used in production** | $ 572 |
| **Total manufacturing costs charged to production during the year (includes $255 of factory overhead)** | 1,095 |
| **Cost of goods available for sale** | 1,415 |
| **Selling and administrative expenses** | 255 |

|  |  |  |
| --- | --- | --- |
| **Inventories:** | **Beginning** | **Ending** |
| **Direct materials** | 175 | 155 |
| **Work in process** | 220 | 190 |
| **Finished goods** | 290 | 310 |

**Required:**  
 (a) Calculate the cost of direct materials purchased during the year.  
 (b) Calculate the direct labor costs charged to production during the year.  
 (c) Calculate the cost of goods manufactured during the year.  
 (d) Calculate the cost of goods sold for the year.

**156)** Information from the records of the Navaho Industries for the month of July is as follows:

|  |  |
| --- | --- |
| **Purchases of direct materials** | $ 24,000 |
| **Indirect labor** | 6,500 |
| **Direct labor** | 13,200 |
| **Depreciation on factory machinery** | 3,600 |
| **Sales** | 75,300 |
| **Selling and administrative expenses** | 8,900 |
| **Rent on factory building** | 8,400 |

|  |  |  |
| --- | --- | --- |
| **Inventories:** | **July 1** | **July 31** |
| **Direct materials** | $ 8,000 | $ 6,700 |
| **Work-in-process** | 1,100 | 1,600 |
| **Finished goods** | 9,000 | 6,800 |

**Required:**  
 (a) Prepare a statement of cost of goods manufactured and sold for the month of July.  
 (b) Prepare a gross margin income statement for the month of July.

**157)** The Yellville Company provided you with the following information for the fiscal year ended December 31.

|  |  |
| --- | --- |
| **Work-in-process inventory, 12/31** | $ 115,800 |
| **Finished goods inventory, 1/1** | 614,800 |
| **Direct labor costs incurred** | 2,008,600 |
| **Manufacturing overhead costs** | 5,368,800 |
| **Direct materials inventory, 1/1** | 501,600 |
| **Finished goods inventory, 12/31** | 1,022,000 |
| **Direct materials purchased** | 3,500,400 |
| **Work-in-process inventory, 1/1** | 202,000 |
| **Direct materials inventory, 12/31** | 338,800 |

**Required:**  
 (a) Compute the total manufacturing costs incurred during the year.  
 (b) Compute the total work-in-process during the year.  
 (c) Compute the cost of goods manufactured during the year.  
 (d) Compute the cost of goods sold during the year.  
 (e) Compute the total prime costs for the year.  
 (f) Compute the total conversion costs for the year.

**158)** The Younce Equipment Company provided you with the following information for the fiscal year ended December 31.

|  |  |
| --- | --- |
| **Work-in-process inventory,12/31** | $ 28,950 |
| **Finished goods inventory, 1/1** | 153,700 |
| **Direct labor costs incurred** | 502,150 |
| **Manufacturing overhead costs** | 1,364,700 |
| **Direct materials inventory, 1/1** | 125,400 |
| **Finished goods inventory, 12/31** | 255,500 |
| **Direct materials purchased** | 875,100 |
| **Work-in-process inventory, 1/1** | 50,500 |
| **Direct materials inventory, 12/31** | 84,700 |

**Required:**  
 (a) Compute the total manufacturing costs incurred during the year.  
 (b) Compute the total work-in-process during the year.  
 (c) Compute the cost of goods manufactured during the year.  
 (d) Compute the cost of goods sold during the year.

**159)** Mobile Device Retail has collected the following information for May:

|  |  |
| --- | --- |
| **Sales revenue** | $ 1,650,000 |
| **Store rent** | 84,000 |
| **Utilities** | 57,200 |
| **Sales commissions** | 247,500 |
| **Merchandise inventory, May 1** | 118,200 |
| **Merchandise inventory, May 31** | 124,600 |
| **Freight-in** | 54,600 |
| **Administrative costs** | 115,100 |
| **Merchandise purchases** | 1,091,000 |

**Required:**  
 Prepare a gross margin income statement for the month of May.

**160)** Fowler Retail has collected the following information for August:

|  |  |
| --- | --- |
| **Sales revenue** | $ 1,155,000 |
| **Store rent** | 58,800 |
| **Utilities** | 40,400 |
| **Sales commissions** | 173,300 |
| **Merchandise inventory, 8/1** | 87,220 |
| **Merchandise inventory, 8/31** | 82,740 |
| **Freight-in** | 30,300 |
| **Administrative costs** | 80,600 |
| **Merchandise purchases** | 763,700 |

**Required:**  
 Prepare a gross margin income statement for the month of August.

**161)** Zach Hartman has developed a new electronic device that he has decided to produce and market. The production facility will be in a nearby industrial park which Zach will rent for $4,000 per month. Utilities will cost $500 per month. He will use his personal computer, which he purchased for $2,000 last year, to monitor the production process. The computer will become obsolete before it wears out from use. The computer will be depreciated at the rate of $1,000 per year. He will rent production equipment at a monthly cost of $8,000. Zach estimates the materials cost per finished unit of product to be $50, and the labor cost to be $10. He will hirehourly paid workers and spend his time promoting the product. To do this, he will quit his job which pays $4,500 per month. Advertising will cost $2,000 per month. Zach will **not** draw a salary from the new company until it gets well established.  
   
   
 **Required:**  
 Complete the chart below by placing an "X" under each heading that helps to identify the cost involved. There can be "Xs" placed under more than one heading for a single cost; e.g., a cost might be an overhead cost and a product cost. There would be an "X" placed under each of these headings opposite the cost.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Opportunity Cost** | **Variable Cost** | **Fixed Cost** | **Product Cost** | | | |
| **Direct Materials** | **Direct Labor** | **Manufacturing Overhead** | **Selling Cost** |
| **Facility rent** |  |  |  |  |  |  |  |
| **Utilities** |  |  |  |  |  |  |  |
| **Personal computer depreciation** |  |  |  |  |  |  |  |
| **Equipment rent** |  |  |  |  |  |  |  |
| **Materials cost** |  |  |  |  |  |  |  |
| **Labor cost** |  |  |  |  |  |  |  |
| **Present salary** |  |  |  |  |  |  |  |
| **Advertising** |  |  |  |  |  |  |  |

**162)** A manufacturing company has provided the following data for the month of March:  
 Inventories:

|  |  |  |
| --- | --- | --- |
|  | **Beginning** | **Ending** |
| **Raw materials** | $ 36,000 | $ 24,000 |
| **Finished goods** | $ 57,000 | $ 28,000 |

Raw materials purchased during March totaled $69,000 and the cost of goods manufactured totaled $146,000.  
 **Required:**  
 (a) What was the cost of raw materials used in production during March? Show your work.  
 (b) What was the cost of goods sold for March? Show your work.

**163)** During the month of June, Bolder Corporation, a manufacturing company, purchased raw materials costing $76,000. The cost of goods manufactured for the month was $129,000. The beginning balance in the raw materials inventory account was $26,000 and the ending balance was $21,000. The beginning balance in the finished goods inventory account was $52,000 and the ending balance was $35,000.  
 **Required:**  
 (a) What was the cost of raw materials used in production during June? Show your work.  
 (b) What was the cost of goods sold for June? Show your work.

**164)** A partial listing of costs incurred at Marshall Corporation during August appears below:

|  |  |
| --- | --- |
| **Direct materials** | $ 135,000 |
| **Utilities, factory** | $ 11,000 |
| **Sales commissions** | $ 69,000 |
| **Administrative salaries** | $ 101,000 |
| **Indirect labor** | $ 29,000 |
| **Advertising** | $ 94,000 |
| **Depreciation of production equipment** | $ 31,000 |
| **Direct labor** | $ 73,000 |
| **Depreciation of administrative equipment** | $ 40,000 |

**Required:**  
 (a) What is the total amount of product costs listed above? Show your work.  
 (b) What is the total amount of period costs listed above? Show your work.

**165)** Grankowski Corporation has provided the following partial listing of costs incurred during November:

|  |  |
| --- | --- |
| **Marketing salaries** | $ 47,000 |
| **Property taxes, factory** | $ 6,000 |
| **Administrative travel** | $ 113,000 |
| **Sales commissions** | $ 56,000 |
| **Indirect labor** | $ 36,000 |
| **Direct materials** | $ 119,000 |
| **Advertising** | $ 63,000 |
| **Depreciation of production equipment** | $ 56,000 |
| **Direct labor** | $ 117,000 |

**Required:**  
   
 (a) What is the total amount of product costs listed above? Show your work.  
 (b) What is the total amount of period costs listed above? Show your work.

**166)** In October, Youngstown Corporation had sales of $273,000, selling expenses of $26,000, and administrative expenses of $47,000. The cost of goods manufactured was $183,000. The beginning balance in the finished goods inventory account was $45,000 and the ending balance was $34,000.  
 **Required:**  
 Prepare an Income Statement in good form for October.

**167)** In July, Mountain Life, Incorporated, a merchandising company, had sales of $295,000, selling expenses of $24,000, and administrative expenses of $29,000. The cost of merchandise purchased during the month was $215,000. The beginning balance in the merchandise inventory account was $25,000 and the ending balance was $30,000.  
   
   
 **Required:**  
 Prepare an Income Statement in good form for July.

**168)** A number of costs and measures of activity are listed below:

|  |  |
| --- | --- |
| **Cost Description** | **Possible Measure of Activity** |
| **1. Cost of heating a hardware store** | Dollar sales |
| **2. Windshield wiper blades installed on autos at an auto assembly plant** | Number of autos assembled |
| **3. Cost of tomato sauce used at a pizza shop** | Pizzas cooked |
| **4. Cost of shipping bags of fertilizer to a customer at a chemical plant** | Bags shipped |
| **5. Cost of electricity for production equipment at a snowboard manufacturer** | Snowboards produced |
| **6. Cost of renting production equipment on a monthly basis at a snowboard manufacturer** | Snowboards produced |
| **7. Cost of vaccine used at a clinic** | Vaccines administered |
| **8. Cost of sales at a hardware store** | Dollar sales |
| **9. Receptionist’s wages at dentist’s office** | Number of patients |
| **10. Salary of production manager at a snowboard manufacturer** | Snowboards produced |

**Required:**  
 For each item above, indicate whether the cost is MAINLY fixed or variable with respect to the possible measure of activity listed next to it.

**169)** A number of costs and measures of activity are listed below:

|  |  |
| --- | --- |
| **Cost Description** | **Possible Measure of Activity** |
| **1. Cost of renting production equipment on a monthly basis at a surfboard manufacturer** | Surfboards produced |
| **2. Pilot’s salary on a regularly scheduled commuter airline** | Number of passengers |
| **3. Cost of dough used at a pizza shop** | Pizzas cooked |
| **4. Janitorial wages at a surfboard manufacturer** | Surfboards produced |
| **5. Cost of shipping bags of garden mulch to a retail garden store** | Bags shipped |
| **6. Salary of production manager at a surfboard manufacturer** | Surfboards produced |
| **7. Property tax on corporate headquarters building** | Dollar sales |
| **8. Cost of heating an electronics store** | Dollar sales |
| **9. Shift manager’s wages at a coffee shop** | Dollar sales |
| **10. Cost of bags used in packaging chickens for shipment to grocery stores** | Crates of chicken shipped |

**Required:**  
 For each item above, indicate whether the cost is MAINLY fixed or variable with respect to the possible measure of activity listed next to it.

**170)** A number of costs are listed below:

|  |  |
| --- | --- |
| **Cost Description** | **Cost Object** |
| **1. Supervisor’s wages in a computer manufacturing facility** | A particular personal computer |
| **2. Salary of the president of a home construction company** | A particular home |
| **3. Cost of tongue depressors used in an outpatient clinic at a hospital** | The outpatient clinic |
| **4. Cost of lubrication oil used at the auto repair shop of an automobile dealer** | The auto repair shop |
| **5. Manger’s salary at a hotel run by a chain of hotels** | The particular hotel |
| **6. Cost of screws used to secure wood trim in a yacht at a yacht manufacturer** | A particular yacht |
| **7. Accounting professor’s salary** | The Accounting Department |
| **8. Cost of a measles vaccine administered at an outpatient clinic at a hospital** | A particular patient |
| **9. Cost of electronic navigation system installed in a yacht at a yacht manufacturer** | A particular yacht |
| **10. Wood used to build a home** | A particular home |

**Required:**  
 For each item above, indicate whether the cost is direct or indirect with respect to the cost object listed next to it.

**171)** The following data relates to the Sunshine Company:

|  |  |
| --- | --- |
| **Direct Materials Inventory, Beginning** | $ 40 |
| **Direct Materials Inventory, Ending** | 50 |
| **Direct Materials Purchases** | 210 |
| **Direct Labor** | 350 |
| **Finished Goods Inventory, Beginning** | 100 |
| **Finished Goods Inventory, Ending** | 95 |
| **Factory overhead** | 153 |
| **Work-in-Process Inventory, Beginning** | 65 |
| **Work-in-Process Inventory, Ending** | 80 |

**Required:**  
  
 (a) Compute the direct materials used during the year.  
 (b) Compute the cost of goods manufactured during the year.  
 (c) Compute the cost of goods sold during the year.

**172)** A computer virus destroyed some of the accounting records for Dorchester Antique Remodeling Company for the years 2022–2024. The following information was salvaged from the computer system.  
   
   
 **Required:**  
 Determine the correct amounts for A through P.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **12/31/22** | **12/31/23** | **12/31/24** |
| **Beginning direct materials** | $ 50,250 | **F** | $ 45,210 |
| **Purchases of direct materials** | **A** | 65,250 | 70,125 |
| **Ending direct materials** | 34,165 | 45,210 | **L** |
| **Direct materials used** | 91,385 | 54,205 | **M** |
| **Direct labor** | **B** | 155,050 | 162,000 |
| **Manufacturing overhead** | 115,325 | **G** | 127,145 |
| **Total manufacturing costs** | **C** | 319,705 | 364,130 |
| **Beginning work-in-process inventory** | 36,450 | **H** | 29,635 |
| **Ending work-in-process inventory** | 21,985 | 29,635 | **N** |
| **Costs of goods manufactured** | 386,700 | **I** | 362,920 |
| **Beginning finished goods inventory** | 37,000 | **J** | 42,500 |
| **Ending finished goods inventory** | **D** | 42,500 | 39,550 |
| **Cost of goods sold** | 377,500 | 315,755 | **O** |
| **Net sales** | 550,000 | 495,000 | **P** |
| **Selling and Administrative Expenses** | 135,950 | **K** | 130,130 |
| **Net income** | **E** | 46,250 | 39,000 |

**173)** Ryan's Lazer Lighting Incorporated produces lamps. During 2022, the company incurred the following costs:

|  |  |
| --- | --- |
| **Factory rent** | $ 80,000 |
| **Direct labor used** | 425,000 |
| **Factory utilities** | 50,000 |
| **Direct materials purchases** | 600,000 |
| **Indirect materials** | 150,000 |
| **Indirect labor** | 90,000 |

Inventories for the year were:

|  |  |  |
| --- | --- | --- |
|  | **January 1** | **December 31** |
| **Direct materials** | $ 100,000 | $ 75,000 |
| **Work in process** | 20,000 | 10,000 |
| **Finished goods** | 250,000 | 215,000 |

**Required:**  
 Prepare a cost of goods manufactured and sold statement.

**174)** Explain the difference between an outlay cost, an expense, and an opportunity cost.

**175)** Explain the difference between a cost, a cost object, and a cost pool.

**176)** Explain the difference between direct materials inventory, work in process inventory, finished goods inventory, and cost of goods sold.

**177)** Explain the difference between cost of goods manufactured and cost of goods sold.

**178)** Explain the difference between a direct cost and an indirect cost.

**179)** The following information applies to the Jamison Tools Company for the year ended December 31, 2022:

|  |  |
| --- | --- |
| **Factory Rent** | $ 330,000 |
| **Direct Materials Inventory, Beginning** | 96,000 |
| **Direct Materials Inventory, Ending** | 87,000 |
| **Direct Materials Purchases** | 654,000 |
| **Direct Labor-Wages** | 425,000 |
| **Indirect Labor-Wages** | 28,000 |
| **Finished Goods Inventory, Beginning** | 25,000 |
| **Finished Goods Inventory, Ending** | 44,000 |
| **Indirect Materials** | 66,000 |
| **Plant Utilities** | 40,000 |
| **General and Administrative** | 101,350 |
| **Work-in-Process Inventory, Beginning** | 27,000 |
| **Work-in-Process Inventory, Ending** | 33,000 |
| **Marketing Expenses** | 225,000 |
| **Sales Revenue** | 2,550,000 |

**Required:**  
 Prepare a statement of cost of goods manufactured and an income statement for the year ended December 31, 2022.

**180)** The following information applies to the Garden Master Company for the year ended December 31, 2022:

|  |  |
| --- | --- |
| **Factory Rent** | $ 80,000 |
| **Direct Materials Inventory, Beginning** | 50,000 |
| **Direct Materials Inventory, Ending** | 45,000 |
| **Direct Materials Purchases** | 325,000 |
| **Direct Labor-Wages** | 550,000 |
| **Indirect Labor-Wages** | 25,000 |
| **Finished Goods Inventory, Beginning** | 50,000 |
| **Finished Goods Inventory, Ending** | 75,000 |
| **Indirect Materials** | 50,000 |
| **Plant Utilities** | 25,000 |
| **General and Administrative** | 130,000 |
| **Work-in-Process Inventory, Beginning** | 50,000 |
| **Work-in-Process Inventory, Ending** | 55,000 |
| **Marketing Expenses** | 180,000 |
| **Sales Revenue** | 1,825,000 |

**Required:**  
 Prepare a statement of cost of goods manufactured and an income statement for the year ended December 31, 2022.

**181)** Michael Corporation has provided the following data for the month of July:

|  |  |
| --- | --- |
| **Sales** | $ 280,000 |
| **Raw materials purchases** | 76,000 |
| **Direct labor cost** | 42,000 |
| **Manufacturing overhead** | 77,000 |
| **Selling expenses** | 20,000 |
| **Administrative expense** | 35,000 |

Inventories:

|  |  |  |
| --- | --- | --- |
|  | **Beginning** | **Ending** |
| **Raw materials** | $ 22,000 | $ 33,000 |
| **Work-in-process** | 15,000 | 23,000 |
| **Finished good** | 52,000 | 43,000 |

**Required:**  
 a. Prepare a Statement of Cost of Goods Manufactured in good form for July.  
 b. Prepare an Income Statement in good form for July.

**182)** The following information is available for the Crossover Company:  
 Sales: 25,000 units per year at $45 per unit  
 Production: 30,000 units in 2022 and 20,000 units in 2023  
 At the beginning of 2022 there was no inventory  
 Variable manufacturing costs are $30.00 per unit  
 Fixed manufacturing costs are $150,000 per year  
 Marketing costs are all fixed at $75,000 per year  
 **Required:**  
 (a) Prepare a gross margin income statement under absorption costing for 2022 and 2023. Include a column for each year and a total column.  
 (b) Prepare a contribution margin income statement under variable costing for 2022 and 2023. Include a column for each year and a total column.  
 (c) Comment on the results and reconcile any differences in income.

**183)** Razor Corporation produces and sells a single product at $40 per unit. During 2022, the company produced 200,000 units, 160,000 of which were sold during the year. All ending inventory was in finished goods inventory; there was no inventory on hand at the beginning of the year. The following data relate to the company's production process:

|  |  |
| --- | --- |
| **Direct materials** | $ 550,000 |
| **Direct labor** | 400,000 |
| **Variable Manufacturing overhead** | 100,000 |
| **Fixed manufacturing overhead** | 300,000 |
| **Variable marketing and administrative** | 160,000 |
| **Fixed marketing and administrative** | 110,000 |

**Required:**  
 Calculate the following:  
 (a) The unit cost of ending inventory on the balance sheet prepared for stockholders.  
 (b) The unit cost of ending inventory on a variable costing balance sheet.  
 (c) The operating income using absorption costing.  
 (d) The operating income using variable costing.  
 (e) The ending inventory using absorption costing.  
 (f) The ending inventory using variable costing.  
 (g) A reconciliation of the difference in operating income between absorption costing and variable costing using the shortcut method.

**184)** Consider the following cost and production information for Barnard Steel Building Company, Incorporated.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Part C-2472 144** | | **Part D-1340 120** | | **All other parts 1140** | |
| **Quantity** | **Subtotal** | **Average per unit** | **Subtotal** | **Average per unit** | **Subtotal** | **Average per unit** |
| **Variable costs:** |  |  |  |  |  |  |
| **Materials cost** | $ 180,000 | $ 1,250 | $ 405,000 | $ 3,375 | $ 2,446,440 | $ 2,146 |
| **Conversion cost** | 72,000 | 500 | 129,000 | 1,075 | 974,700 | 855 |
| **Total variable costs** | $ 252,000 | $ 1,750 | $ 534,000 | $ 4,450 | 3,421,140 | $ 3,001 |
| **Fixed costs:** |  |  |  |  |  |  |
| **Fixed production cost** | 885,600 | 6,150 | 738,000 | 6,150 | 7,011,000 | 6,150 |
| **Fixed operating cost** | 723,600 | 5,025 | 603,000 | 5,025 | 5,728,480 | 5,025 |
| **Total fixed costs** | $ 1,609,200 | $ 11,175 | $ 1,341,000 | $ 11,175 | $ 12,739,480 | $ 11,175 |
| **Total costs** | $ 1,861,200 | $ 12,925 | $ 1,875,000 | $ 15,625 | $ 16,160,620 | $ 14,176 |

Additional information:  
   
 ● Sales revenue: $20,000,000.  
 ● Beginning inventory: $1,150,000.  
 ● Sales of part D-1340: 80 units.  
 ● Sales of all other parts are the same as the number of units produced.  
 ● Sales price of part D-1340: $35,500 per unit  
 ● The only spending increase was for materials cost due to increased production. All other spending as shown above was unchanged.  
 Barnard Steel Building Company uses the variable costing method.  
 **Required:**  
 (a) Compute the (1) contribution margin, (2) operating income, and (3) ending inventory for Barnard Steel Building Company.  
 (b) Assume that sales of part D-1340 increase by 30 units to 110 units during the given period (production remains constant). Re-compute the above amounts.  
 (c) Jaime Porter, the controller of Barnard Steel Building Company, is considering the use of absorption costing instead of variable costing to be in line with financial reporting requirements. She knows that the use of a different costing method will give rise to different incentives. Explain to her how alternative methods of calculating product costs create different incentives.

**185)** Consider the following cost and production information for Darrell Building Components, Incorporated.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Quantity** | **Part C-1849 72** | | **Part D-1251 60** | | **All other parts 570** | |
| **Subtotal** | **Average Per unit** | **Subtotal** | **Average Per unit** | **Subtotal** | **Average Per unit** |
| **Variable costs:** |  |  |  |  |  |  |
| **Materials cost** | $ 45,000 | $ 625 | $ 101,400 | $ 1,690 | $ 611,610 | $ 1,073 |
| **Conversion cost** | 18,000 | 250 | 32,400 | 540 | 243,960 | 428 |
| **Total variable costs** | $ 63,000 | $ 875 | $ 133,800 | $ 2,230 | 855,570 | $ 1,501 |
| **Fixed costs:** |  |  |  |  |  |  |
| **Fixed production costs** | 221,400 | 3,075 | 184,500 | 3,075 | 1,752,750 | 3,075 |
| **Fixed operating costs** | 181,080 | 2,515 | 150,900 | 2,515 | 1,433,550 | 2,515 |
| **Total fixed costs** | $ 402,480 | $ 5,590 | $ 335,400 | $ 5,590 | $ 3,186,300 | $ 5,590 |
| **Total costs** | $ 465,480 | $ 6,465 | $ 469,200 | $ 7,820 | $ 4,041,870 | $ 7,091 |

Additional information:  
 ● Sales revenue: $5,200,000.  
 ● Beginning inventory: $275,000.  
 ● The only spending increase was for materials cost due to increased production. All other spending as shown above was unchanged.  
 ● Sales of all parts are the same as the number of units produced.  
 Darrell Building Components, Incorporated uses the absorption costing method.  
   
 **Required:**  
   
 (a) Compute the (1) gross margin, (2) operating income, and (3) ending inventory for Darrell Building Components, Incorporated.  
 (b) Assume that production of part D-1251 increases by 25 units during the given period (sales remain constant). Re-compute the above amounts.  
 (c) Thane Smith, the cost manager of Darrell Building Components, argues with the controller that variable costing is a better method for product costing. Using the information in part (b) above, re-compute the operating income for Darrell Building Components using variable costing. Explain any differences in the operating incomes obtained under the two different methods.

**186)** Hurwitz Corporation had the following activities during 2022:

|  |  |
| --- | --- |
| **Raw Materials:** |  |
| **Inventory, January 1, 2022** | $ 200,000 |
| **Purchases of Raw Materials** | 318,000 |
| **Inventory, December 31, 2022** | 210,000 |
| **Direct Manufacturing Labor** | 180,000 |
| **Plant Utilities** | 50,000 |
| **Plant and Equipment Depreciation** | 40,000 |
| **Indirect Materials** | 30,000 |
| **Indirect Labor** | 150,000 |
| **Other Manufacturing Overhead** | 60,000 |
| **Sales Revenues** | 1,250,000 |
| **Selling and Administrative Expenses** | 150,000 |
| **Income Tax Rate** | 30% |
| **Work-in-process Inventory, December 31, 2022** | 120,000 |
| **Work-in-process Inventory, January 1, 2022** | 64,000 |
| **Finished Goods Inventory, January 1, 2022** | 80,000 |
| **Finished Goods Inventory, December 31, 2022** | 150,000 |

**Required:**  
   
 (a) Prepare a schedule of cost of goods manufactured for 2022.  
 (b) Prepare a schedule of cost of goods sold for 2022.  
 (c) Prepare an income statement for 2022.

**187)** Styling Toys, Incorporated (STI) manufactures a variety of electronic toys for children aged 3 to 14 years. The company started as a Ma & Pa basement operation, and grew steadily over the last nine years. It now employs over 100 people and has sales revenue of over $250 million. Samantha Marks, the CEO of STI also recognizes that competition has increased during this period; therefore future growth will **not** be easy.  
 Marks recognizes that one of the areas of weakness is the accounting and costing system. Marks' maternal uncle, Zack, had maintained the accounts for the company. He meticulously kept track of all the invoices that were received, payments made, and painstakingly prepared crude annual reports. With Zack passing away at the age of 85, Marks decided to hire a professional cost management expert to keep track of the company's costs. She hired Dona Falcon, who had just completed her CMA.  
 After acquainting Falcon with the company and its people, Marks decided to get down to business. She called Falcon to her office to have a serious conversation about accounting and costing, in particular.  
   
 **Marks:** Dona, I would like you to pay particular attention to developing an official costing system. Currently, we don't have one. I believe this should be your first priority because competition is rising and if we do **not** understand our costs, we might start losingsales to our rivals.  
 **Falcon:** I understand your point very well, Ms. Marks.  
 **Marks:** Call me Sam.  
 **Falcon:** Very well, Sam. I have a few ideas that I picked up from my CMA courses that I think are worth implementing. However, it looks like we need to start with the basics.  
   
 **Required:**  
 Assume the role of Dona Falcon. Write a brief report outlining the basics of a cost management information system. Include in your report the following:  
 ● Resources and costs  
 ● Supply of resources vs. the use of resources  
 ● Classification of costs (three dimensions of resources)  
 ● Alternative costing systems

**Answer Key**Test name: Chapter 02 Testbank - Algorithmic and Static

1) TRUE

2) TRUE

This statement is the definition of an expense.

3) TRUE

4) FALSE

Opportunity costs are not reflected in the accounting system.

5) FALSE

Total cost of goods purchases **plus** beginning merchandise inventory **minus** ending merchandise inventory equals cost of goods sold.

6) FALSE

Cost of goods sold includes only the actual costs of the goods that were sold and does not include the costs required to sell them to the customer, such as the salaries of salespeople.

7) TRUE

8) FALSE

Product costs include both direct and indirect manufacturing costs.

9) TRUE

10) FALSE

The first step in determining whether a cost is direct or indirect is defining the cost object.

11) TRUE

12) TRUE

13) TRUE

14) FALSE

Total variable costs change in direct proportion to the change in volume of activity.

15) TRUE

16) TRUE

17) TRUE

18) FALSE

The two costs are included in full cost, but not in determining full absorption costs.

19) FALSE

Revenue minus variable costs equals contribution margin.

20) FALSE

The goal of the cost accounting system is to provide managers with information useful for decision making.

21) B

Opportunity cost is the forgone benefit that could have been realized from the best forgone alternative use of a resource. Opportunity cost is not attached to products.

22) A

An outlay cost is a past, present, or future cash outflow.

23) A

Expense is for external financial statements.

24) D

Opportunity cost is the forgone benefit that could have been realized from the best forgone alternative use of a resource, whereas outlay cost is a past, present, or future cash outflow.

25) D

Freight out is a selling cost while all the others are production costs.

26) B

Telephone costs associated with taking sales orders from customers are a selling cost rather than a production cost.

27) A

Wages of salespeople would be a selling cost which is a period cost.

28) A

Prime costs are direct materials and direct labor.

29) A

Fire insurance for the manufacturing plant is part of product costs.

30) D

Rent on the headquarters building is a period cost, whereas the other answer choices are product costs.

31) C

Transportation costs incurred to ship a company's product are a period cost.

32) D

The cost of the toll-free line is a period cost as it belongs in the selling department.

33) B

Direct labor is the only cost that fits both terms.

34) D

Legal and accounting are administrative rather than marketing.

35) C

Property taxes on the manufacturing facility is a product cost since it is a part of manufacturing, but taxes are also indirect, so they are a conversion cost.

36) D

Direct labor is expensed when the products are sold. This supports the matching principle.

37) C

$2,300 + $1,800 + $3,400 = $7,500

38) C

$1,500 + $1,000 + $2,000 = $4,500

39) C

The corporate controller's salary is an administrative cost.

40) D

Direct materials are a manufacturing cost and a prime cost; they are not a conversion cost.

41) C

$105 + $85 + ($308,000/2,200) = $330

42) C

$100 + $80 + ($200,000/2,000) = $280

43) C

$290 + $105 = $395

44) C

$200 + $100 = $300

45) A

Shipping to customers is a selling (period) cost.

46) B

$1,800 + $28,500 + $42,000 + $2,800 + $900 + $2,300 = $78,300

47) B

$1,000 + $28,000 + $47,000 + $2,000 + $500 + $1,500 = $80,000

48) C

All answer options are names for indirect resources except direct costs.

49) C

Only wages and benefits of the workers that transform the materials into a finished product should be included in direct labor cost.

50) B

$200,000 + $600,000 + $65,000 − $225,000 = $640,000

51) B

$170,000 + $450,000 + $50,000 − $210,000 = $460,000

52) D

$750,000 + $125,000 + $85,000 + $23,000 = $983,000

53) D

$700,000 + $100,000 + $80,000 + $18,000 = $898,000

54) D

The three elements of manufacturing cost are direct materials, direct labor and manufacturing overhead.

55) A

Direct materials and direct labor = Prime costs

56) D

The first step in classifying a cost as either direct or indirect is defining the cost object to which the cost is being related.

57) C

This statement is a definition of cost allocation.

58) A

This statement is a definition of a cost object.

59) D

60) C

Beginning WIP Inventory + Total Manufacturing Costs = Total WIP during the period

61) A

Product costs are expensed when the goods are sold. This supports the matching principle.

62) C

DM available for production − Ending DM Inventory = DM issued to production

63) D

Beginning FG Inventory + Cost of Goods Manufactured = Cost of Goods Available

64) D

Direct labor would be part of the cost of WIP Inventory for the goods not completed, and also part of the cost of FG Inventory for the goods completed but not yet sold.

65) B

If WIP Inventory was higher at the end of the year than at the beginning of the year, then the cost of goods manufactured must have been less than the total manufacturing costs for the year.

66) C

Management salaries are a period cost.

67) C

Gross margin = Sales − Cost of Goods Sold. Cost of Goods Sold includes all manufacturing costs (both fixed and variable). It does not include selling costs

68) A

All costs associated with the acquisition of the goods constitutes the cost of goods purchased ($334,000 + $7,400 − $4,400 − $9,400) = $327,600

69) A

All costs associated with the acquisition of the goods constitute the cost of goods purchased ($304,000 + $6,700 − $3,500 − $8,400) = $298,800

70) B

$600 + $1,850 − $700 = $1,750 (Direct materials used in production)  
 $800 + $1,750 + $1,950 + $2,050 − $900 = $5,650 (COGM)  
 $1,000 + $5,650 − $1,100 = $5,550 (COGS)

71) B

$300 + $1,400 − $400 = $1,300 (Direct materials used in production)  
 $500 + $1,300 + $1,500 + $1,600 − $600 = $4,300 (COGM)  
 $700 + $4,300 − $800 = $4,200 (COGS)

72) B

$44,500 + $84,000 − $52,000 = $76,500 (Direct materials used in production)  
 $96,000 + $76,500 + $53,000 + $74,000 − $69,000 = $230,500 (COGM)  
 $141,500 + $230,500 − $114,000 = $258,000 (COGS)

73) B

$40,000 + $75,000 − $43,000 = $72,000 (Direct materials used in production)  
 $87,000 + $72,000 + $48,500 + $72,500 − $69,000 = $211,000 (COGM)  
 $128,000 + $211,000 − $105,000 = $234,000 (COGS)

74) A

$1,300 + $10,900 − $3,100 = $9,100 (Direct materials used in production)  
 $1,200 + COGM − $2,500 = $18,800; COGM = $20,100  
 $1,100 + $9,100 + Direct Labor + $5,850 − $2,300 = $20,100; Direct Labor = $6,350

75) A

$500 + $7,700 − $1,500 = $6,700 (Direct materials used in production)  
 $400 + COGM − $900 = $15,600; COGM = $16,100  
 $300 + $6,700 + Direct Labor + $4,300 − $700 = $16,100; Direct Labor = $5,500

76) B

$950 + COGM − $2,000 = $17,800; COGM = $18,850  
 $950 + $18,850 = $19,800 (COGAFS)

77) B

$400 + COGM − $900 = $15,600; COGM = $16,100  
 $400 + $16,100 = $16,500 (COGAFS)

78) A

$49,500 + $326,000 + $520,000 + $268,000 − $76,000 = $1,087,500

79) A

$45,000 + $308,000 + $475,000 + $250,000 − $67,000 = $1,011,000

80) B

$1,590,000 − $645,000 = $945,000 (COGS); $134,000 + COGM − $104,500 = $945,000; COGM = $915,500

81) B

$1,500,000 − $600,000 = $900,000 (COGS): $125,000 + COGM − $100,000 = $900,000; COGM = $875,000

82) B

Taxes are fixed in behavior, and since they are on the factory building, they are a product cost.

83) D

Supplies are variable in behavior, and since they are used to assembly products, they are a product cost.

84) C

The use of a percentage implies a variable cost and being paid to sales personnel, it is a period cost.

85) B

The nurse's salary is a fixed cost, while the film and other radiology materials are variable costs.

86) D

Employees’ wages would be a variable cost (maybe semi variable), while the materials to make tacos are variable.

87) B

Within the relevant range, unit variable costs are constant, total variable costs fluctuate; unit fixed costs fluctuate, total fixed costs are constant.

88) B

The paint is a variable manufacturing cost, not an administrative cost.

89) A

Manufacturing overhead can be either a fixed or a variable cost.

90) A

Full cost is the sum of all costs of manufacturing and selling a unit or product (includes both fixed and variable costs).

91) B

Labor + Overhead = $33 + $28 + $8 = $69

92) B

Labor + Overhead = $28 + $23 + $4 = $55

93) D

Material + Labor = $33 + $23 = $56

94) D

Material + Labor = $32 + $20 = $52

95) A

$37 + $28 + $23 + $3 = $91

96) A

$32 + $20 + $15 + $3 = $70

97) A

$220 + $115 + $95 = $430

98) A

$200 + $100 + $80 = $380

99) C

$160 + $110 + $90 + ($170,500/1,100) = $515

100) C

$200 + $100 + $80 + ($200,000/2,000) = $480

101) D

$290 + $95 + $85 + ($308,000/2,200) + $60 + ($396,000/2,200) = $850

102) D

$200 + $100 + $80 + ($200,000/2,000) + $50 + ($400,000/2,000) = $730

103) C

$850 − $150 − $105 − $85 − $55 = $455

104) C

$800 − $200 − $100 − $80 − $50 = $370

105) D

$95 + $35 + $55 + ($78,000/2,600) + $20 + ($52,000/2,600) = $255

106) D

$80 + $40 + $60 + ($90,000/3,000) + $20 + ($60,000/3,000) = $250

107) C

Materials + Labor = Prime Costs

108) B

Selling price − COGS = Gross Margin

109) D

The total overhead cost is a mixed cost as it includes both fixed and variable costs.

110) A

Prime costs are the direct costs, namely, direct materials and direct labor.

111) C

Advertising is a selling cost and considered a period cost since its influence cannot be tied to changes in volume.

112) D

Full absorption includes all fixed and variable manufacturing costs.

113) C

$16 + $15 + $20 + $13 = $64

114) C

$13 + $12 + $17 + $10 = $52

115) B

$14 + $12 + $16 = $42

116) B

$13 + $12 + $17 = $42

117) B

$115 − ($30 + $25 + $24 + $17) = $19; $19 × 13,500 = $256,500

118) B

$100 − ($25 + $20 + $19 + $12) = $24; $24 × 10,000 = $240,000

119) C

$105 − ($25 + $20 + $19 + $10) = $31; $31 × 10,500 = $325,500

120) C

$100 − ($25 + $20 + $19 + $7) = $29; $29 × 10,000 = $290,000

121) A

$202 − ($42 + $37 + $36 + $29 + $24) = $34; $34 × 13,400 = $455,600

122) A

$100 − ($25 + $20 + $19 + $12 + $7) = $17; $17 × 10,000 = $170,000

123) A

$184 − ($39 + $34 + $33 + $26 + $21) = $31; $31 × 12,800 = $396,800

124) A

$100 − ($25 + $20 + $19 + $12 + $7) = $17; $17 × 10,000 = $170,000

125) B

($108,000 + $54,000)/5,400 = $30 per unit × 4,300 = $129,000

126) B

($96,000 + $48,000)/4,800 = $30 per unit × 4,000 = $120,000

127) C

($120,000 + $60,000 + $270,000)/6,000 = $75 per unit × 4,600 = $345,000

128) C

($96,000 + $48,000 + $72,000)/4,800 = $45 per unit × 4,000 = $180,000

129) D

$1,128,000 − [($124,000 + $62,000) / 6,200 × 4,700] − $310,000 − $83,500 = $593,500

130) D

$400,000 − [($96,000 + $48,000) / 4,800 × 4,000] − $72,000 − $80,000 = $128,000

131) B

$1,100,000 − [($156,000 + $78,000 + $702,000) / 7,800 × 5,500] − $110,000 = $330,000

132) B

$400,000 − [($96,000 + $48,000 + $72,000) / 4,800 × 4,000] − $80,000 = $140,000

133) D

($96,000 + $48,000)/4,800 = $30 per unit; $30 per unit × (4,800 units − 4,000 units) = $24,000

134) D

($96,000 + $48,000)/4,800 = $30 per unit; $30 per unit × (4,800 units − 4,000 units) = $24,000

135) C

($108,000 + $54,000 + $162,000)/5,400 = $60 per unit; $60 per unit × (5,400 units − 4,300 units) = $66,000

136) C

($96,000 + $48,000 + $72,000)/4,800 = $45 per unit; $45 per unit × (4,800 units − 4,000 units) = $36,000

137) A

Variable costing ending inventory: ($132,000 + $66,000)/6,600 = $30 per unit; Absorption costing ending inventory: ($132,000 + $66,000 + $396,000)/6,600 = $90 per unit; $90 − $30 = $60; $60 per unit fixed manufacturing costs × 1,700 units in ending inventory

138) A

Variable costing ending inventory: ($96,000 + $48,000)/4,800 = $30 per unit; Absorption costing ending inventory: ($96,000 + $48,000 + $72,000)/4,800 = $45 per unit; $45 − $30 = $15; $15 per unit fixed manufacturing costs × 800 units in ending inventory

139) C

Sales − absorption cost of goods sold = gross profit

140) D

Inventoriable costs are treated as assets until units are sold.

141) (a) $809,000 − x = $170,000; x = $639,000.  
 (b) $170,000 − x = $65,500; x = $104,500.  
 (c) $65,500 − (0.34 × $65,500) = x; x = $43,230.

142) (a) $900,000 − x = $315,000; x = $585,000.  
 (b) $315,000 − x = $85,000; x = $230,000.  
 (c) $85,000 − (0.32 × $85,000) = $57,800.

143) (a)

|  |  |  |
| --- | --- | --- |
| Tenor Music Store | | |
| Cost of Goods Sold Statement | | |
| For Year Ended December 31 | | |
| **Beginning inventory** |  | $ 79,000 |
| **Cost of goods purchased:** |  |  |
| **Merchandise cost** | $ 450,000 |  |
| **Purchase returns and allowances** | (6,200) |  |
| **Purchase discounts** | (15,000) |  |
| **Transportation-in costs** | 8,900 |  |
| **Total cost of goods purchased** |  | 437,700 |
| **Cost of goods available for sale** |  | 516,700 |
| **Ending inventory** |  | (100,100) |
| **Cost of goods sold** |  | $ 416,600 |

(b)

|  |  |  |
| --- | --- | --- |
| **Sales revenue (gross)** | $ 800,000 |  |
| **Less sales discounts** | (12,500) |  |
| **Sales revenue (net)** |  | $ 787,500 |
| **Cost of goods sold** |  | 416,600 |
| **Gross margin** |  | $ 370,900 |

144)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cost Item** | **Fixed** | **Variable** | **Product** | **Period** |
| **1. Costs (other than food) of running the cafeteria for factory personnel** | X |  | X |  |
| **2. Direct materials used** |  | X | X |  |
| **3. Clerical staff in administrative offices** | X |  |  | X |
| **4. Depreciation of factory machinery\*** | X |  | X |  |
| **5. Property taxes on the factory** | X |  | X |  |
| **6. Insurance premiums on delivery vans** | X |  |  | X |
| **7. Factory custodian pay** | X |  | X |  |
| **8. Sales commissions** |  | X |  | X |
| **9. Rent paid for corporate jet** | X |  |  | X |
| **10. Transportation-in costs for indirect material** |  | X | X |  |

145)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Name of cost** | **Variable cost** | **Fixed cost** | **Direct materials** | **Direct labor** | **Manufacturing overhead** | **Period cost** | **Opportunity cost** |
| **1. Amount that can be earned renting building** |  |  |  |  |  |  | X |
| **2. Cost of direct materials** | X |  | X |  |  |  |  |
| **3. Salary of production supervisor** |  | X |  |  | X |  |  |
| **4. Cost of direct labor** | X |  |  | X |  |  |  |
| **5. Equipment rental cost** |  | X |  |  | X |  |  |
| **6. Depreciation on building** |  | X |  |  | X |  |  |
| **7. Marketing costs** |  | X |  |  |  | X |  |
| **8. Shipping costs** | X |  |  |  |  | X |  |
| **9. Electrical costs** | X |  |  |  | X |  |  |
| **10. Foregone investment income** |  |  |  |  |  |  | X |

146) (a)

|  |  |  |  |
| --- | --- | --- | --- |
| **Beginning work-in-process inventory** |  |  | $ 6,000 |
| **Manufacturing costs during the year:** |  |  |  |
| **Direct materials** |  |  |  |
| **Beginning inventory** | $ 9,000 |  |  |
| **Purchases (net)** | 124,000 |  |  |
| **Direct materials available** | 133,000 |  |  |
| **Ending inventory** | (11,000) |  |  |
| **Direct materials put into production** |  | $ 122,000 |  |
| **Direct labor** |  | 80,000 |  |
| **Manufacturing overhead** |  |  |  |
| **Depreciation, factory equipment** | $ 30,000 |  |  |
| **Supplies, factory** | 1,500 |  |  |
| **Maintenance, factory equipment** | 20,000 |  |  |
| **Utilities, factory** | 8,000 |  |  |
| **Indirect labor** | 54,500 |  |  |
| **Rent, factory building** | 70,000 |  |  |
| **Total manufacturing overhead** |  | 184,000 |  |
| **Total manufacturing costs Incurred** |  |  | 386,000 |
| **Ending work-in-process Inventory** |  |  | (21,000) |
| **Cost of goods manufactured** |  |  | $ 371,000 |

(b)

|  |  |
| --- | --- |
| **Beginning finished goods inventory** | $ 69,000 |
| **Cost of goods manufactured** | 371,000 |
| **Cost of goods available for sale** | 440,000 |
| **Ending finished goods inventory** | (24,000) |
| **Costs of goods sold** | $ 416,000 |

147) (a) ($250,800 + 1,750,200 − 169,400) + 1,004,300 + 2,693,400 = x; x = $5,529,300  
 (b) $101,000 + 5,529,300 = x; x = $5,630,300  
 (c) $5,630,300 − 57,900 = x; x = $5,572,400  
 (d) $307,400 + 5,572,400 − 511,000 = x; x = $5,368,800  
 (e) ($250,800 + 1,750,200 − 169,400) + 1,004,300 = x; x = $2,835,900  
 (f) $1,004,300 + 2,693,400 = x; x = $3,697,700

148) (a) $84.75 + 27.50 + 14.25 + 5.30 + 2.90 = x; x = $134.70  
 (b) $84.75 + 27.50 + 14.25 = x; x = $126.50  
 (c) $84.75 + 27.50 + 14.25 + ($120,000/5,000) = x; x = $150.50  
 (d) $84.75 + 27.50 + 14.25 + 5.30 + 2.90 + [(120,000 + 50,000 + 75,000)/5,000] = x; x = $183.70  
 (e) $210.00 − (84.75 + 27.50 + 14.25 + 5.30 + 2.90) = x; x = $75.30  
 (f) $210.00 − [84.75 + 27.50 + 14.25 + (120,000/5,000)] x; x = $59.50  
 (g) $210.00 − [$84.75 + 27.50 + 14.25 + 5.30 + 2.90 + [(120,000 + 50,000 + 75,000)/5,000]] = x; x = $26.30

149) (a)

|  |  |  |
| --- | --- | --- |
| Friendly Manufacturing Company | | |
| Contribution Margin Income Statement | | |
| For the Month Ended July 31 | | |
| **Revenues** |  | $ 1,050,000 |
| **Variable costs:** |  |  |
| **Direct materials** | $ 423,750 |  |
| **Direct labor** | 137,500 |  |
| **Manufacturing overhead** | 71,250 |  |
| **Marketing costs** | 26,500 |  |
| **Administrative costs** | 14,500 |  |
| **Total variable costs** |  | 673,500 |
| **Contribution margin** |  | 376,500 |
| **Fixed costs:** |  |  |
| **Manufacturing overhead** | 120,000 |  |
| **Marketing costs** | 50,000 |  |
| **Administrative costs** | 75,000 |  |
| **Total fixed costs** |  | 245,000 |
| **Operating profits** |  | $ 131,500 |

(b)

|  |  |  |
| --- | --- | --- |
| Friendly Manufacturing Company | | |
| Gross Margin Income Statement | | |
| For the Month Ended July 31 | | |
| **Revenues** |  | $ 1,050,000 |
| **Cost of goods sold:** |  |  |
| **Direct materials** | $ 423,750 |  |
| **Direct labor** | 137,500 |  |
| **Manufacturing overhead** | 191,250 |  |
| **Cost of goods sold:** |  | 752,500 |
| **Gross margin** |  | 297,500 |
| **Expenses:** |  |  |
| **Marketing costs** | 76,500 |  |
| **Administrative costs** | 89,500 |  |
| **Total expenses** |  | 166,000 |
| **Operating profits** |  | $ 131,500 |

150) (a)  
 [($500,000 + 250,000 + 25,000 + 37,500 + 50,000)/25,000] = Variable manufacturing costs per unit  
 Variable manufacturing cost per unit = $34.50.  
 ($34.50 × 30,000) + (50,000 + 12,500 + 125,000 + 68,000 + 62,500) = Total manufacturing costs  
 Total manufacturing costs = $1,035,000 + $318,000 = $1,353,000.  
 (b)  
 [($250,000 + 25,000 + 37,500 + 50,000)/25,000] = Conversion costs per unit  
 Conversion costs per unit = $14.50.  
 ($14.50 × 30,000) + (50,000 + 12,500 + 125,000 + 68,000 + 62,500) = Total conversion costs  
 Total conversion costs = $435,000 + $318,000 = $753,000.  
 (c)  
 ($149,150 + 30,000 + 48,800)/23,500 = Period costs per unit  
 Period costs per unit = $9.70.  
 ($9.70 × 30,000) + (300,000 + 48,000) = Total period costs  
 Total period costs = $639,000.  
 $639,000/30,000 = Period costs per unit  
 Period costs per unit = $21.30.  
 (d)  
 ($1,353,000/30,000) + $21.30 = Full costs per unit  
 Full costs per unit = $66.40.

151) (a) $x + 16,100 − 4,850 = $15,300; x = $4,050  
 (b) $2,700 + 55,550 − 3,800 = x; x = $54,450  
 (c) $103,300 − 56,050 = x; x = $47,250  
 (d) $x + 30,486 − 4,928 = 30,464; x = $4,906  
 (e) $3,920 + 13,440 − 3,248 = x; x = $14,112  
 (f) $x − 30,464 = 18,368; x = $48,832  
 (g) $68,744 + 129,688 + x = 320,424; x = $121,992

152) (a):

|  |  |  |  |
| --- | --- | --- | --- |
| Moline Company | | | |
| Cost of Goods Manufactured Statement | | | |
| For the Year Ended December 31 | | | |
| **Beginning Work-in-process inventory** |  |  | $ 90,650 |
| **Manufacturing costs during the year:** |  |  |  |
| **Direct materials:** |  |  |  |
| **Beginning inventory (not given)** | $ 674,730 |  |  |
| **Purchases (net)** | 2,268,000 |  |  |
| **Direct materials available** | 2,942,730 |  |  |
| **Ending inventory** | (535,500) |  |  |
| **Direct materials put into production** |  | 2,407,230 |  |
| **Direct labor** |  | 2,520,000 |  |
| **Manufacturing overhead:** |  |  |  |
| **Depreciation** | $ 396,900 |  |  |
| **Insurance** | 119,700 |  |  |
| **Maintenance** | 76,230 |  |  |
| **Plant heat, Light, and power** | 234,360 |  |  |
| **Indirect labor** | 201,600 |  |  |
| **Property taxes** | 82,530 |  |  |
| **Miscellaneous** | 200,970 |  |  |
| **Total manufacturing overhead** |  | 1,312,290 |  |
| **Total manufacturing costs incurred** |  |  | 6,239,520 |
| **Total work in process during the year** |  |  | 6,330,170 |
| **Ending Work-in-process inventory** |  |  | (154,980) |
| **Cost of goods manufactured** |  |  | $ 6,175,190 |

(b):

|  |  |
| --- | --- |
| Moline Company | |
| Cost of Goods Sold Statement | |
| For the Year Ended December 31 | |
| **Beginning Finished goods inventory** | $ 280,000 |
| **Cost of goods manufactured** | 6,175,190 |
| **Cost of goods available for sale** | 6,455,190 |
| **Ending Finished goods inventory** | (567,000) |
| **Cost of goods sold** | $ 5,888,190 |

(c):

|  |  |  |
| --- | --- | --- |
| Moline Company | | |
| Gross Margin Income Statement | | |
| For the Year Ended December 31 | | |
| **Revenues** |  | $ 6,687,500 |
| **Cost of goods sold** |  | 5,888,190 |
| **Gross margin** |  | 799,310 |
| **Marketing costs [$233,100 + 10,080]** | 243,180 |  |
| **Administrative costs [$323,820 + 113,400 + 51,660]** | 488,880 |  |
| **Total expenses** |  | 732,060 |
| **Operating profit** |  | $ 67,250 |

153) (a) $75 + x − 85 = 326; x = $336  
 (b) $326 + x + 135 = $686; x = $225  
 (c) $80 + 686 − 30 = $736  
 (d) $826 − 110 = $716

154) (a)

|  |  |  |
| --- | --- | --- |
| Shawnee Production Company | | |
| Cost of Goods Manufactured and Sold Statement | | |
| For the Month Ended January 31 | | |
| **Beginning Work-in-Process inventory** |  | $ 2,100 |
| **Direct Materials:** |  |  |
| **Beginning inventory** | $ 8,000 |  |
| **Purchases** | 18,000 |  |
| **Ending inventory** | (8,700) |  |
| **Direct materials put into production** |  | 17,300 |
| **Direct labor** |  | 10,400 |
| **Manufacturing overhead:** |  |  |
| **Indirect labor** | 5,000 |  |
| **Depreciation on machinery** | 3,000 |  |
| **Rent on building** | 7,000 |  |
| **Total manufacturing overhead** |  | 15,000 |
| **Total work-in-process during the month** |  | 44,800 |
| **Ending work-in-process Inventory** |  | (3,200) |
| **Cost of goods manufactured** |  | $ 41,600 |
| **Beginning finished goods inventory** |  | 5,000 |
| **Finished goods available for sale** |  | 46,600 |
| **Ending finished goods inventory** |  | (5,700) |
| **Cost of goods sold** |  | $ 40,900 |

(b)

|  |  |
| --- | --- |
| Shawnee Production Company | |
| Gross Margin Income Statement | |
| For the Month Ended January 31 | |
| **Sales** | $ 55,300 |
| **Cost of goods sold** | 40,900 |
| **Gross margin** | 14,400 |
| **Selling and administrative expenses** | 6,300 |
| **Operating profit** | 8,100 |

155) (a) $175 + x − 155 = 572; x = $552  
 (b) $572 + x + 255 = $1,095; x = $268  
 (c) $220 + 1,095 − 190 = $1,125  
 (d) $1,415 − 310 = $1,105

156) (a)

|  |  |  |
| --- | --- | --- |
| Navaho Industries | | |
| Cost of Goods Manufactured and Sold Statement | | |
| For the Month Ended July 31 | | |
| **Beginning Work-in-Process Inventory** |  | $ 1,100 |
| **Direct Materials:** |  |  |
| **Beginning inventory** | $ 8,000 |  |
| **Purchases** | 24,000 |  |
| **Ending direct materials** | (6,700) |  |
| **Direct materials put into production** |  | 25,300 |
| **Direct labor** |  | 13,200 |
| **Manufacturing overhead:** |  |  |
| **Indirect labor** | 6,500 |  |
| **Depreciation on machinery** | 3,600 |  |
| **Rent on building** | 8,400 |  |
| **Total manufacturing overhead** |  | 18,500 |
| **Total work-in-process during the month** |  | 58,100 |
| **Ending work-in-process inventory** |  | (1,600) |
| **Cost of goods manufactured** |  | $ 56,500 |
| **Beginning finished goods inventory** |  | 9,000 |
| **Finished goods available for sale** |  | 65,500 |
| **Ending finished goods inventory** |  | (6,800) |
| **Cost of goods sold** |  | $ 58,700 |

(b)

|  |  |
| --- | --- |
| **Sales** | $ 75,300 |
| **Cost of goods sold** | 58,700 |
| **Gross margin** | 16,600 |
| **Selling & administrative expenses** | 8,900 |
| **Operating profit** | $ 7,700 |

157) (a) [$501,600 + 3,500,400 − 338,800] + 2,008,600 + 5,368,800 = x; x = $11,040,600  
 (b) $202,000 + 11,040,600 = x; x = $11,242,600  
 (c) $11,242,600 − 115,800 = x; x = $11,126,800  
 (d) $614,800 + 11,126,800 − 1,022,000 = x; x = $10,719,600  
 (e) [$501,600 + 3,500,400 − 338,800] + 2,008,600 = x; x = $5,671,800  
 (f) $2,008,600 + 5,368,800 = x; x = $7,377,400

158) (a) [($125,400 + 875,100 − 84,700) + 502,150 + 1,364,700] = x; x = $2,782,650  
 (b) $50,500 + 2,782,650 = x; x = $2,833,150  
 (c) $2,833,150 − 28,950 = x; x = $2,804,200  
 (d) $153,700 + 2,804,200 − 255,500 = x; x = $2,702,400

159)

|  |  |  |
| --- | --- | --- |
| Mobile Device Retail | | |
| Gross Margin Income Statement | | |
| For the Month Ended May 31 | | |
| **Sales revenue** |  | $ 1,650,000 |
| **Merchandise inventory (5/1)** | $ 118,200 |  |
| **Purchases** | 1,091,000 |  |
| **Freight-in** | 54,600 |  |
| **Goods available for sale** | 1,263,800 |  |
| **Less merchandise inventory (5/31)** | (124,600) |  |
| **Cost of goods sold** |  | 1,139,200 |
| **Gross margin** |  | 510,800 |
| **Selling and administrative expenses:** |  |  |
| **Sales commissions** | 247,500 |  |
| **Store rent** | 84,000 |  |
| **Utilities** | 57,200 |  |
| **Administrative** | 115,100 |  |
| **Total selling and administrative expenses** |  | 503,800 |
| **Operating profit** |  | 7,000 |

160)

|  |  |  |
| --- | --- | --- |
| Fowler Retail | | |
| Gross Margin Income Statement | | |
| For the Month Ended August 31 | | |
| **Sales revenue** |  | $ 1,155,000 |
| **Merchandise inventory (8/1)** | $ 87,220 |  |
| **Purchases** | 763,700 |  |
| **Freight-in** | 30,300 |  |
| **Goods available for sale** | 881,220 |  |
| **Less merchandise inventory (5/31)** | (82,740) |  |
| **Cost of goods sold** |  | 798,480 |
| **Gross margin** |  | 356,520 |
| **Selling and administrative expenses:** |  |  |
| **Sales commissions** | 173,300 |  |
| **Store rent** | 58,800 |  |
| **Utilities** | 40,400 |  |
| **Administrative** | 80,600 |  |
| **Total selling and administrative expenses** |  | 353,100 |
| **Operating profit** |  | $ 3,420 |

161)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Opportunity Cost** | **Variable Cost** | **Fixed Cost** | **Direct Materials** | **Product Cost** | | |
| **Direct Labor** | **Manufacturing Overhead** | **Selling Cost** |
| **Facility rent** |  |  | X |  |  | X |  |
| **Utilities** |  |  | X |  |  | X |  |
| **Personal computer depreciation** |  |  | X |  |  | X |  |
| **Equipment rent** |  |  | X |  |  | X |  |
| **Materials cost** |  | X |  | X |  |  |  |
| **Labor cost** |  | X |  |  | X |  |  |
| **Present salary** | X |  |  |  |  |  |  |
| **Advertising** |  |  | X |  |  |  | X |

162) (a)

|  |  |
| --- | --- |
| **Beginning materials inventory** | $ 36,000 |
| **Add: Purchases of raw materials** | 69,000 |
| **Raw materials available for use** | 105,000 |
| **Deduct: Ending raw materials inventory** | 24,000 |
| **Raw materials used in production** | $ 81,000 |

(b)

|  |  |
| --- | --- |
| **Cost of goods manufactured** | $ 146,000 |
| **Add: Beginning finished goods inventory** | 57,000 |
| **Goods available for sale** | 203,000 |
| **Deduct: Ending finished goods inventory** | 28,000 |
| **Cost of goods sold** | $ 175,000 |

163) (a)

|  |  |
| --- | --- |
| **Beginning raw materials inventory** | $ 26,000 |
| **Add: Purchases of raw materials** | 76,000 |
| **Raw materials available for use** | 102,000 |
| **Deduct: Ending raw materials inventory** | 21,000 |
| **Raw materials used in production** | $ 81,000 |

(b)

|  |  |
| --- | --- |
| **Cost of goods manufactured** | $ 129,000 |
| **Add: Beginning finished goods inventory** | 52,000 |
| **Goods available for sale** | 181,000 |
| **Deduct: Ending finished goods inventory** | 35,000 |
| **Cost of goods sold** | $ 146,000 |

164) (a) Product costs consist of direct materials, direct labor, and manufacturing overhead:

|  |  |  |
| --- | --- | --- |
| **Direct materials** |  | $ 135,000 |
| **Direct labor** |  | 73,000 |
| **Manufacturing overhead:** |  |  |
| **Utilities, factory** | $ 11,000 |  |
| **Indirect labor** | 29,000 |  |
| **Depreciation of production equipment** | 31,000 | 71,000 |
| **Total product costs** |  | $ 279,000 |

(b) Period costs consist of all costs other than product costs:

|  |  |
| --- | --- |
| **Administrative salaries** | $ 101,000 |
| **Sales commissions** | 69,000 |
| **Depreciation of administrative equipment** | 40,000 |
| **Advertising** | 94,000 |
| **Total period costs** | $ 304,000 |

165) a. Product costs consist of direct materials, direct labor, and manufacturing overhead:

|  |  |  |
| --- | --- | --- |
| **Direct materials** |  | $ 119,000 |
| **Direct labor** |  | 117,000 |
| **Manufacturing overhead** |  |  |
| **Property taxes, factory** | $ 6,000 |  |
| **Indirect labor** | 36,000 |  |
| **Depreciation of production equipment** | 56,000 | 98,000 |
| **Total product costs** |  | $ 334,000 |

b. Period costs consist of all costs other than product costs:

|  |  |
| --- | --- |
| **Administrative travel** | $ 113,000 |
| **Sales commissions** | 56,000 |
| **Marketing salaries** | 47,000 |
| **Advertising** | 63,000 |
| **Total period costs** | $ 279,000 |

166)

|  |  |  |
| --- | --- | --- |
| Youngstown Corporation | | |
| Income Statement | | |
| For Month Ended October 31 | | |
| **Sales** |  | $ 273,000 |
| **Cost of Goods Sold:** |  |  |
| **Beginning Finished Goods Inventory** | $ 45,000 |  |
| **Add: Cost of goods manufactured** | 183,000 |  |
| **Goods available for sale** | 228,000 |  |
| **Deduct: Ending Finished Goods Inventory** | 34,000 | 194,000 |
| **Gross margin** |  | 79,000 |
| **Selling and administrative expenses:** |  |  |
| **Selling expenses** | 26,000 |  |
| **Administrative expenses** | 47,000 | 73,000 |
| **Net operating income** |  | $ 6,000 |

167)

|  |  |  |
| --- | --- | --- |
| Mountain Life, Incorporated | | |
| Income Statement | | |
| For Month Ended July 31 | | |
| **Sales** |  | $ 295,000 |
| **Cost of Goods Sold:** |  |  |
| **Beginning Merchandise Inventory** | $ 25,000 |  |
| **Add: Purchases** | 215,000 |  |
| **Goods available for sale** | 240,000 |  |
| **Deduct: Ending Merchandise Inventory** | 30,000 | 210,000 |
| **Gross margin** |  | 85,000 |
| **Selling and administrative expenses:** |  |  |
| **Selling expenses** | 24,000 |  |
| **Administrative expenses** | 29,000 | 53,000 |
| **Net operating income** |  | $ 32,000 |

168)

|  |  |  |
| --- | --- | --- |
| **Cost Description** | **Possible Measure of Activity** |  |
| **1. Cost of heating a hardware store** | Dollar sales | Fixed |
| **2. Windshield wiper blades installed on autos at an auto assembly plant** | Number of autos assembled | Variable |
| **3. Cost of tomato sauce used at a pizza shop** | Pizzas cooked | Variable |
| **4. Cost of shipping bags of fertilizer to a customer at a chemical plant** | Bags shipped | Variable |
| **5. Cost of electricity for production equipment at a snowboard manufacturer** | Snowboards produced | Variable |
| **6. Cost of renting production equipment on a monthly basic at a snowboard manufacturer** | Snowboards produced | Fixed |
| **7. Cost of vaccine used at a clinic** | Vaccines administered | Variable |
| **8. Cost of sales at a hardware store** | Dollar sales | Variable |
| **9. Receptionist’s wages at dentist’s office** | Number of patients | Fixed |
| **10. Salary of production manager at a snowboard manufacturer** | Snowboard produced | Fixed |

169)

|  |  |  |
| --- | --- | --- |
| **Cost Description** | **Possible Measure of Activity** |  |
| **1. Cost of renting production equipment on a monthly basis at a surfboard manufacturer** | Surfboards produced | Fixed |
| **2. Pilot’s salary on a regularly scheduled commuter airline** | Number of passengers | Fixed |
| **3. Cost of dough used at a pizza shop** | Pizzas cooked | Variable |
| **4. Janitorial wages at a surfboard manufacturer** | Surfboards produced | Fixed |
| **5. Cost of shipping bags of garden mulch to a retail garden store** | Bags shipped | Variable |
| **6. Salary of production manager at a surfboard manufacturer** | Surfboards produced | Fixed |
| **7. Property tax on corporate headquarters building** | Dollar sales | Fixed |
| **8. Cost of heating an electronics store** | Dollar sales | Fixed |
| **9. Shift manager’s wages at a coffee shop** | Dollar sales | Fixed |
| **10. Cost of bags used in packaging chickens for shipment to grocery stores** | Crates of chicken shipped | Variable |

170)

|  |  |  |
| --- | --- | --- |
| **Cost description** | **Cost Object** |  |
| **1. Supervisor’s wages in a computer manufacturing facility** | A particular personal computer | Indirect |
| **2. Salary of the president of a home construction company** | A particular home | Indirect |
| **3. Cost of tongue depressors used in an outpatient clinic at a hospital** | The outpatient clinic | Direct |
| **4. Cost of lubrication oil used at the auto repair shop of an automobile dealer** | The auto repair shop | Direct |
| **5. Manger’s salary at a hotel run by a chain of hotels** | The particular hotel | Direct |
| **6. Cost of screws used to secure wood trim in a yacht at a yacht manufacturer** | A particular yacht | Indirect |
| **7. Accounting professor’s salary** | The Accounting Department | Direct |
| **8. Cost of a measles vaccine administered at an outpatient clinic at a hospital** | A particular patient | Direct |
| **9. Cost of electronic navigation system installed in a yacht at a yacht manufacturer** | A particular patient | Direct |
| **10. Wood used to build a home** | A particular home | Direct |

171) (a) $40 + 210 − 50 = x; x = $200  
 (b) $65 + ($200 + 350 + 153) − 80 = x; x = $688  
 (c) $100 + 688 − 95 = x; x = $693

172)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **12/31/22** | | **12/31/23** | | **12/31/24** | |
| **Beginning direct materials** | $ 50,250 |  | $ **34,165** | **F** | $ 45,210 |  |
| **Purchases of direct materials** | **75,300** | **A** | 65,250 |  | 70,125 |  |
| **Ending direct materials** | 34,165 |  | 45,210 |  | **40,350** | **L** |
| **Direct materials used** | 91,385 |  | 54,205 |  | **74,985** | **M** |
| **Direct labor** | **165,525** | **B** | 155,500 |  | 162,000 |  |
| **Manufacturing overhead** | 115,325 |  | **110,450** | **G** | 127,145 |  |
| **Total manufacturing costs** | **372,235** | **C** | 319,705 |  | 364,130 |  |
| **Beginning work-in-process inventory** | 36,450 |  | **21,985** | **H** | 29,635 |  |
| **Ending work-in-process inventory** | 21,985 |  | 29,635 |  | **30,845** | **N** |
| **Costs of goods manufactured** | 386,700 |  | **312,055** | **I** | 362,920 |  |
| **Beginning finished goods inventory** | 37,000 |  | **46,200** | **J** | 42,500 |  |
| **Ending finished goods inventory** | **46,200** | **D** | 42,500 |  | 39,550 |  |
| **Cost of goods sold** | 377,500 |  | 315,755 |  | **365,870** | **O** |
| **Net sales** | 550,000 |  | 495,000 |  | **535,000** | **P** |
| **Selling and Administrative Expenses** | 135,950 |  | **132,995** | **K** | 130,130 |  |
| **Net income** | **36,550** | **E** | 46,250 |  | 39,000 |  |

173)

|  |  |  |  |
| --- | --- | --- | --- |
| Ryan’s Lazer Lighting, Incorporated | | | |
| Cost of Goods Manufactured and Sold Statement | | | |
| For the Year Ended December 31, 2022 | | | |
| **Beginning Work-In-Process Inventory, January 1** |  |  | $ 20,000 |
| **Manufacturing costs during the year:** |  |  |  |
| **Direct Materials:** |  |  |  |
| **Beginning Inventory, January 1** | $ 100,000 |  |  |
| **Add Purchases** | 600,000 |  |  |
| **Total Direct Materials Available** | $ 700,000 |  |  |
| **Less Ending Inventory, December 31** | 75,000 |  |  |
| **Direct Materials Put Into Production** |  | $ 625,000 |  |
| **Direct Labor** |  | 425,000 |  |
| **Manufacturing Overhead** |  |  |  |
| **Indirect Materials** | $ 150,000 |  |  |
| **Factory Utilities** | 50,000 |  |  |
| **Indirect Labor** | 90,000 |  |  |
| **Factory Rent** | 80,000 |  |  |
| **Total Manufacturing Overhead** |  | 370,000 |  |
| **Total Manufacturing Costs incurred during the year** |  |  | $ 1,420,000 |
| **Total Work-In-Process during the year** |  |  | $ 1,440,000 |
| **Less Ending Work-in-Process Inventory, December 31** |  |  | 10,000 |
| **Cost of Goods Manufactured** |  |  | $ 1,430,000 |
| **Beginning Finished Goods Inventory, January 1** |  |  | 250,000 |
| **Total Goods Available for Sale** |  |  | 1,680,000 |
| **Less Ending Finished Goods Inventory, December 31** |  |  | 215,000 |
| **Cost of Goods Sold** |  |  | $ 1,465,000 |

174) An outlay cost is any cash outflow, either past, present, or future. An expense is a cost that is charged against revenue in an accounting period. **Not** all outlay costs are expenses—they may have future benefit, in which case they are assets. An opportunity cost is **not** an outlay—it is the benefit that is forgone or **not** being received by choosing one alternative over another.

175) A cost is a sacrifice of resources. It may be either an outlay cost or an opportunity cost. A cost object is any end for which we want to know the cost. A cost pool is a collection of costs to be assigned to the cost objects.

176) Direct materials inventory contains the raw materials (or the costs of the materials) that will be used in production. Work in process contains the products (or the accumulated costs) that have been started into production but are **not** yet completed. Finished goods contains the completed products (or the cost of it) that are **not** yet sold. Cost of goods sold contains the costs associated with the products that have been sold.

177) Cost of goods manufactured consists of all the costs attached to the products completed during the period. Cost of goods manufactured is removed from the work in process inventory account and added to the finished goods inventory account. Cost of goods sold consists of the costs of the goods that are sold during the period. Cost of goods sold is removed from the finished goods inventory account and expensed on the income statement.

178) A direct cost is any cost that can be directly and unambiguously related to a cost object in an economic fashion. An indirect cost is any cost that **cannot** be directly related to a cost object.

179)

|  |  |  |  |
| --- | --- | --- | --- |
| Jamison Tools Company | | | |
| Cost of Goods Manufactured Statement | | | |
| For the Year Ended December 31, 2022 | | | |
| **Beginning Work-In-Process Inventory, January 1** |  |  | $ 27,000 |
| **Manufacturing costs during the year:** |  |  |  |
| **Direct Materials:** |  |  |  |
| **Beginning Inventory, January 1** | $ 96,000 |  |  |
| **Add Purchases** | 654,000 |  |  |
| **Total Direct Materials Available** | $ 750,000 |  |  |
| **Less Ending Inventory, December 31** | 87,000 |  |  |
| **Direct Materials Put Into Production** |  | $ 663,000 |  |
| **Direct Labor** |  | 425,000 |  |
| **Manufacturing Overhead** |  |  |  |
| **Factory Rent** | $ 330,000 |  |  |
| **Plant Utilities** | 40,000 |  |  |
| **Indirect Labor** | 28,000 |  |  |
| **Indirect Materials** | 66,000 |  |  |
| **Total Manufacturing Overhead** |  | 464,000 |  |
| **Total Manufacturing Costs incurred during the year** |  |  | $ 1,552,000 |
| **Total Work-In-Process during the year** |  |  | $ 1,579,000 |
| **Less Ending Work-in-Process Inventory, December 31** |  |  | 33,000 |
| **Cost of Goods Manufactured** |  |  | $ 1,546,000 |

|  |  |  |
| --- | --- | --- |
| Jamison Tools Company | | |
| Income Statement | | |
| For Year Ended December 31, 2022 | | |
| **Sales Revenue** |  | $ 2,550,000 |
| **Cost of Goods Sold:** |  |  |
| **Beginning Finished Goods Inventory (January 1)** | $ 25,000 |  |
| **Cost of Goods Manufactured** | 1,546,000 |  |
| **Ending Finished Goods Inventory (December 31)** | (44,000) |  |
| **Cost of Goods Sold** |  | 1,527,000 |
| **Gross Margin** |  | $ 1,023,000 |
| **Selling and Administrative Expenses:** |  |  |
| **Marketing Expenses** | $ 225,000 |  |
| **Administrative expenses** | 101,350 |  |
| **Total expenses** |  | 326,350 |
| **Operating profits** |  | $ 696,650 |

180)

|  |  |  |  |
| --- | --- | --- | --- |
| Garden Master Company | | | |
| Cost of Goods Manufactured Statement | | | |
| For the Year Ended December 31, 2022 | | | |
| **Beginning Work-In-Process Inventory, January 1** |  |  | $ 50,000 |
| **Manufacturing costs during the year:** |  |  |  |
| **Direct Materials:** |  |  |  |
| **Beginning Inventory, January 1** | $ 50,000 |  |  |
| **Add Purchases** | 325,000 |  |  |
| **Total Direct Materials Available** | $ 375,000 |  |  |
| **Less Ending Inventory, December 31** | 45,000 |  |  |
| **Direct Materials Put Into Production** |  | $ 330,000 |  |
| **Direct Labor** |  | 550,000 |  |
| **Manufacturing Overhead** |  |  |  |
| **Factory Rent** | $ 80,000 |  |  |
| **Plant Utilities** | 25,000 |  |  |
| **Indirect Labor** | 25,000 |  |  |
| **Indirect Materials** | 50,000 |  |  |
| **Total Manufacturing Overhead** |  | 180,000 |  |
| **Total Manufacturing Costs incurred during the year** |  |  | $ 1,060,000 |
| **Total Work-In-Process during the year** |  |  | $ 1,110,000 |
| **Less Ending Work-in-Process Inventory, December 31** |  |  | 55,000 |
| **Cost of Goods Manufactured** |  |  | $ 1,055,000 |

|  |  |  |
| --- | --- | --- |
| Garden Master Company | | |
| Income Statement | | |
| For Year Ended December 31, 2022 | | |
| **Sales Revenue** |  | $ 1,825,000 |
| **Cost of Goods Sold:** |  |  |
| **Beginning Finished Goods Inventory (January 1)** | $ 50,000 |  |
| **Cost of Goods Manufactured** | 1,055,000 |  |
| **Ending Finished Goods Inventory (December 31)** | (75,000) |  |
| **Cost of Goods Sold** |  | 1,030,000 |
| **Gross Margin** |  | 795,000 |
| **Selling and Administrative Expenses:** |  |  |
| **Marketing Expenses** | $ 180,000 |  |
| **General and Administrative** | 130,000 |  |
| **Total expenses** |  | 310,000 |
| **Operating profits** |  | $ 485,000 |

181) a.  
 Statement of Cost of Goods Manufactured for July

|  |  |  |  |
| --- | --- | --- | --- |
| Michael Corporation | | | |
| Cost of Goods Manufactured Statement | | | |
| For the Month Ended July 31 | | | |
| **Beginning Work-In-Process Inventory, July 1** |  |  | $ 15,000 |
| **Manufacturing costs during the year:** |  |  |  |
| **Direct Materials:** |  |  |  |
| **Beginning Inventory, July 1** | $ 22,000 |  |  |
| **Add Purchases** | 76,000 |  |  |
| **Total Direct Materials Available** | 98,000 |  |  |
| **Less Ending Inventory, July 31** | 33,000 |  |  |
| **Direct Materials Put Into Production** |  | $ 65,000 |  |
| **Direct labor** |  | 42,000 |  |
| **Manufacturing overhead** |  | 77,000 |  |
| **Total Manufacturing Costs incurred during the year** |  |  | $ 184,000 |
| **Total Work-In-Process during the year** |  |  | 199,000 |
| **Less Ending Work-in-Process Inventory, July 31** |  |  | 23,000 |
| **Cost of goods manufactured** |  |  | $ 176,000 |

b.  
 Income Statement for July

|  |  |  |
| --- | --- | --- |
| Michael Corporation | | |
| Income Statement | | |
| For the Month Ended July 31 | | |
| **Sales Revenue** |  | $ 280,000 |
| **Cost of goods sold:** |  |  |
| **Beginning Finished Goods Inventory (July 1)** | $ 52,000 |  |
| **Cost of Goods Manufactured** | 176,000 |  |
| **Ending Finished Goods Inventory (July 31)** | (43,000) |  |
| **Cost of Goods Sold** |  | 185,000 |
| **Gross margin** |  | 95,000 |
| **Selling and Administrative Expenses:** |  |  |
| **Selling expenses** | 20,000 |  |
| **Administrative expenses** | 35,000 |  |
| **Total expenses** |  | 55,000 |
| **Operating profits** |  | $ 40,000 |

182) (a)

|  |  |  |  |
| --- | --- | --- | --- |
| Crossover Company | | | |
| Gross Margin Income Statement | | | |
| (Absorption Costing) | | | |
|  | **2022** | **2023** | **Total** |
| **Sales (25,000 × $45)** | $ 1,125,000 | $ 1,125,000 | $ 2,250,000 |
| **Cost of Goods Sold:** |  |  |  |
| **Beginning Inventory** | $ 0 | $ 175,000 | $ 0 |
| **Current Production 2022: ($30 variable + $5 fixed) × 30,000); 2023: ($30 variable + $7.50 fixed) × 20,000)** | 1,050,000 | 750,000 |  |
| **Ending Inventory (30,000 − 25,000) × $35)** | (175,000) | 0 | 0 |
| **Cost of Goods Sold** | 875,000 | 925,000 | 1,800,000 |
| **Gross Margin** | 250,000 | 200,000 | 450,000 |
| **Marketing Costs** | 75,000 | 75,000 | 150,000 |
| **Operating Income** | $ 175,000 | $ 125,000 | $ 300,000 |

(b)

|  |  |  |  |
| --- | --- | --- | --- |
| Crossover Company | | | |
| Contribution Margin Income Statement | | | |
| (Variable Costing) | | | |
|  | **2022** | **2023** | **Total** |
| **Sales (25,000 × $45)** | $ 1,125,000 | $ 1,125,000 | $ 2,250,000 |
| **Variable Costs (25,000 × $30)** | 750,000 | 750,000 | 1,500,000 |
| **Contribution Margin** | 375,000 | 375,000 | 750,000 |
| **Fixed Manufacturing Costs** | 150,000 | 150,000 | 300,000 |
| **Fixed Marketing Costs** | 75,000 | 75,000 | 150,000 |
| **Operating Income** | $ 150,000 | $ 150,000 | $ 300,000 |

(c) In 2022, production exceeded sales by 5,000 units. $25,000 of fixed manufacturing costs ($150,000/30,000 = $5 per unit × 5,000 units) are inventoried under absorption costing but expensed under variable costing. This gives the appearance of a higher profit in 2022 for absorption costing. In 2023, the sales exceeded production. The inventoried costs from 2022 flow through to cost of goods sold in 2023 under absorption costing. These same costs had already been expensed in 2022 under variable costing. This gives variable costing the higher income. The total for both methods is the same for both years since all revenues and costs are the same and no inventory remains at the end of 2023.

183) (a) $6.75 [($550,000 + $400,000 + $100,000 + $300,000 = $1,350,000/200,000 = $6.75)]  
 (b) $5.25 [($550,000 + $400,000 + $100,000 = $1,050,000/200,000 = $5.25)]  
 (c) $5,050,000 [(Sales ($6,400,000) − COGS ($1,080,000) − Marketing ($270,000))]  
 (d) $4,990,000 [(Sales ($6,400,000) − Variable cost of goods sold ($840,000) − Fixed overhead ($300,000) − Marketing (270,000))]  
 (e) $270,000 [(40,000 units × $6.75)]  
 (f) $210,000 [(40,000 units × $5.25)]  
 (g)

|  |  |
| --- | --- |
| **Operating income, absorption costing** | $ 5,050,000 |
| **Operating income, variable costing** | 4,990,000 |
| **Excess of absorption operating income over variable operating income** | $ 60,000 |

Fixed manufacturing overhead / Units produced = $300,000 / 200,000 = $1.50 per unit

|  |  |  |
| --- | --- | --- |
| **Change in inventory** | **Fixed Overhead Rate** | **Difference in Fixed Overhead Expensed (variable costing)** |
| 40,000 units | × $1.50 | = $60,000 |

184) (a)

|  |  |  |
| --- | --- | --- |
| **Sales revenue** |  | $ 20,000,000 |
| **Variable cost of goods sold:** |  |  |
| **Materials cost** | $ 2,896,440 |  |
| **Conversion cost** | 1,132,700 | $ 4,029,140 |
| **Contribution margin(1):** |  | $ 15,970,860 |
| **Fixed expenses:** |  |  |
| **Fixed production costs:** | 8,634,600 |  |
| **Fixed operating costs:** | 7,055,080 | $ 15,689,680 |
| **Operating income(2):** |  | $ 281,180 |
| **Inventory:** |  |  |
| **Beginning inventory:** | $ 1,150,000 |  |
| **+ Variable cost of goods manufactured:** | 4,207,140 |  |
| **– Variable Cost of goods sold:** | 4,029,140 |  |
| **Ending inventory(3)** | $ 1,328,000 |  |

Note: Variable cost of goods sold is based on 144 units of part C-2472, 80 units of part D-1340 and 1,140 units of all other parts. The increase in inventory from $1,150,000 to $1,328,000 ($178,000) equals 40 units of part D-1340 × variable cost per unit of $4,450.  
 (b)

|  |  |  |
| --- | --- | --- |
| **Sales revenue** |  | $ 21,065,000 |
| **Variable cost of goods sold:** |  |  |
| **Materials cost** | $ 2,997,690 |  |
| **Conversion cost** | 1,164,950 | $ 4,162,640 |
| **Contribution margin(1):** |  | $ 16,902,360 |
| **Fixed expense:** |  |  |
| **Fixed production costs:** | 8,634,600 |  |
| **Fixed operating costs:** | 7,055,080 | $ 15,689,680 |
| **Operating income(2):** |  | $ 1,212,680 |
| **Inventory:** |  |  |
| **Beginning inventory:** | $ 1,150,000 |  |
| **+ Variable Cost of goods manufactured:** | 4,207,140 |  |
| **- Variable Cost of goods sold:** | 4,162,140 |  |
| **Ending inventory(3)** | $ 1,194,500 |  |

Note: Variable cost of goods sold is based on 144 units of part C-2472, 110 units of part D-1340 and 1,140 units of all other parts. Notice also that revenues have increased by $1,065,000 for 30 additional units of part D-1340 at $35,500 per unit. Variable expenses have increased by $133,500 for the additional 30 units of part D-1340 at $4,450 per unit. Overall, the contribution margin and operating income are $931,500 higher than in requirement (a) ($1,065,000 – $133,500 = $931,500).  
   
 (c) Alternative costing methods typically result in different income numbers. Why?  
 ● The determination of product and period costs varies depending on the costing approach used. Absorption costing incudes all fixed and variable manufacturing costs as product costs, whereas, variable costing only includes variable manufacturing costs as product costs. Fixed manufacturing overhead costs are expensed in the period they are incurred.  
 ● Timing is a major reason for different income amounts. A cost may be accounted for as an asset or an expense. If the cost is record as an asset, it doesn’t become an expense on the income statement until the asset has been consumed.  
 ● Producing more units in a period than sold can also result in different income amounts. Under absorption costing the fixed manufacturing overhead costs for unsold units are included in inventory on the balance sheet and moved to cost of goods sold on the income statement when the units are sold. Under variable costing; however, fixed manufacturing overhead costs are expensed as incurred.  
 Why are these differences important?  
 ● Because managers are typically rewarded on the basis of income.  
 ● Managers want to maximize income.  
 What are the problems in managers trying to maximize income?  
 ● Sometimes the actions managers may take to maximize income may not be in the long-term best interest of the company.  
 ● Absorption costing and, also variable costing to some extent, will motivate managers to produce more in order to reduce the average costs.

185) (a)

|  |  |  |
| --- | --- | --- |
| **Sales revenue** |  | $ 5,200,000 |
| **Absorption cost goods sold:** |  |  |
| **Materials cost** | $ 758,010 |  |
| **Variable conversion cost** | 294,360 |  |
| **Fixed manufacturing cost** | 2,158,650 | $ 3,211,020 |
| **Gross margin (1)** |  | $ 1,988,980 |
| **Operating expense:** |  |  |
| **Fixed operating costs** | 1,765,530 | $ 1,765,530 |
| **Operating income(2)** |  | $ 223,450 |
| **Inventory:** |  |  |
| **Beginning inventory** | $ 275,000 |  |
| **+ Cost of goods manufactured** | 3,211,020 |  |
| **- Cost of goods sold** | 3,211,020 |  |
| **Ending inventory (3)** | $ 275,000 |  |

Note: Absorption cost of goods sold is based on 72 units of part C-1849, 60 units of part D-1251 and 570 units of all other parts.  
 (b)

|  |  |  |
| --- | --- | --- |
| **Sales revenue** |  | $ 5,200,000 |
| **Absorption cost goods sold:** |  |  |
| **Materials:** | $ 758,010 |  |
| **Variable conversion:** | 294,360 |  |
| **Fixed manufacturing:** | 2,071,384 | $ 3,123,754 |
| **Gross margin:** |  | $ 1,988,980 |
| **Operating expense:** |  |  |
| **Fixed operating costs:** | 1,765,530 | $ 1,765,530 |
| **Operating income:** |  | $ 310,716 |

|  |  |  |
| --- | --- | --- |
| **Inventory:** |  |  |
| **Beginning inventory:** | $ 275,000 |  |
| **+ Cost of goods manufactured:** | 3,253,270 | (increase by $42,250 for the materials costs incurred for the 25 additional units of part D-1251 produced, at $1,690 per unit) |
| **– Cost of goods sold:** | 3,123,754 |  |
| **Ending inventory** | $ 404,516 |  |

Note: Absorption cost of goods sold is based on 72 units of part C-1849, 60 units of part D-1251 and 570 units of all other parts. Fixed manufacturing cost has changed from $2,158,650 to $2,071,384 as follows:  
 $2,158,650 − $13,500 = $2,145,150; $2,145,150 /727 units = $2,950.69 per unit; = $2,950.69 × 702 units = $2,071,384.  
 The amount of $13,500 is the variable conversion cost assigned to the 25 additional units of part D-1251 that are produced ($540 × 25 units = $13,500); this amount is deducted from fixed manufacturing costs.  
   
 (c)

|  |  |  |
| --- | --- | --- |
| **Sales revenue** |  | $ 5,200,000 |
| **Variable cost of goods sold:** |  |  |
| **Materials cost** | $ 758,010 |  |
| **Conversion cost** | 294,360 | $ 1,052,370 |
| **Contribution margin** |  | $ 4,147,630 |
| **Fixed expense:** |  |  |
| **Fixed manufacturing costs:** | 2,145,150 |  |
| **Fixed operating costs:** | 1,765,530 | $ 3,910,680 |
| **Operating income** |  | $ 236,950 |
| **Inventory:** |  |  |
| **Beginning inventory:** | 275,000 |  |
| **+ Cost of goods manufactured:** | 1,108,120 | (includes an additional $42,250 for the materials costs and $13,500 for the variable conversion costs incurred for the 25 additional units of part D-1251) |
| **– Cost of goods sold:** | 1,052,370 |  |
| **Ending inventory** | 330,750 |  |

Note: Variable cost of goods sold is based on 72 units of part C-1849, 60 units of part D-1251 and 570 units of all other parts. Fixed manufacturing costs has changed from $2,158,650 to $2,145,150 as follows:  
 $2,158,650 − $13,500 = $2,145,150. The amount of $13,500 is the variable conversion cost assigned to the 25 additional units of part D-1251 that are produced ($540 × 25 units = $13,500); this amount is deducted from fixed manufacturing costs.  
 The difference in operating income from the use of variable versus absorption costing is $73,766, which comes entirely from the amount of fixed production costs considered in the two methods ($2,145,150 − $2,071,384). Under absorption costing, this amount is carried to inventory as the fixed manufacturing costs for the 25 additional units produced ($2,145,150 /727 units = $2,950.69; $2,950.69 × 25 units × $73,767).

186) (a)

|  |  |  |
| --- | --- | --- |
| Hurwitz Corporation | | |
| Cost of Goods Manufactured Statement | | |
| For the Year Ended December 31, 2022 | | |
| **Beginning Work-in-Process Inventory, January 1** |  | $ 64,000 |
| **Manufacturing costs during the year:** |  |  |
| **Direct Materials:** |  |  |
| **Beginning Inventory, January 1** | $ 200,000 |  |
| **Add Purchases** | 318,000 |  |
| **Total Direct Materials Available** | $ 518,000 |  |
| **Less Ending Inventory, December 31** | 210,000 |  |
| **Direct Materials Put Into Production** |  | $ 308,000 |
| **Direct Labor** |  | 180,000 |
| **Manufacturing Overhead:** |  |  |
| **Plant Utilities** | $ 50,000 |  |
| **Plant and Equipment Depreciation** | 40,000 |  |
| **Indirect Materials** | 30,000 |  |
| **Indirect Labor** | 150,000 |  |
| **Other Manufacturing Overhead** | 60,000 |  |
| **Total Manufacturing Overhead Costs** | 330,000 |  |
| **Total Manufacturing Costs Incurred During the Year** |  | $ 818,000 |
| **Total Work-in-Process During the Year** |  | $ 882,000 |
| **Less Ending Work-in-Process Inventory, December 31** |  | 120,000 |
| **Cost of Goods Manufactured** |  | $ 762,000 |

(b)

|  |  |
| --- | --- |
| Hurwitz Corporation | |
| Statement of Cost of Goods Sold | |
| For the Year Ended December 31, 2022 | |
| **Beginning Finished Goods Inventory, January 1** | $ 80,000 |
| **Cost of Goods Manufactured** | 762,000 |
| **Total Goods Available for Sale** | $ 842,000 |
| **Ending Finished Goods Inventory, December 31** | (150,000) |
| **Cost of Goods Sold** | $ 692,000 |

(c)

|  |  |
| --- | --- |
| Hurwitz Corporation | |
| Income Statement | |
| For Year Ended December 31, 2022 | |
| **Sales Revenue** | $ 1,250,000 |
| **Cost of Goods Sold** | 692,000 |
| **Gross Margin** | 558,000 |
| **Selling and Administrative Expenses** | 150,000 |
| **Income Before Income Taxes** | 408,000 |
| **Income Tax Expense** | 122,400 |
| **Net Income** | $ 285,600 |

187) A cost manager implementing a costing system must make other individuals aware of the following basics of cost management systems.  
 *Resources and costs*  
 ● Resources are consumed by organizations to transform inputs into outputs  
 ● Resources are not free  
 *Supply versus use of resources*  
 ● A distinction must be made between resources acquired and resources used  
 ● Some resources are acquired in advance, whereas others are acquired as needed  
 ● The resources acquired may not all be used, thereby creating excess capacity  
 ● Additional demand may require acquiring additional resources  
 *The dimensions of resources*  
 ● Resources are identified by three dimensions:  
 ● type of resource acquired (material, conversion, operating)  
 ● how the resource is used (production, non-production)  
 ● how traceable a resource is to a particular decision (direct, indirect)  
 *Alternative costing systems*  
 ● The nature of supply and use of resources gives rise to different costing systems  
 ● Three alternative costing systems exist.  
 ● Variable costing  
 ● Absorption costing