Cost Management

MCQs

Contains: in a random basis

Gleim Book

Gleim CD

IMA - Retired 2005

IMA - Retired 2008

By: Mohamed “hengoo” to dvd4arab.com members
[1] Gleim #: 3.2.48 -- Source: Publisher

The sum of the costs necessary to effect a one-unit increase in the activity level is a(n)

A. Differential cost.
B. Marginal cost.
C. Incremental cost.
D. Opportunity cost.


Conversion cost pricing

A. Could be used when the customer furnishes the material used in manufacturing a product.
B. Places minimal emphasis on the cost of materials used in manufacturing a product.
C. Places heavy emphasis on direct costs and disregards consideration of indirect costs.
D. Places heavy emphasis on indirect costs and disregards consideration of direct costs.

[Fact Pattern #1]

Albany Mining Corporation uses a process costing system for its ore extraction operations. The following information pertains to work-in-process inventories and operations for the month of May:

<table>
<thead>
<tr>
<th>Completion %</th>
<th>Units</th>
<th>BWIP</th>
<th>Incurred in May</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Direct materials</td>
<td>$54,560</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Direct labor</td>
<td>20,320</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Factory overhead</td>
<td>15,240</td>
</tr>
</tbody>
</table>

|              |       | $90,120 | $1,042,040 |

BWIP on May 1 32,000 60% 20%
Started in production 200,000
Completed production (184,000)
EWIP on May 31 48,000 90% 40%

[3] Gleim #: 4.2.28 -- Source: Publisher

(Refers to Fact Pattern #1)
Under the FIFO method, Albany Mining’s equivalent units of conversion cost are

A. 177,600 units.
B. 184,000 units.
C. 171,200 units.
D. 196,800 units.
Baldwin Printing Company uses a job order costing system and applies overhead based on machine hours. A total of 150,000 machine hours have been budgeted for the year. During the year, an order for 1,000 units was completed and incurred the following:

<table>
<thead>
<tr>
<th>Costs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct material costs</td>
<td>$1,000</td>
</tr>
<tr>
<td>Direct labor costs</td>
<td>1,500</td>
</tr>
<tr>
<td>Actual overhead</td>
<td>1,980</td>
</tr>
<tr>
<td>Machine hours</td>
<td>450</td>
</tr>
</tbody>
</table>

The accountant calculated the inventory cost of this order to be $4.30 per unit. The annual budgeted overhead in dollars was

A. $660,000  
B. $645,000  
C. $600,000  
D. $577,500

Huron Industries has recently developed two new products, a cleaning unit for video discs and a disc duplicator for reproducing movies taken with a video camera. However, Huron has only enough plant capacity to introduce one of these products during the current year. The company controller has gathered the following data to assist management in deciding which product should be selected for production.

Huron’s fixed overhead includes rent and utilities, equipment depreciation, and supervisory salaries. Selling and administrative expenses are not allocated to products.

<table>
<thead>
<tr>
<th>Costs</th>
<th>Disc Duplicator</th>
<th>Cleaning Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw materials</td>
<td>$ 44.00</td>
<td>$ 36.00</td>
</tr>
<tr>
<td>Machining at $12 per hr.</td>
<td>18.00</td>
<td>15.00</td>
</tr>
<tr>
<td>Assembly at $10 per hr.</td>
<td>30.00</td>
<td>10.00</td>
</tr>
<tr>
<td>Variable overhead at $8 per hr.</td>
<td>36.00</td>
<td>18.00</td>
</tr>
<tr>
<td>Fixed overhead at $4 per hr.</td>
<td>18.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Total cost</td>
<td>$ 146.00</td>
<td>$ 88.00</td>
</tr>
<tr>
<td>Suggested selling price</td>
<td>$ 169.95</td>
<td>$ 99.98</td>
</tr>
<tr>
<td>Actual research and development costs</td>
<td>$240,000</td>
<td>$175,000</td>
</tr>
<tr>
<td>Proposed advertising and promotion costs</td>
<td>$500,000</td>
<td>$350,000</td>
</tr>
</tbody>
</table>

(Refers to Fact Pattern #2)

For Huron’s disc duplicator, the unit costs for raw materials, machining, and assembly represent

A. Separable costs.  
B. Conversion costs.  
C. Prime costs.  
D. Committed costs.
[6] Gleim #: 5.3.76 -- Source: CMA 1296 3-19

Generally, individual departmental rates rather than a plantwide rate for applying manufacturing overhead are used if

A. Manufacturing overhead is the largest cost component of its product cost.
B. A company's manufacturing operations are all highly automated.
C. The manufactured products differ in the resources consumed from the individual departments in the plant.
D. A company wants to adopt a standard cost system.


A company with three products classifies its costs as belonging to five functions: design, production, marketing, distribution, and customer services. For pricing purposes, all company costs are assigned to the three products. The direct costs of each of the five functions are traced directly to the three products. The indirect costs of each of the five business functions are collected into five separate cost pools and then assigned to the three products using appropriate allocation bases. The allocation base that will most likely be the best for allocating the indirect costs of the distribution function is

A. Dollar sales volume.
B. Number of sales persons.
C. Number of shipments.
D. Number of customer phone calls.

[Fact Pattern #3]

Osawa, Inc. planned and actually manufactured 200,000 units of its single product in its first year of operations. Variable manufacturing costs were $30 per unit of product. Planned and actual fixed manufacturing costs were $600,000, and selling and administrative costs totaled $400,000. Osawa sold 120,000 units of product at a selling price of $40 per unit.

[8] Gleim #: 5.1.21 -- Source: CMA 1285 4-15

(Refers to Fact Pattern #3)

Osawa’s operating income for the year using variable costing is

A. $800,000
B. $600,000
C. $200,000
D. $440,000
Taylor Company is determining the cost behavior of several items in order to budget for the upcoming year. Past trends have indicated the following dollars were spent at three different levels of output:

<table>
<thead>
<tr>
<th>Unit Levels</th>
<th>10,000</th>
<th>12,000</th>
<th>15,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost A</td>
<td>$25,000</td>
<td>$29,000</td>
<td>$35,000</td>
</tr>
<tr>
<td>Cost B</td>
<td>10,000</td>
<td>15,000</td>
<td>15,000</td>
</tr>
<tr>
<td>Cost C</td>
<td>15,000</td>
<td>18,000</td>
<td>22,500</td>
</tr>
</tbody>
</table>

In establishing a budget for 14,000 units, Taylor should treat Costs A, B, and C, respectively, as:

A. Semivariable, fixed, and variable.
B. Variable, semivariable, and semivariable.
C. Semivariable, semivariable, and semivariable.
D. Variable, fixed, and variable.

Bombastic Bathrooms manufacturers a certain style of plumbing fixture in four materials. Price and cost data for each are given below:

<table>
<thead>
<tr>
<th>Brass</th>
<th>Chrome</th>
<th>Nickel</th>
<th>Aluminum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selling Price</td>
<td>$250</td>
<td>$220</td>
<td>$375</td>
</tr>
<tr>
<td>Direct Materials Cost</td>
<td>$100</td>
<td>$90</td>
<td>$195</td>
</tr>
<tr>
<td>Direct Labor Cost</td>
<td>$70</td>
<td>$70</td>
<td>$70</td>
</tr>
<tr>
<td>Manufacturing overhead</td>
<td>$30</td>
<td>$35</td>
<td>$45</td>
</tr>
</tbody>
</table>

Hours:
- Boring department: 3, 3, 6, 6
- Machining department: 4, 5, 4, 6
- Finishing department: 1, 3, 3, 4
- Inspection & packing: 1, 1, 1, 1

Bombastic is currently producing equal quantities of each fixture.

The constraint in Bombastic’s manufacturing process is the

A. Finishing department.
B. Boring department.
C. Machining department.
D. Inspection & packing activity.
Travis Petroleum is a small company that acquires crude oil and manufactures it into three intermediate products, differing only in grade. The products are Grade One, Grade Two, and Grade Three. No beginning inventories of finished goods or work-in-process existed on November 1. The production costs for November were as follows (assume separable costs were negligible):

Crude oil acquired and put into production $4,000,000
Direct labor and related costs 2,000,000
Manufacturing overhead 3,000,000

The output and sales for November were as follows:

<table>
<thead>
<tr>
<th></th>
<th>Grade One</th>
<th>Grade Two</th>
<th>Grade Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barrels produced</td>
<td>300,000</td>
<td>240,000</td>
<td>120,000</td>
</tr>
<tr>
<td>Barrels sold</td>
<td>80,000</td>
<td>120,000</td>
<td>120,000</td>
</tr>
<tr>
<td>Prices per barrel sold</td>
<td>$30</td>
<td>$40</td>
<td>$50</td>
</tr>
</tbody>
</table>

Based on the relative sales values of output, the cost of Travis’ ending inventory of Grade Two is

A. $3,375,000
B. $1,636,000
C. $3,512,000
D. $1,756,000

Which of the following statements is true for a firm that uses variable costing?

A. Profits fluctuate with sales.
B. An idle facility variation is calculated.
C. Product costs include variable administrative costs.
D. The cost of a unit of product changes because of changes in number of units manufactured.

Cell Company has discovered that the cost of processing customer invoices is strictly variable within the relevant range. Which one of the following statements concerning the cost of processing customer invoices is incorrect?

A. The cost of processing the 100th customer invoice will be the same as the cost of processing the first customer invoice.
B. The total cost of processing customer invoices will increase as the volume of customer invoices increases.
C. The average cost per unit for processing a customer invoice will equal the incremental cost of processing one more customer invoice.
D. The cost per unit for processing customer invoices will decline as the volume of customer invoices increases.


Cynthia Rogers, the cost accountant for Sanford Manufacturing, is preparing a management report that must include an allocation of overhead. Budgeted overhead for each department and the data for one job are shown below.

<table>
<thead>
<tr>
<th>Department</th>
<th>Tooling</th>
<th>Fabricating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplies</td>
<td>$ 690</td>
<td>$ 80</td>
</tr>
<tr>
<td>Supervisor’s salaries</td>
<td>1,400</td>
<td>1,800</td>
</tr>
<tr>
<td>Indirect labor</td>
<td>1,000</td>
<td>4,000</td>
</tr>
<tr>
<td>Depreciation</td>
<td>1,200</td>
<td>5,200</td>
</tr>
<tr>
<td>Repairs</td>
<td>4,400</td>
<td>3,000</td>
</tr>
<tr>
<td><strong>Total budgeted overhead</strong></td>
<td><strong>$8,690</strong></td>
<td><strong>$14,080</strong></td>
</tr>
<tr>
<td><strong>Total direct labor hours</strong></td>
<td>440</td>
<td>640</td>
</tr>
<tr>
<td><strong>Direct labor hours on Job #231</strong></td>
<td>10</td>
<td>2</td>
</tr>
</tbody>
</table>

Using the departmental overhead application rates and allocating overhead on the basis of direct labor hours, overhead applied to Job #231 in the Tooling Department would be

A. $197.50
B. $44.00
C. $501.00
D. $241.50
A manufacturing firm produces multiple families of products requiring various combinations of different types of parts. The manufacturer has identified various cost pools, one of which consists of materials handling costs. This cost pool includes the wages and employee benefits of the workers involved in receiving materials, inspecting materials, storing materials in inventory, and moving materials to the workstations; depreciation and maintenance of materials handling equipment (e.g., forklift trucks); and costs of supplies used as well as other related costs. Of the following, the most appropriate cost driver for assigning materials handling costs to the various products most likely is

A. Number of parts used.
B. Number of vendors involved.
C. Direct labor hours.
D. Number of units produced.

Valyn Corporation employs an absorption costing system for internal reporting purposes; however, the company is considering using variable costing. Data regarding Valyn’s planned and actual operations for the calendar year are presented below.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Planned Activity</th>
<th>Actual Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning finished goods inventory in units</td>
<td>35,000</td>
<td>35,000</td>
</tr>
<tr>
<td>Sales in units</td>
<td>140,000</td>
<td>125,000</td>
</tr>
<tr>
<td>Production in units</td>
<td>140,000</td>
<td>130,000</td>
</tr>
</tbody>
</table>

The planned per-unit cost figures shown in the next schedule were based on the estimated production and sale of 140,000 units for the year. Valyn uses a predetermined manufacturing overhead rate for applying manufacturing overhead to its product; thus, a combined manufacturing overhead rate of $9.00 per unit was employed for absorption costing purposes. Any over- or underapplied manufacturing overhead is closed to the cost of goods sold account at the end of the reporting year.

<table>
<thead>
<tr>
<th></th>
<th>Planned Costs</th>
<th>Incurred Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Per Unit</td>
<td>Total</td>
</tr>
<tr>
<td>Direct materials</td>
<td>$12.00</td>
<td>$1,680,000</td>
</tr>
<tr>
<td>Direct labor</td>
<td>9.00</td>
<td>1,260,000</td>
</tr>
<tr>
<td>Variable manufacturing overhead</td>
<td>4.00</td>
<td>560,000</td>
</tr>
<tr>
<td>Fixed manufacturing overhead</td>
<td>5.00</td>
<td>700,000</td>
</tr>
<tr>
<td>Variable selling expenses</td>
<td>8.00</td>
<td>1,120,000</td>
</tr>
<tr>
<td>Fixed selling expenses</td>
<td>7.00</td>
<td>980,000</td>
</tr>
<tr>
<td>Variable administrative expenses</td>
<td>2.00</td>
<td>280,000</td>
</tr>
<tr>
<td>Fixed administrative expenses</td>
<td>3.00</td>
<td>420,000</td>
</tr>
<tr>
<td>Total</td>
<td>$50.00</td>
<td>$7,000,000</td>
</tr>
</tbody>
</table>

The beginning finished goods inventory for absorption costing purposes was valued at the previous year’s planned unit manufacturing cost, which was the same as the current year’s planned unit manufacturing cost. There are no work-in-process inventories at either the beginning or the end of the year. The planned and actual unit selling price for the current year was $70.00 per unit.

The value of Valyn Corporation’s actual ending finished goods inventory on the variable costing basis was

A. $750,000
B. $1,400,000
C. $1,000,000
D. $1,125,000
Wilcox Industrial has two support departments, the Information Systems Department and the Personnel Department, and two manufacturing departments, the Machining Department and the Assembly Department. The support departments service each other as well as the two production departments. Company studies have shown that the Personnel Department provides support to a greater number of departments than the Information Systems Department.

If Wilcox uses the direct method of departmental allocation, which one of the following cost allocations would occur? Some of the costs of the Personnel Department would be allocated to the Information Systems Department.

A. Personnel Department would be allocated to the Information Systems Department.
B. Assembly Department would be allocated to the Machining Department.
C. Information Systems Department would be allocated to the Assembly Department.
D. Machining Department would be allocated to the Information Systems Department.

A firm calculates that its annual cost to hold excess goods in order to avoid any chance of running out of inventory is $50,000. This $50,000 is an example of a

A. Prime cost.
B. Carrying cost.
C. Stockout cost.
D. Quality cost.

A company uses a planning system that focuses first on the amount and timing of finished goods demanded and then determines the derived demand for raw materials, components, and subassemblies at each of the prior stages of production. This system is

A. Just-in-time purchasing.
B. Materials requirements planning.
C. An economic order quantity model.
D. Linear programming.
[Fact Pattern #8]
During December, Krause Chemical Company had the following selected data concerning the manufacture of Xyzine, an industrial cleaner:

<table>
<thead>
<tr>
<th>Production Flow</th>
<th>Physical Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed and transferred to the next department</td>
<td>100</td>
</tr>
<tr>
<td>Add: ending work-in-process inventory</td>
<td>10 (40% complete as to conversion)</td>
</tr>
<tr>
<td>Total units to account for</td>
<td>110</td>
</tr>
<tr>
<td>Less: beginning work-in-process inventory</td>
<td>20 (60% complete as to conversion)</td>
</tr>
<tr>
<td>Units started during December</td>
<td>90</td>
</tr>
</tbody>
</table>

All material is added at the beginning of processing in this department, and conversion costs are added uniformly during the process. The beginning work-in-process inventory had $120 of raw material and $180 of conversion costs incurred. Material added during December was $540 and conversion costs of $1,484 were incurred. Krause uses the weighted-average process-costing method.

[20] Gleim #: 4.2.52 -- Source: CMA 0408 2-137
(Refers to Fact Pattern #8)
Under the first-in, first-out (FIFO) method, Krause’s equivalent units of production used to calculate conversion costs for December was

A. 104 units.
B. 92 units.
C. 110 units.
D. 100 units.

A company experienced a machinery breakdown on one of its production lines. As a consequence of the breakdown, manufacturing fell behind schedule, and a decision was made to schedule overtime to return manufacturing to schedule. Which one of the following methods is the proper way to account for the overtime paid to the direct laborers?

A. The overtime hours times the overtime premium would be charged to repair and maintenance expense, and the overtime hours times the straight-time wages would be treated as direct labor.
B. The overtime hours times the sum of the straight-time wages and overtime premium would be charged entirely to manufacturing overhead.
C. The overtime hours times the sum of the straight-time wages and overtime premium would be treated as direct labor.
D. The overtime hours times the overtime premium would be charged to manufacturing overhead, and the overtime hours times the straight-time wages would be treated as direct labor.
If a manufacturing company uses variable costing to cost inventories, which of the following costs are considered inventoriable costs?

A. Only raw material, direct labor, variable manufacturing overhead, and variable selling and administrative costs.
B. Only raw material, direct labor, and variable manufacturing overhead costs.
C. Only raw material, direct labor, and variable and fixed manufacturing overhead costs.
D. Only raw material and direct labor costs.

M&P Tool has three service departments that support the production area. Outlined below is the estimated overhead by department for the upcoming year.

<table>
<thead>
<tr>
<th>Service Departments</th>
<th>Estimated Overhead</th>
<th>Number of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving</td>
<td>$25,000</td>
<td>2</td>
</tr>
<tr>
<td>Repair</td>
<td>35,000</td>
<td>2</td>
</tr>
<tr>
<td>Tool</td>
<td>10,000</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Production Departments</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembly</td>
<td>25</td>
</tr>
<tr>
<td>Bolting</td>
<td>12</td>
</tr>
</tbody>
</table>

The Repair Department supports the greatest number of departments, followed by the Tool Department. Overhead cost is allocated to departments based upon the number of employees.

If M&P uses the step-down method of allocation, the allocation from the Repair Department to the Tool Department would be

A. $7,000
B. $0
C. $11,667
D. $875

Committed costs are costs that

A. Were capitalized and amortized in prior periods.
B. Result from a clear measurable relationship between inputs and outputs.
C. Establish the current level of operating capacity and cannot be altered in the short run.
D. Management decides to incur in the current period that do not have a clear cause and effect relationship between inputs and outputs.
A systematic approach to reaching targeted cost levels during value chain analysis is known as

A. Activity analysis.
B. Value engineering.
C. Life-cycle costing.
D. Process value analysis.

Which one of the following statements is true regarding absorption costing and variable costing?

A. Overhead costs are treated in the same manner under both costing methods.
B. If finished goods inventory increases, absorption costing results in higher income.
C. Gross margins are the same under both costing methods.
D. Variable manufacturing costs are lower under variable costing.

The terms direct cost and indirect cost are commonly used in accounting. A particular cost might be considered a direct cost of a manufacturing department but an indirect cost of the product produced in the manufacturing department. Classifying a cost as either direct or indirect depends upon

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

The process model used in a theory of constraints (TOC) analysis is called

A. Drum-buffer-rope.
B. Just-in-time.
C. Materials requirements planning.
D. Lean production.

The most important criterion in accurate cost allocations is

A. Using homogeneous cost pools.
B. Using a simple allocation method.
C. Allocating fixed and variable costs by using the same allocation base.
D. Using multiple drivers for each cost pool.
A TOC analysis would recommend that Bombastic Bathrooms expend its limited resources mainly to produce which fixture?

A. Aluminum.
B. Brass.
C. Chrome.
D. Nickel.

Joint costs are useful for

A. Setting the selling price of a product.
B. Determining inventory cost for accounting purposes.
C. Evaluating management by means of a responsibility reporting system.
D. Determining whether to continue producing an item.

Atlas Foods produces the following three supplemental food products simultaneously through a refining process costing $93,000.

The joint products, Alfa and Betters, have a final selling price of $4 per pound and $10 per pound, respectively, after additional processing costs of $2 per pound of each product are incurred after the split-off point. Morefeed, a by-product, is sold at the split-off point for $3 per pound.

Assuming Atlas Foods does not inventory Morefeed, the by-product, the joint cost to be allocated to Betters using the net realizable value method is

A. $52,080
B. $31,000
C. $62,000
D. $30,000
[Fact Pattern #11]
Superb Hancock Company uses a process costing system in which all materials are added at the beginning of the first process. Conversion costs are added evenly throughout the process. During the past month, 10,000 units were started in production, and 8,000 were completed and transferred to the next department. There were no beginning inventories. The ending inventories were 70% complete at the end of the month. The company uses a weighted-average method for inventory valuation.

[33] Gleim #: 4.2.25 -- Source: Publisher

(Refers to Fact Pattern #11)
If Superb Hancock’s materials used in production cost $15,000 and its conversion costs incurred were $25,000, what is the value (rounded) of the ending work-in-process inventory in the first processing department?

A. $0  
B. $8,000  
C. $6,720  
D. $3,720

[34] Gleim #: 6.1.14 -- Source: Publisher

The physical reconfiguration of equipment that often accompanies the institution of a just-in-time manufacturing regime is described as the creation of

A. Cells.  
B. Kanbans.  
C. Electronic Data Interchange.  
D. Tickets.

[35] Gleim #: 5.2.62 -- Source: CMA 1293 3-6

(Refers to Fact Pattern #10)
Assuming Atlas Foods inventories Morefeed, the by-product, and that it incurs no additional processing costs for Alfa and Betters, the joint cost to be allocated to Alfa using the gross market value method is

A. $40,000  
B. $36,000  
C. $41,333  
D. $50,000

[36] Gleim #: 5.1.48 -- Source: CMA 0408 2-116

Dawn Company has significant fixed overhead costs in the manufacturing of its sole product, auto mufflers. For internal reporting purposes, in which one of the following situations would ending finished goods inventory be higher under direct (variable) costing rather than under absorption costing?

A. If more units were produced than were sold during a given year.  
B. None of these situations.  
C. If more units were sold than were produced during a given year.  
D. In all cases when ending finished goods inventory exists.
Nash Glassworks Company has budgeted fixed manufacturing overhead of $100,000 per month. The company uses absorption costing for both external and internal financial reporting purposes. Budgeted overhead rates for cost allocations for the month of April using alternative unit output denominator levels are shown in the next column.

<table>
<thead>
<tr>
<th>Capacity Levels</th>
<th>Budgeted Denominator Level (units of output)</th>
<th>Budgeted Overhead Cost Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>1,500,000</td>
<td>$.0667</td>
</tr>
<tr>
<td>Practical</td>
<td>1,250,000</td>
<td>.0800</td>
</tr>
<tr>
<td>Normal</td>
<td>775,000</td>
<td>.1290</td>
</tr>
<tr>
<td>Master-budget</td>
<td>800,000</td>
<td>.1250</td>
</tr>
</tbody>
</table>

Actual output for the month of April was 800,000 units of glassware.

[37] Gleim #: 5.3.87 -- Source: CMA 696 3-2

(Refers to Fact Pattern #12)
The choice of a production volume level as a denominator in the computation of fixed overhead rates can significantly affect reported net income. Which one of the following statements is true for Nash Glassworks Company if its beginning inventory is zero, production exceeded sales, and variances are adjustments to cost of goods sold? The choice of

A. Normal capacity as the denominator level will result in a lower net income amount than if any other capacity volume is chosen.
B. Master-budget capacity as the denominator level will result in a lower net income amount than if theoretical capacity is chosen.
C. Practical capacity as the denominator level will result in a higher net income amount than if normal capacity is chosen.
D. Practical capacity as the denominator level will result in a lower net income amount than if master-budget capacity is chosen.

[38] Gleim #: 5.2.68 -- Source: CMA 0408 2-118

The distinction between joint products and by-products is largely dependent on

A. Prime costs.
B. Salvage value.
C. Market value.
D. Historical costs.
Bright Co. manufactures light bulbs. The following salaries were included in Bright’s manufacturing costs for the year:

<table>
<thead>
<tr>
<th>Role</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine operators</td>
<td>$145,000</td>
</tr>
<tr>
<td>Factory supervisors</td>
<td>$60,000</td>
</tr>
<tr>
<td>Machinery mechanics</td>
<td>$25,000</td>
</tr>
</tbody>
</table>

What is the amount of Bright’s direct labor for the year?

A. $170,000  
B. $145,000  
C. $205,000  
D. $230,000

A.P. Hill Corporation uses a process-costing system. Products are manufactured in a series of three departments. The following data relate to Department Two for the month of February:

<table>
<thead>
<tr>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning work-in-process (70% complete)</td>
<td>10,000 units</td>
</tr>
<tr>
<td>Goods started in production</td>
<td>80,000 units</td>
</tr>
<tr>
<td>Ending work-in-process (60% complete)</td>
<td>5,000 units</td>
</tr>
</tbody>
</table>

The beginning work-in-process was valued at $66,000, consisting of $20,000 of transferred-in costs, $30,000 of materials costs, and $16,000 of conversion costs. Materials are added at the beginning of the process; conversion costs are added evenly throughout the process. Costs added to production during February were:

- Transferred-in: $16,000
- Materials used: $88,000
- Conversion costs: $50,000

All preliminary and final calculations are rounded to two decimal places.

Assume that the company uses the first-in, first-out (FIFO) method of inventory valuation. Under FIFO, how much materials cost did A.P. Hill Corporation transfer out of Department Two during February?

A. $111,350  
B. $114,615  
C. $112,500  
D. $88,000
A management accountant is about to prepare graphs of total variable cost and per-unit variable cost for use in a short-term planning model. Dollars will be depicted on the vertical axis; activity will be shown on the horizontal axis. How will these graphs appear under completion?

<table>
<thead>
<tr>
<th>Total Variable Cost</th>
<th>Per-Unit Variable Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Curvilinear, sloping upward to the right.</td>
<td>A line that basically parallels the horizontal axis, first decreasing and then increasing.</td>
</tr>
<tr>
<td>B. Straight line, sloping upward to the right.</td>
<td>Straight line, sloping upward to the right.</td>
</tr>
<tr>
<td>C. Straight line, sloping upward to the right.</td>
<td>Straight line, parallel to the horizontal axis.</td>
</tr>
<tr>
<td>D. Straight line, parallel to the horizontal axis.</td>
<td>Straight line, sloping upward to the right.</td>
</tr>
</tbody>
</table>

The contribution margin is the excess of revenues over

A. Manufacturing cost.  
B. Cost of goods sold.  
C. Direct cost.  
D. All variable costs.
Pelder Products Company manufactures two types of engineering diagnostic equipment used in construction. The two products are based on different technologies, x-ray and ultrasound, but are manufactured in the same factory. Pelder has computed the manufacturing cost of the x-ray and ultrasound products by adding together direct materials, direct labor, and overhead cost applied based on the number of direct labor hours. The factory has three overhead departments that support the single production line that makes both products. Budgeted overhead spending for the departments is as follows:

<table>
<thead>
<tr>
<th>Department</th>
<th>Engineering design</th>
<th>Material handling</th>
<th>Setup</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$6,000</td>
<td>$5,000</td>
<td>$3,000</td>
<td>$14,000</td>
</tr>
</tbody>
</table>

Pelder’s budgeted manufacturing activities and costs for the period are as follows:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Product</th>
<th>X-Ray</th>
<th>Ultrasound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units produced and sold</td>
<td>50</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Direct materials used</td>
<td>$5,000</td>
<td>$8,000</td>
<td></td>
</tr>
<tr>
<td>Direct labor hours used</td>
<td>100</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>Direct labor cost</td>
<td>$4,000</td>
<td>$12,000</td>
<td></td>
</tr>
<tr>
<td>Number of parts used</td>
<td>400</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>Number of engineering</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>changes</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Number of product setups</td>
<td>8</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

The budgeted cost to manufacture one ultrasound machine using the activity-based costing method is

A. $305
B. $293
C. $264
D. $225

Finley Painters Co., a painting contractor, maintains a job-order cost system. Job costs are accumulated by tracking the actual cost of paint and other materials used on each job, as well as the actual cost of wages earned by the painters on each job. In addition, overhead is applied to each job by using a predetermined rate based on the actual painters’ wages. Leonard Wayne, painter, earned $168 today by working on Job 08-45. In computing prime cost and conversion cost for Job 08-45, how would the wages earned today by Wayne be classified?

A. As a component of conversion cost but not as a component of prime cost.
B. As a component of both prime and conversion cost.
C. As a component of prime cost but not as a component of conversion cost.
D. As a component of neither prime cost nor conversion cost.
[45] Gleim #: 3.4.113 -- Source: CMA 1294 3-4
(Refers to Fact Pattern #2)
Research and development costs for Huron’s two new products are

A. Sunk costs.
B. Conversion costs.
C. Relevant costs.
D. Avoidable costs.

[46] Gleim #: 4.3.75 -- Source: CMA 1293 3-15

Multiple or departmental overhead rates are considered preferable to a single or plantwide overhead rate when

A. Individual cost drivers cannot accurately be determined with respect to cause-and-effect relationships.
B. Manufacturing is limited to a single product flowing through identical departments in a fixed sequence.
C. Various products are manufactured that do not pass through the same departments or use the same manufacturing techniques.
D. Cost drivers, such as direct labor, are the same over all processes.

[Fact Pattern #14]
Farber Company employs a normal (nonstandard) absorption cost system. The following information is from the financial records of the company for the year.

- Total manufacturing costs were $2,500,000.
- Cost of goods manufactured was $2,425,000.
- Applied factory overhead was 30% of total manufacturing costs.
- Factory overhead was applied to production at a rate of 80% of direct labor cost.
- Work-in-process inventory at January 1 was 75% of work-in-process inventory at December 31.

[47] Gleim #: 5.1.29 -- Source: CMA 1285 4-27
(Refers to Fact Pattern #14)
The carrying value of Farber Company’s work-in-process inventory at December 31 is

A. $75,000.
B. $100,000.
C. $225,000.
D. $300,000.
When allocating costs from one department to another, a dual-rate cost-allocation method may be used. The dual-rate cost-allocation method is most useful when

A. Two or more products are produced.
B. Two or more cost pools are to be allocated.
C. Costs are separated into variable-cost and fixed-cost subpools.
D. Two or more departments’ costs are to be allocated.

Starr Company uses material requirements planning (MRP) and manufactures a product with the following product structure tree.

Starr has just received an order for 100 units of X, the finished product. The company has 20 units of X, 100 units of B, and 50 units of E in inventory. How many units of E must Starr purchase in order to fill the order?

A. 800
B. 830
C. 1,000
D. 550

The following is taken from Fortech Company’s records for the fiscal year just ended:

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials used</td>
<td>$300,000</td>
</tr>
<tr>
<td>Direct labor</td>
<td>100,000</td>
</tr>
<tr>
<td>Variable manufacturing overhead</td>
<td>50,000</td>
</tr>
<tr>
<td>Fixed manufacturing overhead</td>
<td>80,000</td>
</tr>
<tr>
<td>Selling and admin. costs--variable</td>
<td>40,000</td>
</tr>
<tr>
<td>Selling and admin. costs--fixed</td>
<td>20,000</td>
</tr>
</tbody>
</table>
If Fortech Company uses variable costing, the inventoriable costs for the fiscal year are

A. $450,000  
B. $530,000  
C. $400,000  
D. $490,000

Because this allocation method recognizes that service departments often provide each other with interdepartmental service, it is theoretically considered to be the most accurate method for allocating service department costs to production departments. This method is the

A. Linear method.  
B. Reciprocal method.  
C. Direct method.  
D. Variable method.

A difference between standard costs used for cost control and budgeted costs

A. Cannot exist because they should be the same amounts.  
B. Can exist because standard costs represent what costs should be, whereas budgeted costs represent expected actual costs.  
C. Can exist because budgeted costs are historical costs, whereas standard costs are based on engineering studies.  
D. Can exist because standard costs must be determined after the budget is completed.

In allocating factory service department costs to producing departments, which one of the following items would most likely be used as an activity base?

A. Units of electric power consumed.  
B. Units of product sold.  
C. Salary of service department employees.  
D. Direct materials usage.
All of the following are likely to be used as a cost allocation base in activity-based costing except the

A. Number of different materials used to manufacture the product.
B. Number of vendors supplying the materials used to manufacture the product.
C. Units of materials used to manufacture the product.
D. Cost of materials used to manufacture the product.

Northcoast Manufacturing Company, a small manufacturer of parts used in appliances, has just completed its first year of operations. The company’s controller, Vic Trainor, has been reviewing the actual results for the year and is concerned about the application of factory overhead. Trainor is using the following information to assess its manufacturing operations.

- Northcoast’s equipment consists of several machines with a combined cost of $2,200,000 and no residual value. Each machine has an output of five units of product per hour and a useful life of 20,000 hours.
- Selected actual data of Northcoast’s operations for the year just ended is presented in the opposite column.

Northcoast Manufacturing Company

| Products manufactured | 650,000 units |
| Machine use           | 130,000 hours |
| Direct labor usage    | 35,000 hours  |
| Labor rate            | $15 per hour  |
| Total overhead        | $1,130,000    |
| Cost of goods sold    | $1,720,960    |
| Finished goods inventory (at year-end) | $430,240 |
| Work-in-process inventory (at year-end) | $0 |

- Total overhead is applied to direct labor cost using a predetermined plant-wide rate.
- The budgeted activity for the year included 20 employees, each working 1,800 productive hours per year to produce 540,000 units of product. The machines are highly automated, and each employee can operate two to four machines simultaneously. Normal activity is for each employee to operate three machines. Machine operators are paid $15 per hour.
- Budgeted overhead costs for the past year for various levels of activity are shown in the table below.

<table>
<thead>
<tr>
<th>Northcoast Manufacturing Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budgeted Annual Costs for Total Overhead</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Units of product</th>
<th>360,000</th>
<th>540,000</th>
<th>720,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor hours</td>
<td>30,000</td>
<td>36,000</td>
<td>42,000</td>
</tr>
<tr>
<td>Machine hours</td>
<td>72,000</td>
<td>108,000</td>
<td>144,000</td>
</tr>
<tr>
<td>Total overhead costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant supervision</td>
<td>$ 70,000</td>
<td>$ 70,000</td>
<td>$ 70,000</td>
</tr>
<tr>
<td>Plant rent</td>
<td>40,000</td>
<td>40,000</td>
<td>40,000</td>
</tr>
<tr>
<td>Equipment depreciation</td>
<td>288,000</td>
<td>432,000</td>
<td>576,000</td>
</tr>
<tr>
<td>Maintenance</td>
<td>42,000</td>
<td>51,000</td>
<td>60,000</td>
</tr>
<tr>
<td>Utilities</td>
<td>144,600</td>
<td>216,600</td>
<td>288,600</td>
</tr>
<tr>
<td>Indirect material</td>
<td>90,000</td>
<td>135,000</td>
<td>180,000</td>
</tr>
<tr>
<td>Other costs</td>
<td>11,200</td>
<td>16,600</td>
<td>22,000</td>
</tr>
<tr>
<td>Total</td>
<td>$685,800</td>
<td>$961,200</td>
<td>$1,236,600</td>
</tr>
</tbody>
</table>
**[55] Gleim #: 5.3.85 -- Source: Publisher**

(Refers to Fact Pattern #16)

If machine hours were used as the application base, what would be Northcoast’s predetermined overhead rate?

A. $10.46 per machine hour.
B. $7.39 per machine hour.
C. $8.90 per machine hour.
D. $8.69 per machine hour.

**[56] Gleim #: 4.3.68 -- Source: Publisher**

Davis Corporation has used a traditional cost accounting system to apply quality control costs uniformly to all products at a rate of 15% of direct labor cost. Monthly direct labor cost for its main product is $30,000. In an attempt to distribute quality control costs more equitably, Davis is considering activity-based costing (ABC). The monthly data shown below have been gathered for the main product. The three activities are (1) incoming materials inspection, (2) in-process inspection, and (3) product certification. Costs are to be allocated to each activity on the basis of cost drivers.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost Driver</th>
<th>Cost Rate</th>
<th>Quantity for Main Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Number of types of materials</td>
<td>$12 per type</td>
<td>12 types</td>
</tr>
<tr>
<td>(2)</td>
<td>Number of units</td>
<td>$0.14 per unit</td>
<td>17,500 units</td>
</tr>
<tr>
<td>(3)</td>
<td>Number of orders</td>
<td>$77 per order</td>
<td>30 orders</td>
</tr>
</tbody>
</table>

The monthly quality control cost assigned to the main product using ABC is

A. $404 higher than using the traditional system.
B. $4,500
C. $404 lower than using the traditional system.
D. $150 per order.

**[57] Gleim #: 6.1.11 -- Source: Publisher**

A firm that is deploying just-in-time manufacturing for the first time will

A. Maintain a carefully calibrated safety stock since interruptions in supply are inevitable.
B. Establish contracts with a few carefully chosen suppliers since an interruption in supply is extremely disruptive of the production process.
C. Acquire considerable computer processing capability to manage the demands of the data-dependent kanban inventory management system.
D. Establish contracts with many suppliers since an interruption in supply is extremely disruptive of the production process.
Ramseur Company employs a process costing system for its two-department manufacturing operation using the first-in, first-out (FIFO) inventory method. When units are completed in Department 1, they are transferred to Department 2 for completion. Inspection takes place in Department 2 immediately before the direct materials are added, when the process is 70% complete with respect to conversion. The specific identification method is used to account for lost units.

The number of defective units (that is, those failing inspection) is usually below the normal tolerance limit of 4% of units inspected. Defective units have minimal value, and the company sells them without any further processing for whatever it can. Generally, the amount collected equals, or slightly exceeds, the transportation cost. A summary of the manufacturing activity for Department 2, in units for the current month, is presented in the next column.

<table>
<thead>
<tr>
<th>Physical Flow (output units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning inventory (60% complete with respect to conversion)</td>
</tr>
<tr>
<td>Units transferred in from Department 1</td>
</tr>
<tr>
<td>Total units to account for</td>
</tr>
<tr>
<td>Units completed in Department 2 during the month</td>
</tr>
<tr>
<td>Units found to be defective at inspection</td>
</tr>
<tr>
<td>Ending inventory (80% complete with respect to conversion)</td>
</tr>
<tr>
<td>Total units accounted for</td>
</tr>
</tbody>
</table>

**[58] Gleim #: 4.2.42 -- Source: CIA 1196 III-86**

(Refers to Fact Pattern #17)

The units that failed inspection during the current month would be classified by Ramseur as

A. Normal waste.
B. Normal reworked units.
C. Normal scrap.
D. Abnormal spoilage.

**[59] Gleim #: 3.1.15 -- Source: Publisher**

Butler Co.'s production costs for July are

- Direct materials: $120,000
- Direct labor: 108,000
- Factory overhead: 6,000

What is the amount of costs traceable to specific products?

A. $234,000
B. $120,000
C. $108,000
D. $228,000
[60] Gleim #: 4.2.31 -- Source: Publisher
(Refers to Fact Pattern #1)
Under the FIFO method, Albany Mining’s total cost of units in the ending work-in-process inventory at May 31 is

A. $156,960
B. $153,264
C. $155,424
D. $154,800

[61] Gleim #: 6.1.12 -- Source: Publisher

Which of the following is not a benefit of lean production?

A. Reduced setup time.
B. Improved on-time delivery.
C. Lower central support costs.
D. Lower training costs.

[62] Gleim #: 3.1.37 -- Source: CMA 0408 2-089

Indirect and common costs often make up a significant portion of the cost of a product. All of the following are reasons for indirect cost allocation to cost objects except to

A. Reduce total costs identified with products.
B. Provide information for economic decision making.
C. Justify costs for reimbursement purposes.
D. Measure income and assets for external reporting purposes.

[63] Gleim #: 5.1.42 -- Source: CMA 0408 2-110

Bethany Company has just completed the first month of producing a new product but has not yet shipped any of this product. The product incurred variable manufacturing costs of $5,000,000, fixed manufacturing costs of $2,000,000, variable marketing costs of $1,000,000, and fixed marketing costs of $3,000,000. If Bethany uses the variable cost method to value inventory, the inventory value of the new product will be

A. $8,000,000
B. $6,000,000
C. $11,000,000
D. $5,000,000
Parker Company pays each member of its sales staff a salary as well as a commission on each unit sold. For the coming year, Parker plans to increase all salaries by 5% and to keep unchanged the commission paid on each unit sold. Because of increased demand, Parker expects the volume of sales to increase by 10%. How will the total cost of sales salaries and commissions change for the coming year?

A. Increase by 5% or less.
B. Increase by 10%.
C. Increase by more than 10%.
D. Increase by more than 5% but less than 10%.

Roberta Johnson is the manager of SleepWell Inn, one of a chain of motels located throughout the United States. An example of an operating cost at SleepWell that is semivariable is

A. Local yellow pages advertising.
B. The security guard’s salary.
C. Postage for reservation confirmations.
D. Electricity.

Zeta Company is preparing its annual profit plan. As part of its analysis of the profitability of individual products, the controller estimates the amount of overhead that should be allocated to the individual product lines from the information given as follows:

<table>
<thead>
<tr>
<th></th>
<th>Wall Mirrors</th>
<th>Specialty Windows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units produced</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Material moves per product line</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Direct labor hours per unit</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Budgeted materials handling costs</td>
<td>$50,000</td>
<td></td>
</tr>
</tbody>
</table>

Under activity-based costing (ABC), Zeta’s materials handling costs allocated to one unit of wall mirrors would be

A. $1,500
B. $2,500
C. $500
D. $1,000
Colt Company uses a weighted-average process cost system to account for the cost of producing a chemical compound. As part of production, Material B is added when the goods are 80% complete. Beginning work-in-process inventory for the current month was 20,000 units, 90% complete. During the month, 70,000 units were started in process, and 65,000 of these units were completed. There were no lost or spoiled units. If the ending inventory was 60% complete, the total equivalent units for Material B for the month was

A. 90,000 units.
B. 65,000 units.
C. 85,000 units.
D. 70,000 units.

A metal fabricating company uses a job-order cost system. The company expects to have small residual pieces of metal cuttings and shavings from all of its jobs. Although the metal pieces and shavings cannot be reused, they can be sold for scrap. The scrap metal is sold when a ton of scrap has been accumulated. During the current month, 100,000 pounds of aluminum was requisitioned at $1.50 per pound. Aluminum scrap recovery totaled 800 pounds. This amount of scrap is within normal allowances for the company’s operations. The market price for scrap aluminum fluctuates greatly and has ranged from $.25 to $.40 per pound during the last 12 months. The accumulated scrap aluminum was sold last month for $.35 per pound. The appropriate accounting treatment for the scrap aluminum recovered during the current month is to

A. Debit scrap inventory for $280 (800 lbs. @ $.35/lb.) and credit factory overhead control for $280.
B. Debit direct materials quantity variance for $1,200 (800 lbs. @ $1.50/lb.) and credit work-in-process inventory control for $1,200, with postings to each job from which the scrap metal was recovered.
C. For materiality reasons, no entry is made until the scrap metal is sold. At that time, debit cash and credit factory overhead control for the quantity sold at the current market price.
D. Debit direct materials quantity variance for $1,200 (800 lbs. @ $1.50/lb.) and credit factory overhead control for $1,200 at the time of recovery, and when the scrap is sold, debit cash and credit direct materials quantity variance for the quantity sold at the current market price.

Assuming Atlas Foods inventories Morefeed, the by-product, the joint cost to be allocated to Alfa, using the physical quantity method is

A. $60,000
B. $3,000
C. $31,000
D. $30,000
Southwood Industries uses a process-costing system and inspects its goods at the end of manufacturing. The inspection as of June 30 revealed the following information for the month of June:

- Good units completed: 16,000
- Normal spoilage (units): 300
- Abnormal spoilage (units): 100

Unit costs were: materials, $3.50 and conversion costs, $6.00. The number of units that Southwood would transfer to its finished goods inventory and the related cost of these units are:

<table>
<thead>
<tr>
<th>Units Transferred</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. 16,300</td>
<td>$154,850</td>
</tr>
<tr>
<td>B. 16,000</td>
<td>$152,800</td>
</tr>
<tr>
<td>C. 16,000</td>
<td>$155,800</td>
</tr>
<tr>
<td>D. 16,000</td>
<td>$154,850</td>
</tr>
</tbody>
</table>

The controller of JoyCo has requested a quick estimate of the manufacturing supplies needed for the Morton Plant for the month of July when production is expected to be 470,000 units to meet the ending inventory requirements and sales of 475,000 units. JoyCo’s budget analyst has the following actual data for the last 3 months:

<table>
<thead>
<tr>
<th>Month</th>
<th>Production in Units</th>
<th>Manufacturing Supplies</th>
</tr>
</thead>
<tbody>
<tr>
<td>March</td>
<td>450,000</td>
<td>$723,060</td>
</tr>
<tr>
<td>April</td>
<td>540,000</td>
<td>853,560</td>
</tr>
<tr>
<td>May</td>
<td>480,000</td>
<td>766,560</td>
</tr>
</tbody>
</table>

Using these data and the high-low method to develop a cost estimating equation, the estimate of needed manufacturing supplies for July would be:

A. $749,180
B. $752,060
C. $681,500
D. $652,500
[Fact Pattern #19]
Longstreet, Inc’s. Photocopying Department provides photocopy services for both Departments A and B and has prepared its total budget using the following information for next year:

- Fixed costs: $100,000
- Available capacity: 4,000,000 pages
- Budgeted usage:
  - Department A: 1,200,000 pages
  - Department B: 2,400,000 pages
- Variable cost: $0.03 per page

Assume that Longstreet uses the dual-rate cost allocation method, and the allocation basis is budgeted usage for fixed costs and actual usage for variable costs. How much cost would be allocated to Department A during the year if actual usage for Department A is 1,400,000 pages and actual usage for Department B is 2,100,000 pages?

A. $72,000
B. $82,000
C. $42,000
D. $75,333

[Fact Pattern #20]
Fabricating and Finishing are the two production departments of Ewell Company. Building Operations and Information Services are service departments that provide support to the two production departments as well as to each other. Ewell employs departmental overhead rates in the two production departments to allocate the service department costs to the production departments. Square footage is used to allocate Building Operations, and computer time is used to allocate Information Services. The costs of the service departments and relevant operating data for the departments are as follows:

<table>
<thead>
<tr>
<th>Costs:</th>
<th>Building Operations</th>
<th>Information Services</th>
<th>Fabricating</th>
<th>Finishing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor and benefit costs</td>
<td>$200,000</td>
<td>$300,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other traceable costs</td>
<td>350,000</td>
<td>900,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$550,000</td>
<td>$1,200,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Operating Data:
- Square feet occupied:
  - Fabricating: 5,000
  - Information Services: 10,000
  - Finishing: 16,000
  - Building Operations: 24,000
- Computer time (in hours):
  - Fabricating: 200
  - Information Services: 1,200
  - Finishing: 600
  - Building Operations: 200
[73] Gleim #: 5.4.122 -- Source: CIA 596 III-83
(Refers to Fact Pattern #20)
If Ewell employs the step method to allocate the costs of the service departments and if Information Services costs are allocated first, then the total amount of service department costs (Information Services and Building Operations) allocated to Finishing would be

A. $657,000
B. $762,000
C. $730,000
D. $681,600

[74] Gleim #: 6.3.27 -- Source: Publisher
The immediate goal of a theory of constraints (TOC) analysis is to

A. Maximize the efficiency of the entire production process.
B. Minimize direct materials cost.
C. Maximize contribution margin through the constraint.
D. Smooth production flow to eliminate backup in the system.

[75] Gleim #: 5.3.97 -- Source: Publisher
Which concept of capacity applies the least amount of overhead to units of production?

A. Minimum volume.
B. Theoretical capacity.
C. Normal volume.
D. Practical capacity.

[76] Gleim #: 5.1.12 -- Source: CMA 1290 3-24
(Refers to Fact Pattern #6)
The value of Valyn Corporation’s actual ending finished goods inventory on the absorption costing basis was

A. $1,200,000
B. $1,350,000
C. $900,000
D. $1,220,000
When allocating service department costs to production departments, the method that does not consider different cost behavior patterns is the

A. Single-rate method.
B. Reciprocal method.
C. Step method.
D. Direct method.

A standard-cost system may be used in

<table>
<thead>
<tr>
<th></th>
<th>Job-Order Process Costing</th>
<th>Activity-Based Costing</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>B. Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>C. No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>D. Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

The numerator of the overhead application rate equals

A. Actual overhead costs.
B. The actual activity level.
C. Estimated overhead costs.
D. The estimated activity level.

The difference between the $99.98 suggested selling price for Huron’s video disc cleaning unit and its total unit cost of $88.00 represents the unit’s

A. Gross profit margin ratio.
B. Contribution margin ratio.
C. Gross profit.
D. Contribution.
When compared with normal spoilage, abnormal spoilage

A. Arises more frequently from factors that are inherent in the manufacturing process.
B. Is given the same accounting treatment as normal spoilage.
C. Is generally thought to be more controllable by production management than normal spoilage.
D. Is not typically influenced by the “tightness” of production standards.

Which one of the following considers the impact of fixed overhead costs?

A. Direct costing.
B. Marginal costing.
C. Variable costing.
D. Full absorption costing.

In joint-product costing and analysis, which one of the following costs is relevant when deciding the point at which a product should be sold to maximize profits?

A. Sales salaries for the period when the units were produced.
B. Joint costs to the split-off point.
C. Purchase costs of the materials required for the joint products.
D. Separable costs after the split-off point.

Annual overhead application rates are used to

A. Budget overhead.
B. Treat overhead as period costs.
C. Simulate seasonal variability of activity levels.
D. Smooth seasonal variability of overhead costs.

When allocating service and administrative costs, the least useful criterion as a basis for allocation is

A. Ability to bear.
B. Cause.
C. Fairness.
D. Benefit.
Tempo Company produces three products from a joint process. The three products are sold after further processing as there is no market for any of the products at the split-off point. Joint costs per batch are $315,000. Other product information is shown below.

<table>
<thead>
<tr>
<th>Units produced per batch</th>
<th>Product A</th>
<th>Product B</th>
<th>Product C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20,000</td>
<td>30,000</td>
<td>50,000</td>
</tr>
<tr>
<td>Further processing and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>marketing cost per unit</td>
<td>$.70</td>
<td>$3.00</td>
<td>$1.72</td>
</tr>
<tr>
<td>Final sales value per unit</td>
<td>5.00</td>
<td>6.00</td>
<td>7.00</td>
</tr>
</tbody>
</table>

If Tempo uses the net realizable value method of allocating joint costs, how much of the joint costs will be allocated to each unit of Product C?

A. $2.65  
B. $3.15  
C. $2.10  
D. $3.78

A fixed cost that would be considered a direct cost is

A. A production supervisor’s salary when the cost objective is the Production Department.  
B. The rental cost of a warehouse to store inventory when the cost objective is the Purchasing Department.  
C. A cost accountant’s salary when the cost objective is a unit of product.  
D. Board of directors’ fees when the cost objective is the Marketing Department.

Which of the following statements is false with respect to best practices analysis?

A. Best practice analysis is a way or method of accomplishing a business function or process that is considered to be superior to all other known methods.  
B. The concept of benchmarking is incompatible with best practices analysis.  
C. Best practices analysis assumes that a lesson learned from one area of a business can be passed on to another area of the business or between businesses.  
D. The balanced scorecard facilitates best practice analysis.

The cost of statistical quality control in a product quality cost system is categorized as a(n)

A. Internal failure cost.  
B. External failure cost.  
C. Training cost.  
D. Appraisal cost.
“Committed costs” are

A. Costs which are governed mainly by past decisions that established the present levels of operating and organizational capacity and which only change slowly in response to small changes in capacity.
B. Costs which management decides to incur in the current period to enable the company to achieve objectives other than the filling of orders placed by customers.
C. Amortization of costs which were capitalized in previous periods.
D. Costs which are likely to respond to the amount of attention devoted to them by a specified manager.

Antlers, Inc. produces a single product that sells for $150 per unit. The product is processed through the Cutting and Finishing Departments. Additional data for these departments are as follows:

<table>
<thead>
<tr>
<th></th>
<th>Cutting</th>
<th>Finishing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual capacity</td>
<td>180,000 units</td>
<td>135,000 units</td>
</tr>
<tr>
<td>(36,000 direct labor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hours available in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>each department)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current production</td>
<td>108,000 units</td>
<td>108,000 units</td>
</tr>
<tr>
<td>rate (annualized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed manufacturing</td>
<td>$1,296,000</td>
<td>$1,944,000</td>
</tr>
<tr>
<td>overhead</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed selling and</td>
<td>864,000</td>
<td>1,296,000</td>
</tr>
<tr>
<td>administrative expense</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct materials cost</td>
<td>45</td>
<td>15</td>
</tr>
<tr>
<td>per unit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The current production rate is the budgeted rate for the entire year. Direct labor employees earn $20 per hour, and the company has a “no layoff” period in effect. What is the amount of the throughput contribution per unit as computed using the theory of constraints?

A. $76.67
B. $90.00
C. $26.67
D. $46.67
Mack, Inc. uses a weighted-average process costing system. Direct materials and conversion costs are incurred evenly during the production process. During the month of October, the following costs were incurred:

- Direct materials $39,700
- Conversion costs 70,000

The work-in-process inventory as of October 1 consisted of 5,000 units, valued at $4,300, that were 20% complete. During October, 27,000 units were transferred out. Inventory as of October 31 consisted of 3,000 units that were 50% complete. The weighted-average inventory cost per unit completed in October was

A. $3.99
B. $3.88
C. $4.00
D. $3.51

Practical capacity as a plant capacity concept

A. Assumes all personnel and equipment will operate at peak efficiency and total plant capacity will be used.
B. Includes consideration of idle time caused by both limited sales orders and human and equipment inefficiencies.
C. Is the production volume that is necessary to meet sales demand for the next year.
D. Does not consider idle time caused by inadequate sales demand.

A company’s product has an expected 4-year life cycle from research, development, and design through its withdrawal from the market. Budgeted costs are:

- Upstream costs (R&D, design) $2,000,000
- Manufacturing costs 3,000,000
- Downstream costs (marketing, distribution, customer service) 1,200,000
- After-purchase costs 1,000,000

The company plans to produce 200,000 units and price the product at 125% of the whole-life unit cost. Thus, the budgeted unit selling price is

A. $45
B. $15
C. $36
D. $31
[95] Gleim #: 3.1.2 -- Source: CMA 697 3-1
Which one of the following best describes direct labor?

A. A period cost.
B. A prime cost.
C. Both a product cost and a prime cost.
D. A product cost.

[96] Gleim #: 5.1.2 -- Source: CMA 1273 4-2
When a firm prepares financial reports by using absorption costing,

A. Decreased output and constant sales result in increased profits.
B. Profits will always decrease with decreases in sales.
C. Profits will always increase with increases in sales.
D. Profits may decrease with increased sales even if there is no change in selling prices and costs.

[97] Gleim #: 5.1.24 -- Source: CMA 0205 2-19
Huntington Corporation pays bonuses to its managers based on operating income, as calculated under variable costing. It is now 2 months before year-end, and earnings have been depressed for some time. Which one of the following actions should Wanda Richards, production manager, definitely implement if she desires to maximize her bonus for this year?

A. Step up production so that more manufacturing costs are deferred into inventory.
B. Cut $2.3 million of advertising and marketing costs.
C. Implement, with the aid of the controller, an activity-based costing and activity-based management system.
D. Postpone $1.8 million of discretionary equipment maintenance until next year.

[98] Gleim #: 6.5.51 -- Source: Publisher
The term referring to the excess of the price of a good over its cost is

A. Profit margin.
B. Value-added transfer.
C. Contribution margin.
D. Consumer surplus.
[Fact Pattern #21]
Dremmon Corporation uses a standard cost accounting system. Data for the last fiscal year are as follows:

<table>
<thead>
<tr>
<th>Units</th>
<th>Per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning inventory of finished goods</td>
<td>100</td>
</tr>
<tr>
<td>Production during the year</td>
<td>700</td>
</tr>
<tr>
<td>Sales</td>
<td>750</td>
</tr>
<tr>
<td>Ending inventory of finished goods</td>
<td>50</td>
</tr>
<tr>
<td>Product selling price</td>
<td>$200</td>
</tr>
<tr>
<td>Standard variable manufacturing cost</td>
<td>90</td>
</tr>
<tr>
<td>Standard fixed manufacturing cost</td>
<td>20*</td>
</tr>
<tr>
<td>Budgeted selling and administrative costs (all fixed)</td>
<td>$45,000</td>
</tr>
</tbody>
</table>

*Denominator level of activity is 750 units for the year.

There were no price, efficiency, or spending variances for the year, and actual selling and administrative expenses equaled the budget amount. Any volume variance is written off to cost of goods sold in the year incurred. There are no work-in-process inventories.

[99] Gleim #: 5.1.40 -- Source: CMA 0408 2-108

(Refers to Fact Pattern #21)
If Dremmon uses variable costing, its operating income earned in the last fiscal year was

A. $21,500  
B. $28,000  
C. $22,500  
D. $31,000

[Fact Pattern #22]
Tucariz Company processes Duo into two joint products, Big and Mini. Duo is purchased in 1,000 gallon drums for $2,000. Processing costs are $3,000 to process the 1,000 gallons of Duo into 800 gallons of Big and 200 gallons of Mini. The selling price is $9 per gallon for Big and $4 per gallon for Mini. Big can be processed further into 600 gallons of Giant if $1,000 of additional processing costs are incurred. Giant can be sold for $17 per gallon.

[100] Gleim #: 5.2.71 -- Source: CMA 0408 2-121

(Refers to Fact Pattern #22)
If Tucariz uses the net realizable value method to allocate costs to the joint products, the total cost of producing Giant is

A. $5,564  
B. $4,600  
C. $5,600  
D. $5,520
[101] Gleim #: 5.1.28 -- Source: CMA 1285 4-26
(Refers to Fact Pattern #14)
Total cost of direct material used by Farber Company for the year is

A. $937,500  
B. $750,000  
C. $812,500  
D. $1,150,000

[102] Gleim #: 4.1.2 -- Source: Publisher
Felicity Corporation manufactures a specialty line of dresses using a job-order costing system. During January, the following costs were incurred in completing job J-1:

<table>
<thead>
<tr>
<th>Cost Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td>$27,400</td>
</tr>
<tr>
<td>Direct labor</td>
<td>9,600</td>
</tr>
<tr>
<td>Administrative costs</td>
<td>2,800</td>
</tr>
<tr>
<td>Selling costs</td>
<td>11,200</td>
</tr>
</tbody>
</table>

Factory overhead was applied at the rate of $50 per direct labor hour, and job J-1 required 400 direct labor hours. If job J-1 resulted in 4,000 good dresses, the cost of goods sold per unit is

A. $17.75  
B. $14.95  
C. $9.25   
D. $14.25
Believing that its traditional cost system may be providing misleading information, Farragut Manufacturing is considering an activity based costing (ABC) approach. It now employs a full cost system and has been applying its manufacturing overhead on the basis of machine hours.

Farragut plans on using 50,000 direct labor hours and 30,000 machine hours in the coming year. The following data show the manufacturing overhead that is budgeted.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost Driver</th>
<th>Budgeted Activity</th>
<th>Budgeted Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material handling</td>
<td>No. of parts handled</td>
<td>6,000,000</td>
<td>$ 720,000</td>
</tr>
<tr>
<td>Setup costs</td>
<td>No. of setups</td>
<td>750</td>
<td>315,000</td>
</tr>
<tr>
<td>Machining costs</td>
<td>Machine hours</td>
<td>30,000</td>
<td>540,000</td>
</tr>
<tr>
<td>Quality control</td>
<td>No. of batches</td>
<td>500</td>
<td>225,000</td>
</tr>
<tr>
<td>Total manufacturing overhead cost:</td>
<td></td>
<td></td>
<td>$1,800,000</td>
</tr>
</tbody>
</table>

Cost, sales, and production data for one of Farragut’s products for the coming year are as follows:

Prime costs:
- Direct material cost per unit $4.40
- Direct labor cost per unit 
  \[0.05 \text{ DLH} \times \$15.00/\text{DLH}\]
  \[= 0.75\]
- Total prime cost $5.15

Sales and production data:
- Expected sales 20,000 units
- Batch size 5,000 units
- Setups 2 per batch
- Total parts per finished unit 5 parts
- Machine hours required 80 MH per batch

[103] Gleim #: 4.3.74 -- Source: CIA 1195 III-94

(Refers to Fact Pattern #23)

If Farragut employs an activity-based costing system, the cost per unit for the product described for the coming year would be

A. $6.00
B. $6.30
C. $6.21
D. $6.08
Fact Pattern #24
Marlan Manufacturing produces a product that passes through two departments. The units from the molding department are completed in the assembly department. The units are completed in assembly by adding the remaining direct materials when the units are 60% complete with respect to conversion costs. Conversion costs are added proportionately in assembly. The production activity in the assembly department for the current month is presented as follows. Marlan uses the FIFO (first-in, first-out) inventory method in its process cost system.

<table>
<thead>
<tr>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning inventory units (25% complete with respect to conversion costs)</td>
<td>8,000</td>
</tr>
<tr>
<td>Units transferred in from the molding department during the month</td>
<td>42,000</td>
</tr>
<tr>
<td>Units to account for</td>
<td>50,000</td>
</tr>
<tr>
<td>Units completed and transferred to finished goods inventory</td>
<td>38,000</td>
</tr>
<tr>
<td>Ending inventory units (40% complete with respect to conversion costs)</td>
<td>12,000</td>
</tr>
<tr>
<td>Units accounted for</td>
<td>50,000</td>
</tr>
</tbody>
</table>

Gleim #: 4.2.45 -- Source: CMA 692 3-2
(Refers to Fact Pattern #24)

The equivalent units transferred from the molding department to the assembly department for the current month are

A. 40,800 units.
B. 30,000 units.
C. 42,000 units.
D. 38,000 units.

Gleim #: 3.1.5 -- Source: CMA 696 3-18

Conversion costs do not include

A. Direct materials.
B. Indirect labor.
C. Indirect materials.
D. Depreciation.

Gleim #: 5.1.16 -- Source: CMA 1290 3-26

(Refers to Fact Pattern #6)
Valyn Corporation’s actual manufacturing contribution margin calculated on the variable costing basis was

A. $4,935,000
B. $4,910,000
C. $4,375,000
D. $5,625,000
A cost that may be eliminated by performing an activity more efficiently is a(n)

A. Opportunity cost.
B. Cost driver.
C. Avoidable cost.
D. Indirect cost.

In contrast to just-in-time manufacturing, materials requirements planning is a

A. Push system.
B. Automated system.
C. Pull system.
D. Manual system.

A company wants to determine its marketing costs for budgeting purposes. Activity measures and costs incurred for 4 months of the current year are presented in the table below. Advertising is considered to be a discretionary cost. Salespersons are paid monthly salaries plus commissions. The sales force was increased from 20 to 21 individuals during the month of May.

<table>
<thead>
<tr>
<th>Activity measures:</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales orders</td>
<td>2,000</td>
<td>1,800</td>
<td>2,400</td>
<td>2,300</td>
</tr>
<tr>
<td>Units sold</td>
<td>55,000</td>
<td>60,000</td>
<td>70,000</td>
<td>65,000</td>
</tr>
<tr>
<td>Dollar sales</td>
<td>$1,150,000</td>
<td>$1,200,000</td>
<td>$1,330,000</td>
<td>$1,275,000</td>
</tr>
</tbody>
</table>

| Marketing costs: | | | |
|------------------|------------------|
| Advertising      | Sales salaries   |
| $ 190,000        | 20,000           |
| $ 190,000        | 20,000           |
| $ 190,000        | 20,000           |
| $ 190,000        | 20,000           |

| Commissions      | Shipping costs   |
| 23,000           | 93,000           |
| 24,000           | 100,000          |
| 26,600           | 114,000          |
| 25,500           | 107,000          |

| Total costs      | $ 326,000        |
| $ 344,000        | $ 351,600        |
| $ 343,500        |                  |

(Refers to Fact Pattern #25)

In relation to the dollar amount of sales, which of the following cost classifications is appropriate for advertising and sales salaries costs?

A. Variable cost Fixed cost
B. Fixed cost Variable cost
C. Fixed cost Fixed cost
D. Mixed cost Mixed cost
[110] Gleim #: 6.3.26 -- Source: Publisher

Under throughput costing, the only cost considered to be truly variable in the short run is

A. Direct materials.
B. Direct labor.
C. All manufacturing costs are considered variable.
D. Manufacturing overhead.

[Fact Pattern #26]

Madtack Company’s beginning and ending inventories for the month of November are

<table>
<thead>
<tr>
<th>November 1</th>
<th>November 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td>$ 67,000</td>
</tr>
<tr>
<td>Work-in-process</td>
<td>145,000</td>
</tr>
<tr>
<td>Finished goods</td>
<td>85,000</td>
</tr>
</tbody>
</table>

Production data for the month of November follows:

<table>
<thead>
<tr>
<th></th>
<th>November 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct labor</td>
<td>$200,000</td>
</tr>
<tr>
<td>Actual overhead</td>
<td>132,000</td>
</tr>
<tr>
<td>Direct materials purchased</td>
<td>163,000</td>
</tr>
<tr>
<td>Transportation in</td>
<td>4,000</td>
</tr>
<tr>
<td>Purchase returns and allowances</td>
<td>2,000</td>
</tr>
</tbody>
</table>

Madtack uses one overhead control account and charges overhead to production at 70% of direct labor cost. The company does not formally recognize over/underapplied overhead until year-end.

[111] Gleim #: 3.3.85 -- Source: CMA 1295 3-21

(Refers to Fact Pattern #26)

Madtack Company’s cost of goods transferred to finished goods inventory for November is

A. $469,000
B. $484,000
C. $495,000
D. $477,000

[112] Gleim #: 5.3.104 -- Source: CMA 0408 2-147

Young Company is beginning operations and is considering three alternative ways in which to allocate manufacturing overhead to individual units produced. Young can use a plantwide rate, departmental rates, or activity-based costing. Young will produce many types of products in its single plant, and not all products will be processed through all departments. In which one of the following independent situations would reported net income for the first year be the same regardless of which overhead allocation method had been selected?

A. The sales mix does not vary from the mix that was budgeted.
B. All manufacturing overhead is a fixed cost.
C. All production costs approach those costs that were budgeted.
D. All ending inventory balances are zero.
Using the weighted-average method, Albany Mining’s equivalent unit cost of materials for May is

A. $2.30  
B. $2.25  
C. $2.06  
D. $2.51

Rosecrans Manufacturing produces kerosene lanterns. The company can sell all of its output. Each unit sells for $120, and direct materials costing $48 per unit are added at the start of the first operation. Other variable costs are immaterial. Production data for one of its products is presented below:

<table>
<thead>
<tr>
<th>Operation</th>
<th>Total capacity per year</th>
<th>Total output per year</th>
<th>Fixed cost of operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation 1</td>
<td>200,000 units</td>
<td>150,000 units</td>
<td>$1,200,000</td>
</tr>
<tr>
<td>Operation 2</td>
<td>150,000 units</td>
<td>150,000 units</td>
<td>$1,800,000</td>
</tr>
<tr>
<td>Operation 3</td>
<td>180,000 units</td>
<td>150,000 units</td>
<td>$2,250,000</td>
</tr>
</tbody>
</table>

Operation 1 produces 500 unsalable units and Operation 2 also produces 500 unsalable units. The relevant cost of the unsalable units to Rosecrans is

A. $84,000  
B. $60,000  
C. $24,000  
D. $120,000

If the beginning balance for May of the materials inventory account was $27,500, the ending balance for May is $28,750, and $128,900 of materials were used during the month, the materials purchased during the month cost

A. $130,150  
B. $157,650  
C. $127,650  
D. $101,400
[116] Gleim #: 4.2.11 -- Source: Publisher
(Refers to Fact Pattern #13)
Under the weighted-average method, how much materials cost did A.P. Hill Corporation transfer out of Department Two during February?

A. $93,500  
B. $111,350  
C. $88,000  
D. $112,500

[117] Gleim #: 4.2.13 -- Source: Publisher
(Refers to Fact Pattern #13)
Assume that the company uses the first-in, first-out (FIFO) method of inventory valuation. Under FIFO, how much conversion cost did A.P. Hill Corporation transfer out of Department Two during February?

A. $63,750  
B. $74,500  
C. $66,000  
D. $64,360

[118] Gleim #: 3.2.63 -- Source: CMA 0408 2-092
When identifying fixed and variable costs, which one of the following is a typical assumption concerning cost behavior?

A. Cost behavior is assumed to be realistic for all levels of activity from zero to maximum capacity.  
B. General and administrative costs are assumed to be variable costs.  
C. Total costs are assumed to be linear when plotted on a graph.  
D. The relevant time period is assumed to be 5 years.

[Fact Pattern #28]
Dixon Porter Co., which uses life cycle costing, is considering the manufacture of a product with a 5-year life cycle that will require spending $1,000,000 for R&D and $2,000,000 for design and testing. Annual fixed and unit variable costs for the product and projected average annual unit sales at three selling prices are given below:

<table>
<thead>
<tr>
<th>Sales Price</th>
<th>Fixed</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>$750</td>
<td>$1,500,000</td>
<td>$100</td>
</tr>
<tr>
<td>$900</td>
<td>1,500,000</td>
<td>100</td>
</tr>
<tr>
<td>$1,125</td>
<td>180,000</td>
<td>40</td>
</tr>
</tbody>
</table>

At the highest price, R&D costs will increase by $500,000 and design and testing costs by $1,000,000. Moreover, fixed customer service costs will rise by $30,000 per year, and variable customer service costs will rise by $25 per unit. At the lowest price, fixed marketing and distribution costs will decrease by $30,000 per year.
Which unit sales price should Dixon Porter select to obtain the maximum profit over the product’s 5-year life cycle?

A. $750  
B. $900  
C. $1,125  
D. No profit can be earned.

Gram Co. develops computer programs to meet customers’ special requirements. How should Gram categorize payments to employees who develop these programs?

<table>
<thead>
<tr>
<th>Direct Costs</th>
<th>Value-Adding Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. No</td>
<td>Yes</td>
</tr>
<tr>
<td>B. No</td>
<td>No</td>
</tr>
<tr>
<td>C. Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>D. Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

In Belk Co.’s just-in-time production system, costs per setup were reduced from $28 to $2. In the process of reducing inventory levels, Belk found that there were fixed facility and administrative costs that previously had not been included in the carrying cost calculation. The result was an increase from $8 to $32 per unit per year. What were the effects of these changes on Belk’s economic lot size and relevant costs?

<table>
<thead>
<tr>
<th>Lot Size</th>
<th>Relevant Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Increase</td>
<td>Decrease</td>
</tr>
<tr>
<td>B. Decrease</td>
<td>Decrease</td>
</tr>
<tr>
<td>C. Decrease</td>
<td>Increase</td>
</tr>
<tr>
<td>D. Increase</td>
<td>Increase</td>
</tr>
</tbody>
</table>

Materials requirements planning (MRP) sometimes results in

A. Longer idle periods.  
B. Decreased setup costs.  
C. Less flexibility in responding to customers.  
D. Increased inventory carrying costs.
Which of the following is the best example of a variable cost?

A. Cost of raw material.
B. Property taxes.
C. Interest charges.
D. The corporate president’s salary.

Tocon Company produces two components: A-1 and A-2. The unit throughput contribution margins for A-1 and A-2 are $150 and $300, respectively. Each component must proceed through two processes: Operation 1 and Operation 2. The capacity of Operation 1 is 180 machine hours, with A-1 and A-2 requiring 1 hour and 3 hours, respectively. Furthermore, Tocon can sell only 45 units of A-1 and 100 units of A-2. However, Tocon is considering expanding Operation 1’s capacity by 90 machine hours at a cost of $80 per hour. Assuming that Operation 2 has sufficient capacity to handle any additional output from Operation 1, Tocon should produce

<table>
<thead>
<tr>
<th>Units of A-1</th>
<th>Units of A-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. 45</td>
<td>100</td>
</tr>
<tr>
<td>B. 180</td>
<td>0</td>
</tr>
<tr>
<td>C. 0</td>
<td>60</td>
</tr>
<tr>
<td>D. 45</td>
<td>75</td>
</tr>
</tbody>
</table>

During the month of May, Robinson Corporation sold 1,000 units. The cost per unit for May was as follows:

<table>
<thead>
<tr>
<th>Cost per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
</tr>
<tr>
<td>$ 5.50</td>
</tr>
<tr>
<td>Direct labor</td>
</tr>
<tr>
<td>3.00</td>
</tr>
<tr>
<td>Variable manufacturing overhead</td>
</tr>
<tr>
<td>1.00</td>
</tr>
<tr>
<td>Fixed manufacturing overhead</td>
</tr>
<tr>
<td>1.50</td>
</tr>
<tr>
<td>Variable administrative costs</td>
</tr>
<tr>
<td>.50</td>
</tr>
<tr>
<td>Fixed administrative costs</td>
</tr>
<tr>
<td>3.50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
<tr>
<td><strong>$15.00</strong></td>
</tr>
</tbody>
</table>

May’s income using absorption costing was $9,500. The income for May, if variable costing had been used, would have been $9,125. The number of units Robinson produced during May was

A. 750
B. 1,250
C. 925
D. 1,075
At a unit price of $750, Dixon Porter’s life cycle costs are

A. $27,000,000
B. $28,350,000
C. $7,620,000
D. $8,070,000

Normal costing systems are said to offer a user several distinct benefits when compared with actual costing systems. Which one of the following is not a benefit associated with normal costing systems?

A. A more economical way of attaching overhead to a job or product.
B. Improved accuracy of job and product costing.
C. More timely costing of jobs and products.
D. A smoothing of product costs throughout the period.

Kimbeth Manufacturing uses a process cost system to manufacture Dust Density Sensors for the mining industry. The following information pertains to operations for the month of May.

<table>
<thead>
<tr>
<th>Units</th>
<th>Beginning work-in-process inventory, May 1</th>
<th>16,000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Started in production during May</td>
<td>100,000</td>
</tr>
<tr>
<td></td>
<td>Completed production during May</td>
<td>92,000</td>
</tr>
<tr>
<td></td>
<td>Ending work-in-process inventory, May 31</td>
<td>24,000</td>
</tr>
</tbody>
</table>

The beginning inventory was 60% complete for materials and 20% complete for conversion costs. The ending inventory was 90% complete for materials and 40% complete for conversion costs.

Costs pertaining to the month of May are as follows:

- Beginning inventory costs are materials, $54,560; direct labor, $20,320; and overhead, $15,240.
- Costs incurred during May are materials used, $468,000; direct labor, $182,880; and overhead, $391,160.

Using the FIFO method, Kimbeth’s equivalent unit conversion cost for May is

A. $5.65
B. $5.83
C. $6.00
D. $6.20
[129] Gleim #: 3.1.21 -- Source: CIA 1194 III-42
Using absorption costing, fixed manufacturing overhead costs are best described as

A. Direct period costs.
B. Direct product costs.
C. Indirect product costs.
D. Indirect period costs.

[130] Gleim #: 5.4.132 -- Source: CMA 0408 2-154
The management of ROX Company wishes to encourage all other departments to use the legal department, as circumstances warrant. To accomplish this, legal department costs should be

A. Allocated to users on the basis of the budgeted cost of actual hours used.
B. Absorbed as a corporate expense.
C. Allocated to users on the basis of the actual cost of hours used.
D. Allocated to users on the basis of standard cost for the type of service provided.

[131] Gleim #: 4.2.48 -- Source: CMA 0408 2-356
A major advantage of the first-in, first-out (FIFO) process-costing method over the weighted-average process-costing method is

A. That only ending inventory costs need to be separately computed when using the FIFO method.
B. That inventories are eliminated from consideration in the FIFO method.
C. The simplicity of the FIFO method.
D. That current period cost per unit is highlighted under the FIFO method.

[132] Gleim #: 6.3.29 -- Source: Publisher
Below are data concerning the hours spent by a manufacturer’s two products in its two processes.

<table>
<thead>
<tr>
<th></th>
<th>Assembly</th>
<th>Painting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product A</td>
<td>21</td>
<td>14</td>
</tr>
<tr>
<td>Product B</td>
<td>32</td>
<td>8</td>
</tr>
</tbody>
</table>

The constraint is

A. The assembly activity.
B. Product B in Assembly.
C. Cannot be determined from the information given.
D. Product A.
Companies characterized by the production of basically homogeneous products will most likely use which of the following methods for the purpose of averaging costs and providing management with unit-cost data?

A. Direct costing.
B. Job-order costing.
C. Process costing.
D. Absorption costing.

The manufacturing concept that relates demand forecasts to specific dates for completion is

A. Materials requirements planning.
B. Master production schedule.
C. Bill of materials.
D. Manufacturing resource planning.

A company uses a job-order cost system in accounting for its manufacturing operations. Because its processes are labor oriented, it applies manufacturing overhead on the basis of direct labor hours (DLH). Normal spoilage is defined as 4% of the units passing inspection. The company includes a provision for normal spoilage cost in its budgeted manufacturing overhead and manufacturing overhead rate. Data regarding a job consisting of 30,000 units are presented below:

Volume Data:
Good units passing inspection 28,500
Units failing inspection (spoiled) 1,500
Total units in job 30,000

Cost Data:
Direct materials $18.00 $540,000
Direct labor (2 DLH @ $16.00/DLH) 32.00 960,000
Manufacturing overhead (2 DLH @ $30.00/DLH) 60.00 1,800,000
Total $110.00 $3,300,000

The 1,500 units that failed inspection required .25 direct labor hours per unit to rework the units into good units. What is the proper charge to the loss from abnormal spoilage account?

A. $3,450
B. $1,440
C. Zero.
D. $4,140
A review of Plunkett Corporation’s accounting records for last year disclosed the following selected information:

Variable costs:
- Direct materials used $56,000
- Direct labor 179,100
- Manufacturing overhead 154,000
- Selling costs 108,400

Fixed costs:
- Manufacturing overhead 267,000
- Selling costs 121,000
- Administrative costs 235,900

In addition, the company suffered a $27,700 uninsured factory fire loss during the year. What were Plunkett’s product costs and period costs for last year?

<table>
<thead>
<tr>
<th>Product</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. $683,800</td>
<td>$465,300</td>
</tr>
<tr>
<td>B. $656,100</td>
<td>$493,000</td>
</tr>
<tr>
<td>C. $235,100</td>
<td>$914,000</td>
</tr>
<tr>
<td>D. $497,500</td>
<td>$651,600</td>
</tr>
</tbody>
</table>

All of the following are examples of benchmarking standards except

A. The best performance of a competitor with a similar operation.
B. The performance of the unit during the previous year.
C. A comparison with a similar unit within the same company.
D. The best performance of the unit in comparable past periods.

Which one of the following alternatives correctly classifies the business application to the appropriate costing system?

<table>
<thead>
<tr>
<th>Job Costing System</th>
<th>Process Costing System</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Wallpaper manufacturer</td>
<td>Oil refinery</td>
</tr>
<tr>
<td>B. Paint manufacturer</td>
<td>Retail banking</td>
</tr>
<tr>
<td>C. Print shop</td>
<td>Beverage manufacturer</td>
</tr>
<tr>
<td>D. Aircraft assembly</td>
<td>Public accounting firm</td>
</tr>
</tbody>
</table>
Assuming two overhead accounts are used, what is the entry to close them and to charge underapplied overhead to cost of goods sold?

A. Factory O/H applied
   Factory O/H control
   Cost of goods sold
B. Cost of goods sold
   Factory O/H applied
C. Cost of goods sold
   Finished goods
D. Factory O/H applied
   Cost of goods sold
   Factory O/H control

The difference between Valyn Corporation’s operating income calculated on the absorption costing basis and calculated on the variable costing basis was

A. $90,000
B. $25,000
C. $65,000
D. $40,000

Henry Manufacturing, which uses direct labor hours to apply overhead to its product line, undertook an extensive renovation and modernization program 2 years ago. Manufacturing processes were reengineered, considerable automated equipment was acquired, and 60% of the company’s nonunion factory workers were terminated. Which of the following statements would apply to the situation at Henry?

I. The company’s factory overhead rate has likely increased.
II. The use of direct labor hours seems to be appropriate.
III. Henry will lack the ability to properly determine labor variances.
IV. Henry has likely reduced its ability to quickly cut costs in order to respond to economic downturns.

A. I, II, III, and IV.
B. I and IV only.
C. II and IV only.
D. I and III only.
Some units of output failed to pass final inspection at the end of the manufacturing process. The production and inspection supervisors determined that the estimated incremental revenue from reworking the units exceeded the cost of rework. The rework of the defective units was authorized, and the following costs were incurred in reworking the units:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials requisitioned from stores</td>
<td>$5,000</td>
</tr>
<tr>
<td>Miscellaneous supplies</td>
<td>300</td>
</tr>
<tr>
<td>Direct labor</td>
<td>14,000</td>
</tr>
</tbody>
</table>

The manufacturing overhead budget includes an allowance for rework. The predetermined manufacturing overhead rate is 150% of direct labor cost. The account(s) to be charged and the appropriate charges for the rework cost would be:

A. Work-in-process inventory control for $5,000 and factory overhead control for $35,300.
B. Factory overhead control for $19,300.
C. Factory overhead control for $40,300.
D. Work-in-process inventory control for $19,000.

Which changes in costs are most conducive to switching from a traditional inventory ordering system to a just-in-time ordering system?

<table>
<thead>
<tr>
<th>Cost per Purchase Order</th>
<th>Inventory Unit Carrying Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decreasing</td>
<td>Decreasing</td>
</tr>
<tr>
<td>Increasing</td>
<td>Increasing</td>
</tr>
<tr>
<td>Decreasing</td>
<td>Increasing</td>
</tr>
<tr>
<td>Increasing</td>
<td>Decreasing</td>
</tr>
</tbody>
</table>

A company that uses a process costing system inspects its goods at the 60% stage of completion. If the firm’s ending work-in-process inventory is 80% complete, how would the firm account for its normal and abnormal spoilage?

A. Both normal and abnormal spoilage costs would be written off as an expense of the period.
B. Both normal and abnormal spoilage costs would be added to the cost of the good units completed during the period.
C. Normal spoilage costs would be allocated between the cost of good units completed during the period and the ending work-in-process inventory. In contrast, abnormal spoilage costs would be written off as a loss.
D. Normal spoilage costs would be added to the cost of the good units completed during the period; in contrast, abnormal spoilage costs would be written off as a loss.
Which of the following statements is true for a firm that uses variable costing?

A. Product costs include variable administrative costs.
B. The cost of a unit of product changes because of changes in number of units manufactured.
C. Profits fluctuate with sales.
D. An idle facility variation is calculated.

The principal disadvantage of using the physical quantity method of allocating joint costs is that

A. Additional processing costs affect the allocation base.
B. Joint costs, by definition, should not be separated on a unit basis.
C. Costs assigned to inventories may have no relationship to value.
D. Physical quantities may be difficult to measure.

Which one of the following is correct regarding a relevant range?

A. Actual fixed costs usually fall outside the relevant range.
B. Total fixed costs will not change.
C. The relevant range cannot be changed after being established.
D. Total variable costs will not change.

If M&P uses the direct method of allocation, how much of the Repair Department’s overhead will be allocated to the Tool Department?

A. $0
B. $7,000
C. $11,667
D. $875

In determining next year’s overhead application rates, a company desires to focus on manufacturing capacity rather than output demand for its products. To derive a realistic application rate, the denominator activity level should be based on

A. Normal capacity.
B. Maximum capacity.
C. Master-budget (expected annual) capacity.
D. Practical capacity.
An assembly plant accumulates its variable and fixed manufacturing overhead costs in a single cost pool, which is then applied to work in process using a single application base. The assembly plant management wants to estimate the magnitude of the total manufacturing overhead costs for different volume levels of the application activity base using a flexible budget formula. If there is an increase in the application activity base that is within the relevant range of activity for the assembly plant, which one of the following relationships regarding variable and fixed costs is true?

A. The variable cost per unit increases, and the total fixed costs remain constant.
B. The variable cost per unit is constant, and the total fixed costs decrease.
C. The variable cost per unit is constant, and the total fixed costs increase.
D. The variable cost per unit and the total fixed costs remain constant.

Consider the following situation for Weisman Corporation for the prior year:

- The company produced 1,000 units and sold 900 units, both as budgeted.
- There were no beginning or ending work-in-process inventories and no beginning finished goods inventory.
- Budgeted and actual fixed costs were equal, all variable manufacturing costs are affected by volume of production only, and all variable selling costs are affected by sales volume only.
- Budgeted per unit revenues and costs were as follows.

<table>
<thead>
<tr>
<th>Per Unit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales price</td>
<td>$100</td>
</tr>
<tr>
<td>Direct materials</td>
<td>30</td>
</tr>
<tr>
<td>Direct labor</td>
<td>20</td>
</tr>
<tr>
<td>Variable manufacturing overhead</td>
<td>10</td>
</tr>
<tr>
<td>Fixed manufacturing overhead</td>
<td>5</td>
</tr>
<tr>
<td>Variable selling costs</td>
<td>12</td>
</tr>
<tr>
<td>Fixed selling costs ($3,600 total)</td>
<td>4</td>
</tr>
<tr>
<td>Fixed administrative costs ($1,800 total)</td>
<td>2</td>
</tr>
</tbody>
</table>

If Weisman uses absorption costing, its operating income earned in the last fiscal year was

A. $14,200
B. $15,300
C. $15,840
D. $13,600
If Wilcox uses the reciprocal method of department allocation, which one of the following departmental allocations would occur? The costs of the

A. Information Systems Department are allocated to the Machining Department and the costs of the Machining Department are allocated to the Assembly Department.
B. Assembly Department are allocated to the Information Systems Department and the Personnel Department.
C. Information Systems Department are allocated to the Personnel Department, Machining Department, and Assembly Department.
D. Personnel Department are allocated solely to the Information Systems Department.

Under the weighted-average method, what is the total of equivalent units for A.P. Hill’s transferred-in costs for the month?

A. 81,000 units.
B. 90,000 units.
C. 80,000 units.
D. 75,000 units.

Atlantic Co. used $200,000 of direct materials during June. At June 30, Atlantic’s direct materials inventory was $30,000 more than it was at June 1. What were Atlantic’s direct materials purchases during June?

A. $170,000
B. $230,000
C. $30,000
D. $200,000

A company’s accounts receivable department processed 33,000 invoices during a 6-month period with a billing error rate of 3%. Each billing error cost $110 to correct. In addition, 15% of contract cancellations during this period were attributed to billing errors, resulting in estimated lost total contribution margins of $75,000 from dissatisfied customers who canceled their contracts. If the number of invoices issued and the costs per billing error remain unchanged, the annual savings available for funding of a quality improvement program to lower the company’s billing error rate by 1% (i.e., from 3% to 2%) would be

A. $267,800
B. $122,600
C. $61,300
D. $222,600
What is the key strategic issue when a firm is considering capacity expansion?

A. Identifying options.
B. Forecasting long-term demand.
C. Avoiding industry overcapacity.
D. Analyzing the behavior of competitors.

The use of activity-based costing (ABC) normally results in

A. Decreased setup costs being charged to low-volume products.
B. Substantially greater unit costs for low-volume products than is reported by traditional product costing.
C. Substantially lower unit costs for low-volume products than is reported by traditional product costing.
D. Equalizing setup costs for all product lines.

The portion of Travis’ joint production costs assigned to Grade Two based upon physical output is (rounded to the nearest thousand dollars)

A. $3,273,000
B. $1,636,000
C. $3,375,000
D. $3,512,000

FIFO requires separate costing of goods started last period and finished this period and goods started and completed this period. The weighted-average method does not. Which is the true statement about the cost of completed goods transferred under FIFO to the next production department or to finished goods inventory?

A. The two amounts are kept separate but are combined by the next department.
B. The two amounts are ultimately recorded in separate finished goods accounts.
C. The goods started and completed this period are transferred prior to those started last period and completed this period.
D. The two amounts are considered combined as the goods are transferred.
Activities, their drivers, and their costs may be classified as unit-level, batch-level, product-level, and facility-level. If activity-based costing (ABC) information is prepared for internal purposes, which costs are most likely to be treated as period costs?

A. Product-level.
B. Batch-level.
C. Unit-level.
D. Facility-level.

Madtack Company's total manufacturing cost for November is

A. $503,000
B. $502,000
C. $363,000
D. $510,000

Wagner Corporation applies factory overhead based upon machine hours. At the beginning of the year, Wagner budgeted factory overhead at $250,000 and estimated that 100,000 machine hours would be used to make 50,000 units of product. During the year, the company produced 48,000 units using 97,000 machine hours. Actual overhead for the year was $252,000. Under a standard cost system, the amount of factory overhead applied during the year was

A. $240,000
B. $252,000
C. $242,500
D. $250,000

Lucy Sportswear manufactures a specialty line of T-shirts using a job-order costing system. During March, the following costs were incurred in completing job ICU2: direct materials, $13,700; direct labor, $4,800; administrative, $1,400; and selling, $5,600. Overhead was applied at the rate of $25 per machine hour, and job ICU2 required 800 machine hours. If job ICU2 resulted in 7,000 good shirts, the cost of goods sold per unit would be

A. $6.30
B. $6.50
C. $5.50
D. $5.70
Using the weighted-average method, Kimbeth’s equivalent unit cost of materials for May is

A. $4.60  
B. $4.12  
C. $4.50  
D. $5.02

If Wilcox uses the step-down method of departmental allocation, which one of the following cost allocations would not occur? Some of the costs of the Personnel Department would be allocated to the Information Systems Department.

A. Personnel Department would be allocated to the Information Systems Department.  
B. Personnel Department would be allocated to the Assembly Department and the Machining Department.  
C. Personnel Department would be allocated to the Assembly Department.  
D. Information Systems Department would be allocated to the Personnel Department.

A computer company charges indirect manufacturing costs to a project at a fixed percentage of a cost pool. This project is covered by a cost-plus government contract. Which of the following is an appropriate guideline for determining how costs are assigned to the pool?

A. Assign prime costs and variable administrative costs to the same pool.  
B. Assign all manufacturing costs related to the project to the same pool.  
C. Establish a separate pool for each assembly line worker to account for wages.  
D. Establish separate pools for variable and fixed costs.

The margin amounts of interest to Bombastic Bathrooms at the start of a theory of constraints (TOC) analysis are, respectively,

A. $50, $25, $65, $55.  
B. $150, $115, $260, $265.  
C. $80, $60, $110, $120.  
D. $150, $130, $180, $190.
Boston Furniture Company manufactures several steel products. It has three production departments: Fabricating, Assembly, and Finishing. The service departments include Maintenance, Material Handling, and Designing. Currently, the company does not allocate service department costs to the production departments. John Baker, who has recently joined the company as the new cost accountant, believes that service department rates should be developed and charged to the production departments for services requested. If the company adopts this new policy, the production department managers would be least likely to

A. Refrain from using necessary services.
B. Request an excessive amount of service.
C. Replace outdated and inefficient systems.
D. Be encouraged to control costs.

A manufacturing company’s primary goals include product quality and customer satisfaction. The company sells a product, for which the market demand is strong, for $50 per unit. Due to the capacity constraints in the Production Department, only 300,000 units can be produced per year. The current defective rate is 12% (i.e., of the 300,000 units produced, only 264,000 units are sold and 36,000 units are scrapped). There is no revenue recovery when defective units are scrapped. The full manufacturing cost of a unit is $29.50, including

| Direct materials | $17.50 |
| Direct labor     | 4.00   |
| Fixed manufacturing overhead | 8.00 |

The company’s designers have estimated that the defective rate can be reduced to 2% by using a different direct material. However, this will increase the direct materials cost by $2.50 per unit to $20 per unit. The net benefit of using the new material to manufacture the product will be

A. $(120,000)
B. $120,000
C. $750,000
D. $1,425,000
[Fact Pattern #31]
Listed below are costs of quality that a manufacturing company has incurred throughout its operations. The company plans to prepare a report that classifies these costs into the following four categories: preventive costs, appraisal costs, internal failure costs, and external failure costs.

<table>
<thead>
<tr>
<th>Cost Items</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design reviews</td>
<td>$275,000</td>
</tr>
<tr>
<td>Finished goods returned due to failure</td>
<td>55,000</td>
</tr>
<tr>
<td>Freight on replacement finished goods</td>
<td>27,000</td>
</tr>
<tr>
<td>Labor inspection during manufacturing</td>
<td>75,000</td>
</tr>
<tr>
<td>Labor inspection of raw materials</td>
<td>32,000</td>
</tr>
<tr>
<td>Manufacturing product-testing labor</td>
<td>63,000</td>
</tr>
<tr>
<td>Manufacturing rework labor and overhead</td>
<td>150,000</td>
</tr>
<tr>
<td>Materials used in warranty repairs</td>
<td>68,000</td>
</tr>
<tr>
<td>Process engineering</td>
<td>180,000</td>
</tr>
<tr>
<td>Product-liability claims</td>
<td>145,000</td>
</tr>
<tr>
<td>Product-testing equipment</td>
<td>35,000</td>
</tr>
<tr>
<td>Repairs to equipment due to breakdowns</td>
<td>22,000</td>
</tr>
<tr>
<td>Scheduled equipment maintenance</td>
<td>90,000</td>
</tr>
<tr>
<td>Scrap material</td>
<td>125,000</td>
</tr>
<tr>
<td>Training of manufacturing workers</td>
<td>156,000</td>
</tr>
</tbody>
</table>


(Refers to Fact Pattern #31)
The costs of quality that are incurred in detecting units of product that do not conform to product specifications are referred to as

A. Appraisal costs.
B. Internal failure costs.
C. External failure costs.
D. Preventive costs.

[Fact Pattern #32]
The managers of Rochester Manufacturing are discussing ways to allocate the cost of service departments, such as Quality Control and Maintenance, to the production departments. To aid them in this discussion, the controller has provided the following information:

<table>
<thead>
<tr>
<th>Budgeted overhead costs before allocation</th>
<th>Quality Control</th>
<th>Maintenance</th>
<th>Machining</th>
<th>Assembly</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$350,000</td>
<td>$200,000</td>
<td>$400,000</td>
<td>$300,000</td>
<td>$1,250,000</td>
<td></td>
</tr>
<tr>
<td>Budgeted machine hours</td>
<td>--</td>
<td>--</td>
<td>50,000</td>
<td>--</td>
<td>50,000</td>
</tr>
<tr>
<td>Budgeted direct labor hours</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>25,000</td>
<td>25,000</td>
</tr>
<tr>
<td>Budgeted hours of service:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Control</td>
<td>--</td>
<td>7,000</td>
<td>21,000</td>
<td>7,000</td>
<td>35,000</td>
</tr>
<tr>
<td>Maintenance</td>
<td>10,000</td>
<td>--</td>
<td>18,000</td>
<td>12,000</td>
<td>40,000</td>
</tr>
</tbody>
</table>
Using the direct method, the total amount of overhead allocated to each machine hour at Rochester Manufacturing would be

A. $15.65  
B. $2.40  
C. $5.25  
D. $8.00  

Which one of the following is least likely to be involved in establishing standard costs for evaluation purposes?

A. Budgetary accountants.  
B. Top management.  
C. Quality control personnel.  
D. Industrial engineers.  

Mill Corporation had the following unit costs for the recently concluded calendar year:

<table>
<thead>
<tr>
<th></th>
<th>Variable</th>
<th>Fixed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>$8.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>Nonmanufacturing</td>
<td>$2.00</td>
<td>$5.50</td>
</tr>
</tbody>
</table>

Inventory for Mill’s sole product totaled 6,000 units on January 1 and 5,200 units on December 31. When compared to variable costing income, Mill’s absorption costing income is

A. $6,800 higher.  
B. $6,800 lower.  
C. $2,400 higher.  
D. $2,400 lower.  

Under the FIFO method, Albany Mining’s equivalent units of materials are

A. 214,400 units.  
B. 195,200 units.  
C. 227,200 units.  
D. 208,000 units.
Effective cost capacity management

A. Matches the firm’s resources with current and future market opportunities.
B. Maximizes required future investments.
C. Minimizes the value delivered to customers.
D. Is limited to eliminating short-term worth.

(Refers to Fact Pattern #30)
If Weisman uses variable costing, its operating income earned in the last fiscal year was

A. $15,300
B. $14,200
C. $14,800
D. $13,600

Just-in-time manufacturing practices are based in part on the belief that

A. Goods should be “pulled” through the production process, not “pushed.”
B. High inventory levels provide greater flexibility in production scheduling.
C. Beefed-up internal control in the central warehouse can greatly enhance productivity in the production areas.
D. Attempting to reduce inventory to a consistently low level can lead to “panic” situations.

A review of the year-end accounting records of Elk Industries discloses the following information:

| Raw materials | $80,000 |
| Work-in-process | $128,000 |
| Finished goods | $272,000 |
| Cost of goods sold | $1,120,000 |

The company’s underapplied overhead equals $133,000. On the basis of this information, Elk’s cost of goods sold is most appropriately reported as

A. $1,218,000
B. $1,253,000
C. $1,213,100
D. $987,000
Jacob Corp. wishes to determine the fixed portion of its maintenance expense (a semivariable expense), as measured against direct labor hours, for the first 3 months of the year. The inspection costs are fixed; the adjustments necessitated by errors found during inspection account for the variable portion of the maintenance costs. Information for the first quarter is as follows:

<table>
<thead>
<tr>
<th>Direct Labor Hours</th>
<th>Maintenance Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>34,000</td>
</tr>
<tr>
<td></td>
<td>$610</td>
</tr>
<tr>
<td>February</td>
<td>31,000</td>
</tr>
<tr>
<td></td>
<td>$585</td>
</tr>
<tr>
<td>March</td>
<td>34,000</td>
</tr>
<tr>
<td></td>
<td>$610</td>
</tr>
</tbody>
</table>

What is the fixed portion of Jacob’s maintenance expense, rounded to the nearest dollar?

A. $327  
B. $541  
C. $258  
D. $283

Alex Company had the following inventories at the beginning and end of the month of January:

<table>
<thead>
<tr>
<th></th>
<th>January 1</th>
<th>January 31</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished goods</td>
<td>$125,000</td>
<td>$117,000</td>
</tr>
<tr>
<td>Work-in-process</td>
<td>235,000</td>
<td>251,000</td>
</tr>
<tr>
<td>Direct materials</td>
<td>134,000</td>
<td>124,000</td>
</tr>
</tbody>
</table>

The following additional manufacturing data were available for the month of January:

Direct materials purchased $189,000  
Purchase returns and allowances 1,000  
Transportation-in 3,000  
Direct labor 300,000  
Actual factory overhead 175,000

Alex Company applies factory overhead at a rate of 60% of direct labor cost, and any overapplied or underapplied factory overhead is deferred until the end of the year, December 31.

Alex Company’s prime cost for January was

A. $489,000  
B. $201,000  
C. $501,000  
D. $199,000
A manufacturer allocates overhead to jobs in process using direct labor costs, direct materials costs, and machine hours. The overhead application rates for the current year are

100% of direct labor
20% of direct materials
$117 per machine hour

A particular production run incurred the following costs:

Direct labor, $8,000
Direct materials, $2,000
A total of 140 machine hours were required for the production run.

What is the total cost charged to the production run?

A. $18,400
B. $18,000
C. None of the answers are true.
D. $34,780

Costs are allocated to cost objects in many ways and for many reasons. Which one of the following is a purpose of cost allocation?

A. Aiding in variable costing for internal reporting.
B. Budgeting cash and controlling expenditures.
C. Evaluating revenue center performance.
D. Measuring income and assets for external reporting.
Oster Manufacturing uses a weighted-average process costing system and has the following costs and activity during October:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials</td>
<td>$40,000</td>
</tr>
<tr>
<td>Conversion cost</td>
<td>32,500</td>
</tr>
<tr>
<td>Total beginning work-in-process inventory</td>
<td>$72,500</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials</td>
<td>$ 700,000</td>
</tr>
<tr>
<td>Conversion cost</td>
<td>617,500</td>
</tr>
<tr>
<td>Total production costs -- October</td>
<td>$1,317,500</td>
</tr>
</tbody>
</table>

Production completed: 60,000 units
Work-in-process, October 31: 20,000 units

All materials are introduced at the start of the manufacturing process, and conversion cost is incurred uniformly throughout production. Conversations with plant personnel reveal that, on average, month-end in-process inventory is 25% complete. Assuming no spoilage, how should Oster’s October manufacturing cost be assigned?

<table>
<thead>
<tr>
<th>Production Completed</th>
<th>Work-in-Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. $1,155,000</td>
<td>$235,000</td>
</tr>
<tr>
<td>B. $1,095,000</td>
<td>$222,500</td>
</tr>
<tr>
<td>C. $1,283,077</td>
<td>$106,923</td>
</tr>
<tr>
<td>D. $1,042,500</td>
<td>$347,500</td>
</tr>
</tbody>
</table>

The difference between the sales price and total variable costs is

A. Gross operating profit.
B. The contribution margin.
C. The breakeven point.
D. Net profit.
San Jose, Inc. uses a weighted-average process costing system. All materials are introduced at the start of manufacturing, and conversion cost is incurred evenly throughout production. The company started 70,000 units during May and had the following work-in-process inventories at the beginning and end of the month:

May 1 30,000 units, 40% complete
May 31 24,000 units, 25% complete

Assuming no spoilage or defective units, the total equivalent units used to assign costs for May are

<table>
<thead>
<tr>
<th>Materials</th>
<th>Conversion Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. 70,000</td>
<td>70,000</td>
</tr>
<tr>
<td>B. 100,000</td>
<td>82,000</td>
</tr>
<tr>
<td>C. 82,000</td>
<td>82,000</td>
</tr>
<tr>
<td>D. 100,000</td>
<td>70,000</td>
</tr>
</tbody>
</table>

Alex Company’s cost of goods sold for January was

A. $673,000
B. $697,000
C. $681,000
D. $657,000

In practice, items such as wood screws and glue used in the production of school desks and chairs would most likely be classified as

A. Period costs.
B. Direct materials.
C. Direct labor.
D. Factory overhead.

The benefits of a just-in-time system for raw materials usually include

A. Elimination of nonvalue-adding operations.
B. Decrease in the number of deliveries required to maintain production.
C. Increase in the number of suppliers, thereby ensuring competitive bidding.
D. Maximization of the standard delivery quantity, thereby lessening the paperwork for each delivery.
“Discretionary costs” are costs which

A. Are governed mainly by past decisions that established the present levels of operating and organizational capacity and which only change slowly in response to small changes in capacity.
B. Are likely to respond to the amount of attention devoted to them by a specified manager.
C. Will be unaffected by current managerial decisions.
D. Management decides to incur in the current period to enable the company to achieve objectives other than the filling of orders placed by customers.

Fitzpatrick Corporation uses a joint manufacturing process in the production of two products, Gummo and Xylo. Each batch in the joint manufacturing process yields 5,000 pounds of an intermediate material, Valdene, at a cost of $20,000. Each batch of Gummo uses 60% of the Valdene and incurs $10,000 of separate costs. The resulting 3,000 pounds of Gummo sells for $10 per pound. The remaining Valdene is used in the production of Xylo, which incurs $12,000 of separable costs per batch. Each batch of Xylo yields 2,000 pounds and sells for $12 per pound. Fitzpatrick uses the net realizable value method to allocate the joint material costs. The company is debating whether to process Xylo further into a new product, Zinten, which would incur an additional $4,000 in costs and sell for $15 per pound. If Zinten is produced, income would increase by

A. $2,000
B. $26,000
C. $14,000
D. $5,760

Patterson Corporation expects to incur $70,000 of factory overhead and $60,000 of general and administrative costs next year. Direct labor costs at $5 per hour are expected to total $50,000. If factory overhead is to be applied per direct labor hour, how much overhead will be applied to a job incurring 20 hours of direct labor?

A. $260
B. $120
C. $28
D. $140

Units of production is an appropriate overhead allocation base when

A. Several well-differentiated products are manufactured.
B. Only one product is manufactured.
C. Direct labor costs are low.
D. Direct material costs are large relative to direct labor costs incurred.
If a worker encounters a production kanban at his/her workstation, the worker should

A. Confirm the amount of the item requested and present the kanban to the production supervisor.
B. Initiate a purchase order with the supplier of the requested item.
C. Release the requested item to the next stage in the process.
D. Begin manufacturing the requested item.

Pickett Manufacturing uses a joint production process that produces three products at the split-off point. Joint production costs during April were $720,000. Product information for April was as follows:

<table>
<thead>
<tr>
<th>Product</th>
<th>R</th>
<th>S</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units produced</td>
<td>2,500</td>
<td>5,000</td>
<td>7,500</td>
</tr>
<tr>
<td>Units sold</td>
<td>2,000</td>
<td>6,000</td>
<td>7,000</td>
</tr>
</tbody>
</table>

Sales prices:
- At split-off: $100, $80, $20
- After further processing: $150, $115, $30

Costs to process after split-off: $150,000, $150,000, $100,000

Assume that all three products are main products and that they can be sold at the split-off point or processed further, whichever is economically beneficial to the company. What is Pickett’s total cost of Product S in April if joint cost allocation is based on sales value at split-off?

A. $390,000
B. $571,463
C. $375,000
D. $510,000

Which of the following is not an appropriate time measure for use in process analysis?

A. Product development time.
B. Process value time.
C. Breakeven time.
D. Customer-response time.
If Rochester Manufacturing uses the direct method of allocating service department costs, the total service costs allocated to the assembly department would be

A. $167,500  
B. $87,500  
C. $120,000  
D. $80,000

Under a costing system that allocates overhead on the basis of direct labor hours, Zeta Company’s materials handling costs allocated to one unit of wall mirrors would be

A. $2,000  
B. $5,000  
C. $500  
D. $1,000

Which pairs of systems are considered complementary because they inherently focus on different time frames?

<table>
<thead>
<tr>
<th>Short-term</th>
<th>Long-term</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Theory of constraints</td>
<td>Activity-based costing</td>
</tr>
<tr>
<td>B. Activity-based costing</td>
<td>Theory of constraints</td>
</tr>
<tr>
<td>C. Operation costing</td>
<td>Theory of constraints</td>
</tr>
<tr>
<td>D. Theory of constraints</td>
<td>Operation costing</td>
</tr>
</tbody>
</table>

An example of an internal nonfinancial benchmark is the

A. Labor rate of comparably skilled employees at a major competitor’s plant.  
B. Average actual cost per pound of a specific product at the company’s most efficient plant becoming the benchmark for the company’s other plants.  
C. Percentage of customer orders delivered on time at the company’s most efficient plant becoming the benchmark for the company’s other plants.  
D. Company setting a benchmark of $50,000 for employee training programs at each of the company’s plants.
The flow of materials and services from their original sources to final consumers is the

A. Product chain.
B. Value chain.
C. Supply chain.
D. Value process.

A standard costing system is most often used by a firm in conjunction with

A. Management by objectives.
B. Target (hurdle) rates of return.
C. Flexible budgets.
D. Participative management programs.

Conversion costs are

A. All costs associated with manufacturing other than direct labor costs and raw material costs.
B. The sum of raw materials costs and direct labor costs.
C. The sum of direct labor costs and all factory overhead costs.
D. Manufacturing costs incurred to produce units of output.

If Rochester Manufacturing uses the reciprocal method of allocating service costs, the total amount of quality control costs (rounded to the nearest dollar) to be allocated to the other departments would be

A. $350,000
B. $421,053
C. $284,211
D. $336,842

Which one of the following is least likely to be an objective of a cost accounting system?

A. Sales commission determination.
B. Product costing.
C. Department efficiency.
D. Inventory valuation.
If Ewell employs the direct method to allocate the costs of the service departments, then the amount of Building Operations costs allocated to Fabricating would be

A. $140,000  
B. $176,000  
C. $160,000  
D. $220,000

If Rochester Manufacturing decides not to allocate service costs to the production departments, the overhead allocated to each direct labor hour in the Assembly Department would be

A. $16.00  
B. $12.00  
C. $3.20  
D. $3.50

Logo, Inc. has two service departments (the Systems Department and the Facilities Department) that provide support to the company's three production departments (Machining Department, Assembly Department, and Finishing Department). The overhead costs of the Systems Department are allocated to other departments on the basis of computer usage hours. The overhead costs of the Facilities Department are allocated based on square feet occupied (in thousands). Other information pertaining to Logo is as follows:

<table>
<thead>
<tr>
<th>Department</th>
<th>Overhead</th>
<th>Computer Usage Hours</th>
<th>Square Feet Occupied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systems</td>
<td>$200,000</td>
<td>300</td>
<td>1,000</td>
</tr>
<tr>
<td>Facilities</td>
<td>100,000</td>
<td>900</td>
<td>600</td>
</tr>
<tr>
<td>Machining</td>
<td>400,000</td>
<td>3,600</td>
<td>2,000</td>
</tr>
<tr>
<td>Assembly</td>
<td>550,000</td>
<td>1,800</td>
<td>3,000</td>
</tr>
<tr>
<td>Finishing</td>
<td>620,000</td>
<td>2,700</td>
<td>5,000</td>
</tr>
<tr>
<td>Total</td>
<td>9,300</td>
<td></td>
<td>11,600</td>
</tr>
</tbody>
</table>
Logo employs the step-down method of allocating service department costs and begins with the Systems Department. Which one of the following correctly denotes the amount of the Systems Department’s overhead that would be allocated to the Facilities Department and the Facilities Department’s overhead charges that would be allocated to the Machining Department?

<table>
<thead>
<tr>
<th>Systems to Facilities</th>
<th>Facilities to Machining</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. $0</td>
<td>$20,000</td>
</tr>
<tr>
<td>B. $20,000</td>
<td>$20,000</td>
</tr>
<tr>
<td>C. $20,000</td>
<td>$24,000</td>
</tr>
<tr>
<td>D. $19,355</td>
<td>$20,578</td>
</tr>
</tbody>
</table>

Listed below are selected line items from the Cost of Quality Report for Watson Products for last month.

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rework</td>
<td>$725</td>
</tr>
<tr>
<td>Equipment maintenance</td>
<td>1,154</td>
</tr>
<tr>
<td>Product testing</td>
<td>786</td>
</tr>
<tr>
<td>Product repair</td>
<td>695</td>
</tr>
</tbody>
</table>

What is Watson’s total prevention and appraisal cost for last month?

A. $2,665  
B. $1,154  
C. $786    
D. $1,940

Rosecrans hires additional workers at a cost of $50,000 per year to expedite setups and materials handling in the bottleneck operation. As a result, the annual output of the bottleneck operation increases by 500 units. The change in operating income attributable to the increase in workers is

A. $50,000  
B. $(14,000)  
C. $36,000  
D. $(20,000)
A profitable company with five departments uses plantwide overhead rates for its highly diversified operation. The firm is studying a change to either allocating overhead by using departmental rates or using activity-based costing (ABC). Which one of these two methods will likely result in the use of a greater number of cost allocation bases and more accurate costing results?

<table>
<thead>
<tr>
<th>Greater Number of Allocation Bases</th>
<th>More Accurate Costing Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Departmental</td>
<td>ABC</td>
</tr>
<tr>
<td>B. ABC</td>
<td>ABC</td>
</tr>
<tr>
<td>C. Departmental</td>
<td>Departmental</td>
</tr>
<tr>
<td>D. ABC</td>
<td>Departmental</td>
</tr>
</tbody>
</table>

Process value analysis is a key component of activity-based management that links product costing and

A. Reduction of the number of cost pools.
B. Continuous improvement.
C. Accumulation of heterogeneous cost pools.
D. Overhead rates based on broad averages.

John Sheng, cost accountant at Starlet Co., is developing departmental factory overhead application rates for the company’s tooling and fabricating departments. The budgeted overhead for each department and the data for one job are shown below.

<table>
<thead>
<tr>
<th>Department</th>
<th>Tooling</th>
<th>Fabricating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplies</td>
<td>$850</td>
<td>$200</td>
</tr>
<tr>
<td>Supervisor’s salaries</td>
<td>1,500</td>
<td>2,000</td>
</tr>
<tr>
<td>Indirect labor</td>
<td>1,200</td>
<td>4,880</td>
</tr>
<tr>
<td>Depreciation</td>
<td>1,000</td>
<td>5,500</td>
</tr>
<tr>
<td>Repairs</td>
<td>4,075</td>
<td>3,540</td>
</tr>
<tr>
<td>Total budgeted overhead</td>
<td>$8,625</td>
<td>$16,120</td>
</tr>
<tr>
<td>Total direct labor hours</td>
<td>460</td>
<td>620</td>
</tr>
<tr>
<td>Direct labor hours on Job #231</td>
<td>12</td>
<td>3</td>
</tr>
</tbody>
</table>

Using the departmental overhead application rates, total overhead applied to Job #231 in the Tooling and Fabricating Departments will be

A. $303
B. $671
C. $537
D. $225
The relevant range refers to the activity levels over which

A. Cost relationships hold constant.
B. Costs fluctuate.
C. Production varies.
D. Relevant costs are incurred.

The marketing manager of Ames Company has learned the following about a new product that is being introduced by Ames: Sales of this product are planned at $100,000 for the first year. Sales commission expense is budgeted at 8% of sales plus the marketing manager’s incentive budgeted at an additional 1/2%. The preparation of a product brochure will require 20 hours of marketing salaried staff time at an average rate of $100 per hour, and 10 hours at $150 per hour for an outside illustrator’s effort. The variable marketing cost for this new product will be

A. $10,000
B. $10,500
C. $8,000
D. $8,500

The cost of goods manufactured for Toddler Toys for the year was $860,000. Beginning work-in-process inventory was $50,000. Ending work-in-process was $60,000. If the beginning finished goods inventory was $500,000 and the ending finished goods inventory was $990,000, what was the cost of goods sold for the year?

A. $1,350,000
B. $370,000
C. $490,000
D. $360,000

Abnormal spoilage is

A. Not expected to occur when perfection standards are used.
B. The result of unrealistic production standards.
C. Not usually controllable by the production supervisor.
D. Not expected to occur under efficient operating conditions.
ALF Co. is an assisted-living facility that provides services in the form of residential space, meals, and other occupant assistance (OOA) to its occupants. ALF currently uses a traditional cost accounting system that defines the service provided as assisted living, with service output measured in terms of occupant days. Each occupant is charged a daily rate equal to ALF’s annual cost of providing residential space, meals, and OOA divided by total occupant days. However, an activity-based costing (ABC) analysis has revealed that occupants’ use of OOA varies substantially. This analysis determined that occupants could be grouped into three categories (low, moderate, and high usage of OOA) and that the activity driver of OOA is nursing hours. The driver of the other activities is occupant days. The following quantitative information was also provided:

<table>
<thead>
<tr>
<th>Occupant Category</th>
<th>Annual Occupant Days</th>
<th>Annual Nursing Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low usage</td>
<td>36,000</td>
<td>90,000</td>
</tr>
<tr>
<td>Medium usage</td>
<td>18,000</td>
<td>90,000</td>
</tr>
<tr>
<td>High usage</td>
<td>6,000</td>
<td>120,000</td>
</tr>
<tr>
<td></td>
<td>60,000</td>
<td>300,000</td>
</tr>
</tbody>
</table>

The total annual cost of OOA was $7.5 million, and the total annual cost of providing residential space and meals was $7.2 million. Accordingly, the ABC analysis indicates that the daily costing rate should be

A. $145.00 for occupants in the medium-usage category.
B. $620.00 for all occupants.
C. $182.50 for occupants in the low-usage category.
D. $245.00 for occupants in the high-usage category.

Job-order costs are most useful for

A. Determining the cost of a specific project.
B. Determining inventory valuation using LIFO.
C. Estimating the overhead costs included in transfer prices.
D. Controlling indirect costs of future production.

Which of the following is not a typical benefit of an outsourcing arrangement?

A. Access to technology.
B. Avoidance of risk of obsolescence.
C. Increased control over a necessary function.
D. Reduced costs.
The cost associated with abnormal spoilage ordinarily is charged to

A. Inventory.
B. A material variance account.
C. A special loss account.
D. Manufacturing overhead.

(Refers to Fact Pattern #29)
Using the FIFO method, Kimbeth’s the total cost of units in the ending work-in-process inventory at May 31 is

A. $155,328
B. $156,960
C. $154,800
D. $153,168

Lankip Company produces two main products and a by-product out of a joint process. The ratio of output quantities to input quantities of direct material used in the joint process remains consistent from month to month. Lankip has employed the physical-volume method to allocate joint production costs to the two main products. The net realizable value of the by-product is used to reduce the joint production costs before the joint costs are allocated to the main products. Data regarding Lankip’s operations for the current month are presented in the chart below. During the month, Lankip incurred joint production costs of $2,520,000. The main products are not marketable at the split-off point and, thus, have to be processed further.

<table>
<thead>
<tr>
<th>First Main Product</th>
<th>Second Main Product</th>
<th>By-product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly output in pounds</td>
<td>90,000</td>
<td>150,000</td>
</tr>
<tr>
<td>Selling price per pound</td>
<td>$30</td>
<td>$14</td>
</tr>
<tr>
<td>Separable process costs</td>
<td>$540,000</td>
<td>$660,000</td>
</tr>
</tbody>
</table>

The amount of joint production cost that Lankip would allocate to the Second Main Product by using the physical-volume method to allocate joint production costs would be

A. $1,200,000
B. $1,500,000
C. $1,575,000
D. $1,260,000
Key Co. changed from a traditional manufacturing operation with a job-order costing system to a just-in-time operation with a backflush costing system. What is (are) the expected effect(s) of these changes on Key’s inspection costs and recording detail of costs tracked to jobs in process?

<table>
<thead>
<tr>
<th>Inspection Costs</th>
<th>Detail of Costs Tracked to Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Decrease</td>
<td>Increase</td>
</tr>
<tr>
<td>B. Increase</td>
<td>Decrease</td>
</tr>
<tr>
<td>C. Increase</td>
<td>Increase</td>
</tr>
<tr>
<td>D. Decrease</td>
<td>Decrease</td>
</tr>
</tbody>
</table>

(Refers to Fact Pattern #29)
Using the first-in, first-out (FIFO) method, Kimbeth’s equivalent units of production (EUP) for materials are

A. 104,000 units.
B. 107,200 units.
C. 108,000 units.
D. 97,600 units.

A joint process is a manufacturing operation yielding two or more identifiable products from the resources employed in the process. The two characteristics that identify a product generated from this type of process as a joint product are that it

A. Is identifiable as an individual product only upon reaching the split-off point, and it has relatively significant sales value when compared with the other products.
B. Is identifiable as an individual product only upon reaching the split-off point, and it has relatively minor sales value when compared to the other products.
C. Is identifiable as an individual product before the production process, and it has relatively significant physical volume when compared with the other products.
D. Has relatively significant physical volume when compared with the other products, and it can be sold immediately without any additional processing.
[226] Gleim #: 5.3.101 -- Source: CMA 0408 2-099
From the following budgeted data, calculate the budgeted indirect cost rate that would be used in a normal costing system.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total direct labor hours</td>
<td>250,000</td>
</tr>
<tr>
<td>Total indirect labor hours</td>
<td>50,000</td>
</tr>
<tr>
<td>Direct costs</td>
<td>$10,000,000</td>
</tr>
<tr>
<td>Total indirect labor related costs</td>
<td>5,000,000</td>
</tr>
<tr>
<td>Total indirect nonlabor related costs</td>
<td>7,000,000</td>
</tr>
</tbody>
</table>

A. $28
B. $20
C. $40
D. $48

[227] Gleim #: 4.2.30 -- Source: Publisher
(Refers to Fact Pattern #1)
Using the FIFO method, Albany Mining’s equivalent unit conversion cost for May is

A. $2.92
B. $3.23
C. $3.00
D. $3.10

[228] Gleim #: 6.6.60 -- Source: CMA 1295 3-12
The four categories of costs associated with product quality costs are

A. External failure, internal failure, training, and appraisal.
B. External failure, internal failure, prevention, and carrying.
C. Warranty, product liability, training, and appraisal.
D. External failure, internal failure, prevention, and appraisal.

[229] Gleim #: 5.2.72 -- Source: CMA 0408 2-122
(Refers to Fact Pattern #22)
If Tucariz uses the sales-value at split-off method to allocate joint costs to the final products, the per gallon cost (rounded to the nearest cent) of producing Big is

A. $4.50
B. $5.00
C. $5.63
D. $3.38
A large manufacturing company has two service departments and two production departments. Each of the service departments renders services to each other and to the two production departments. Which one of the following methods would most accurately allocate the costs of the service departments to the production departments of this company?

A. The direct allocation method.
B. The reciprocal allocation method.
C. The step-down allocation method.
D. The linear allocation method.

In a traditional manufacturing operation, direct costs would normally include

A. Electricity in an electronics plant.
B. Wood in a furniture factory.
C. Commissions paid to sales personnel.
D. Machine repairs in an automobile factory.

Management accounting differs from financial accounting in that financial accounting is

A. Concerned with nonquantitative information.
B. Heavily involved with decision analysis and implementation of decisions.
C. More oriented toward the future.
D. Primarily concerned with external financial reporting.

Alex Company’s cost of goods manufactured for January was

A. $657,000
B. $681,000
C. $673,000
D. $665,000

Process value analysis is a key component of activity-based management that links product costing and
[235] Gleim #: 5.1.7 -- Source: CMA 1292 3-6

The costing method that is properly classified for both external and internal reporting purposes is

<table>
<thead>
<tr>
<th></th>
<th>External Reporting</th>
<th>Internal Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Activity-based costing</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>B. Process costing</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>C. Job-order costing</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>D. Variable costing</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

[236] Gleim #: 6.6.64 -- Source: Publisher

Which of the following quality costs are nonconformance costs?

A. Costs of inspecting in-process items.
B. Environmental costs.
C. Systems development costs.
D. Costs of quality circles.

[237] Gleim #: 5.1.33 -- Source: CMA 0408 2-094

Which one of the following is the **best** reason for using variable costing?

A. All costs are variable in the long term.
B. Variable costing usually results in higher operating income than if a company uses absorption costing.
C. Fixed factory overhead is more closely related to the capacity to produce than to the production of specific units.
D. Variable costing is acceptable for income tax reporting purposes.

[238] Gleim #: 3.3.82 -- Source: CMA 0205 2-14

The profit and loss statement of Madengrad Mining, Inc. includes the following information for the current fiscal year:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>$160,000</td>
</tr>
<tr>
<td>Gross profit</td>
<td>48,000</td>
</tr>
<tr>
<td>Year-end finished goods inventory</td>
<td>58,300</td>
</tr>
<tr>
<td>Opening finished goods inventory</td>
<td>60,190</td>
</tr>
</tbody>
</table>

The cost of goods manufactured by Madengrad for the current fiscal year is

A. $49,890
B. $113,890
C. $110,110
D. $46,110
The total overhead cost of $27.00 for Huron’s video disc cleaning unit is a

A. Mixed cost.
B. Sunk cost.
C. Discretionary cost.
D. Carrying cost.

Using the FIFO method, Kimbeth’s equivalent units of production for conversion costs are

A. 98,400 units.
B. 88,800 units.
C. 95,200 units.
D. 85,600 units.

Waller Co. uses a weighted-average process-costing system. Material B is added at two different points in the production of shirms, 40% is added when the units are 20% completed, and the remaining 60% of Material B is added when the units are 80% completed. At the end of the quarter, there are 22,000 shirms in process, all of which are 50% completed. With respect to Material B, the ending shirms in process represent how many equivalent units?

A. 4,400
B. 8,800
C. 22,000
D. 11,000

Farber Company’s total direct labor cost for the year is

A. $750,000
B. $600,000
C. $937,500
D. $909,375
During the current accounting period, a manufacturing company purchased $70,000 of raw materials, of which $50,000 of direct materials and $5,000 of indirect materials were used in production. The company also incurred $45,000 of total labor costs and $20,000 of other manufacturing overhead costs. An analysis of the work-in-process control account revealed $40,000 of direct labor costs. Based upon the above information, what is the total amount accumulated in the overhead control account?

A. $25,000  
B. $50,000  
C. $30,000  
D. $45,000

Management has prepared a graph showing the total costs of operating branch warehouses throughout the country. The cost line crosses the vertical axis at $200,000. The total cost of operating one branch is $350,000. The total cost of operating ten branches is $1,700,000. For purposes of preparing a flexible budget based on the number of branch warehouses in operation, what formula should be used to determine budgeted costs at various levels of activity?

A. \( Y = 350,000 + 150,000X \)  
B. \( Y = 350,000 + 200,000X \)  
C. \( Y = 200,000 + 150,000X \)  
D. \( Y = 200,000 + 170,000X \)

A controllable expense

A. Is an expense whose actual amount will not normally differ from the standard (budget) amount.  
B. Is an expense that will remain semivariable in total over the relevant range in a given time period.  
C. Is one that is directly influenced at a given level of managerial authority within a given time period.  
D. Is an expected future expense that will be different under various alternatives.

United Industries manufactures three products at its highly automated factory. The products are very popular, with demand far exceeding the company’s ability to supply the marketplace. To maximize profit, management should focus on each product’s

A. Gross margin.  
B. Contribution margin per machine hour.  
C. Segment margin.  
D. Contribution margin ratio.
Levittown Company employs a process cost system for its manufacturing operations. All direct materials are added at the beginning of the process and conversion costs are added proportionately. Levittown’s production quantity schedule for November is reproduced in the next column.

<table>
<thead>
<tr>
<th>Units</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Work-in-process on November 1</td>
<td>1,000</td>
</tr>
<tr>
<td>(60% complete as to conversion costs)</td>
<td></td>
</tr>
<tr>
<td>Units started during November</td>
<td>5,000</td>
</tr>
<tr>
<td>Total units to account for</td>
<td>6,000</td>
</tr>
<tr>
<td>Units completed and transferred out</td>
<td></td>
</tr>
<tr>
<td>from beginning inventory</td>
<td>1,000</td>
</tr>
<tr>
<td>Units started and completed during November</td>
<td>3,000</td>
</tr>
<tr>
<td>Work-in-process on November 30</td>
<td>2,000</td>
</tr>
<tr>
<td>(20% complete as to conversion costs)</td>
<td></td>
</tr>
<tr>
<td>Total units accounted for</td>
<td>6,000</td>
</tr>
</tbody>
</table>

Using the FIFO method, Levittown’s equivalent units for direct materials for November are

A. 6,000 units.
B. 4,400 units.
C. 3,800 units.
D. 5,000 units.

The effectiveness of a JIT system is often facilitated by the elimination of some common forms of internal control. The elimination of which internal control is usually acceptable with a JIT system?

A. Locked doors on production areas.
B. Preparation of hard copy receiving reports.
C. Voucher approval prior to paying accounts payable.
D. Two signatures required on large checks.
Kimber Company has the following unit cost for the current year:

<table>
<thead>
<tr>
<th>Cost</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw material</td>
<td>$20.00</td>
</tr>
<tr>
<td>Direct labor</td>
<td>$25.00</td>
</tr>
<tr>
<td>Variable manufacturing overhead</td>
<td>$10.00</td>
</tr>
<tr>
<td>Fixed manufacturing overhead</td>
<td>$15.00</td>
</tr>
<tr>
<td><strong>Total unit cost</strong></td>
<td><strong>$70.00</strong></td>
</tr>
</tbody>
</table>

Fixed manufacturing cost is based on an annual activity level of 8,000 units. Based on these data, the total manufacturing cost expected to be incurred to manufacture 9,000 units in the current year is

A. $575,000
B. $615,000
C. $560,000
D. $630,000

Jones Corporation uses a first-in, first-out (FIFO) process costing system. Jones has the following unit information for the month of August:

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning work-in-process inventory:</td>
</tr>
<tr>
<td>100% complete for materials,</td>
</tr>
<tr>
<td>75% complete for conversion cost</td>
</tr>
<tr>
<td>Units complete and transferred out</td>
</tr>
<tr>
<td>Ending work-in-process inventory:</td>
</tr>
<tr>
<td>100% complete for materials,</td>
</tr>
<tr>
<td>60% complete for conversion costs</td>
</tr>
</tbody>
</table>

The number of equivalent units of production for conversion costs for the month of August is

A. 88,000
B. 92,300
C. 87,300
D. 92,700

Which one of the following items would not be considered a manufacturing cost?

A. Sales commissions for a car manufacturer.
B. Cream for an ice cream maker.
C. Plant property taxes for an ice cream maker.
D. Tires for an automobile manufacturer.
[252] Gleim #: 6.1.16 -- Source: CMA 0205 3-3

Just-in-time production is also called

A. Lean manufacturing.
B. Kaizen.
C. Activity-based management.
D. Backflush costing.

[253] Gleim #: 3.3.92 -- Source: CMA 690 4-2

(Refers to Fact Pattern #33)
Alex Company’s total manufacturing cost for January was

A. $681,000
B. $665,000
C. $489,000
D. $673,000

[254] Gleim #: 6.3.38 -- Source: Publisher

The following steps make up the stages of a theory of constraints (TOC) analysis.

I. Determine the most profitable product mix given the constraint.
II. Increase capacity at the constraint.
III. Identify the constraint.
IV. Redesign the manufacturing process.
V. Maximize the flow through the constraint.

If executed in the correct order, the sequence is

A. III, II, I, V, IV.
B. III, I, V, II, IV.
C. III, II, I, IV, V.
D. III, I, II, V, IV.

[255] Gleim #: 3.1.26 -- Source: CMA 685 5-6

A cost incurred for the benefit of more than one cost objective is

A. A conversion cost.
B. A variable cost.
C. A common cost.
D. A prime cost.
[256] Gleim #: 3.1.10 -- Source: Publisher
Which of the following is a period cost rather than a product cost of a manufacturer?

A. Fixed overhead.
B. Variable overhead.
C. Direct materials.
D. Abnormal spoilage.

[257] Gleim #: 5.1.38 -- Source: CMA 0408 2-105
Which of the following correctly shows the treatment of (1) factory insurance, (2) direct labor, and (3) finished goods shipping costs under absorption costing and variable costing?

<table>
<thead>
<tr>
<th>Absorption Costing</th>
<th>Variable Costing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Cost</td>
<td>Period Cost</td>
</tr>
<tr>
<td></td>
<td>Product Cost</td>
</tr>
<tr>
<td></td>
<td>Period Cost</td>
</tr>
<tr>
<td>A. 2</td>
<td>1, 3</td>
</tr>
<tr>
<td>B. 1, 2</td>
<td>3</td>
</tr>
<tr>
<td>C. 1</td>
<td>2, 3</td>
</tr>
<tr>
<td>D. 1, 2</td>
<td>3</td>
</tr>
</tbody>
</table>

[258] Gleim #: 5.1.15 -- Source: CMA 1290 3-29
(Refers to Fact Pattern #6)
Valyn Corporation’s absorption costing operating income was

A. Lower than variable costing operating income because actual production was less than planned production.
B. Lower than variable costing operating income because actual sales were less than planned sales.
C. Lower than variable costing operating income because actual production exceeded actual sales.
D. Higher than variable costing operating income because actual production exceeded actual sales.
Pane Company uses a job costing system and applies overhead to products on the basis of direct labor cost. Job No. 75, the only job in process on January 1, had the following costs assigned as of that date: direct materials, $40,000; direct labor, $80,000; and factory overhead, $120,000. The following selected costs were incurred during the year:

Traceable to jobs:
- Direct materials: $178,000
- Direct labor: $345,000
- Total: $523,000

Not traceable to jobs:
- Factory materials and supplies: $46,000
- Indirect labor: $235,000
- Plant maintenance: $73,000
- Depreciation on factory equipment: $29,000
- Other factory costs: $76,000
- Total: $459,000

Pane’s profit plan for the year included budgeted direct labor of $320,000 and overhead of $448,000. Assuming no work-in-process on December 31, Pane’s overhead for the year was:

A. $24,000 overapplied.
B. $24,000 underapplied.
C. $11,000 underapplied.
D. $11,000 overapplied.

Lar Company has found that its total electricity cost has both a fixed component and a variable component within the relevant range. The variable component seems to vary directly with the number of units produced. Which one of the following statements concerning Lar’s electricity cost is incorrect?

A. The fixed electricity cost per unit of production will decline as production volume increases.
B. The total electricity cost will increase as production volume increases.
C. The total electricity cost per unit of production will increase as production volume increases.
D. The variable electricity cost per unit of production will remain constant as production volume increases.

Under the weighted-average method, Krause’s total conversion cost assigned to units transferred to the next department in December was:

A. $1,513
B. $1,600
C. $1,484
D. $1,664
Assume that Superb Hancock uses first-in, first-out (FIFO) for inventory costing instead of the weighted-average inventory valuation. If materials used in production cost $15,000 and conversion costs incurred were 25,000, what amount of inventory (rounded) was transferred to the next department under FIFO?

A. $36,280
B. $40,000
C. $32,000
D. $33,280

The term “prime costs” refers to

A. All costs associated with manufacturing other than direct labor costs and raw material costs.
B. The sum of raw material costs and direct labor costs.
C. Manufacturing costs incurred to produce units of output.
D. The sum of direct labor costs and all factory overhead costs.

Companies that adopt just-in-time purchasing systems often experience

A. Less need for linkage with a vendor’s computerized order entry system.
B. A greater need for inspection of goods as the goods arrive.
C. Fewer deliveries from suppliers.
D. A reduction in the number of suppliers.

If the beginning monthly balance of materials inventory was $37,000, the ending balance was $39,500, and $257,800 of materials were used, the cost of materials purchased during the month was

A. $255,300
B. $260,300
C. $257,800
D. $297,300
Which of the following statements about activity-based costing (ABC) is false?

A. Activity-based costing is more likely to result in major differences from traditional costing systems if the firm manufactures only one product rather than multiple products.
B. In activity-based costing, cost drivers are what cause costs to be incurred.
C. Activity-based costing differs from traditional costing systems in that products are cross-subsidized.
D. Activity-based costing is useful for allocating marketing and distribution costs.

The allocation of general overhead costs to operating departments can be least justified in determining

A. Costs for the federal government’s cost-plus contracts.
B. Income tax payable.
C. Costs for making management’s decisions.
D. Income of a product or functional unit.

When comparing absorption costing with variable costing, the difference in operating income can be explained by the difference between the

A. Ending inventory in units and the beginning inventory in units, multiplied by the unit sales price.
B. Ending inventory in units and the beginning inventory in units, multiplied by the budgeted fixed manufacturing cost per unit.
C. Units sold and the units produced, multiplied by the budgeted variable manufacturing cost per unit.
D. Units sold and the units produced, multiplied by the unit sales price.

In a production process where joint products are produced, the primary factor that will distinguish a joint product from a by-product is the

A. Accounting method used to allocate joint costs.
B. Relative total sales value of the products.
C. Relative ease of selling the products.
D. Relative total volume of the products.
If Farragut uses the traditional full cost system, the cost per unit for this product for the coming year would be

A. $6.95  
B. $6.11  
C. $5.39  
D. $5.44

The difference between variable costs and fixed costs is

A. Variable costs per unit fluctuate and fixed costs per unit remain constant.  
B. Variable costs per unit change in varying increments, while fixed costs per unit change in equal increments.  
C. Total variable costs are variable over the relevant range and fixed in the long term, while fixed costs never change.  
D. Variable costs per unit are fixed over the relevant range and fixed costs per unit are variable.

Data regarding four different products manufactured by an organization are presented as follows. Direct material and direct labor are readily available from the respective resource markets. However, the manufacturer is limited to a maximum of 3,000 machine hours per month.

<table>
<thead>
<tr>
<th>Products</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit price</td>
<td>$15</td>
<td>$18</td>
<td>$20</td>
<td>$25</td>
</tr>
<tr>
<td>Variable cost</td>
<td>$7</td>
<td>$11</td>
<td>$10</td>
<td>$16</td>
</tr>
</tbody>
</table>

Units Produced per Machine Hour:
A: 3  
B: 4  
C: 2  
D: 3

The product that is the most profitable for the manufacturer in this situation is

A. Product A.  
B. Product D.  
C. Product B.  
D. Product C.
The equivalent units in the assembly department for direct materials for the current month are

A. 40,800 units.
B. 38,000 units.
C. 30,000 units.
D. 42,000 units.

What is the journal entry to record the purchase of materials on account?

A. Raw materials inventory XX
   Cash XX
B. Accounts receivable XX
   Accounts payable XX
C. Accounts payable XX
   Raw materials inventory XX
D. Raw materials inventory XX
   Accounts payable XX

Departmental overhead rates are usually preferred to plant-wide overhead rates when

A. The activities of each of the various departments in the plant are not homogeneous.
B. Most of the overhead costs are fixed.
C. The costs of many service departments are being allocated to each of the various departments.
D. All products passing through the various departments require the same manufacturing effort in each department.

Which of the following is not a component of the value chain?

A. Primary activities.
B. Secondary activities.
C. The product.
D. Support activities.
[277] Gleim #: 3.4.125 -- Source: Publisher

Rose Co.’s fixed manufacturing overhead costs totaled $150,000 and variable selling costs totaled $75,000. How should these costs be classified under variable costing?

A. $150,000 period costs; $75,000 product costs.
B. $0 period costs; $225,000 product costs.
C. $75,000 period costs; $150,000 product costs.
D. $225,000 period costs; $0 product costs.

[278] Gleim #: 3.3.89 -- Source: CIA 1194 III-46

A company produces stereo speakers for automobile manufacturers. The automobile manufacturers reject approximately 3% of the stereo speakers received as being of unacceptable quality. The company inspects the rejected speakers to determine which ones should be reworked and which ones should be discarded. The discarded speakers are classified as

A. Spoilage.
B. Rework costs.
C. Waste.
D. Scrap.

[279] Gleim #: 5.2.55 -- Source: Publisher

(Refers to Fact Pattern #5)

The portion of Travis’ joint production costs assigned to Grade One based upon the relative sales value of output is (rounded to the nearest thousand dollars)

A. $3,512,000
B. $1,636,000
C. $4,091,000
D. $3,293,000

[Fact Pattern #37]

Petro-Chem, Inc. is a small company that acquires high-grade crude oil from low-volume production wells owned by individuals and small partnerships. The crude oil is processed in a single refinery into Two Oil, Six Oil, and impure distillates. Petro-Chem does not have the technology or capacity to process these products further and sells most of its output each month to major refineries. There were no beginning inventories of finished goods or work-in-process on November 1. The production costs and output of Petro-Chem for November are in the right column.

| Crude oil acquired and placed in production | $5,000,000 |
| Direct labor and related costs | 2,000,000 |
| Manufacturing overhead | 3,000,000 |
| Production and sales |
| - Two Oil, 300,000 barrels produced; 80,000 barrels sold at $20 each. |
| - Six Oil, 240,000 barrels produced; 120,000 barrels sold at $30 each. |
| - Distillates, 120,000 barrels produced and sold at $15 per barrel. |
The portion of Petro-Chem’s joint production costs assigned to Six Oil based upon physical output would be

A. $3,636,000  
B. $3,750,000  
C. $7,500,000  
D. $1,818,000

Cost drivers are

A. A mechanical basis, such as machine hours, computer time, size of equipment, or square footage of factory, used to assign costs to activities.  
B. Activities that cause costs to increase as the activity increases.  
C. Accounting techniques used to control costs.  
D. Accounting measurements used to evaluate whether or not performance is proceeding according to plan.

In a broad sense, cost accounting can best be defined within the accounting system as

A. Internal reporting for use in management planning and control, and external reporting to the extent its product-costing function satisfies external reporting requirements.  
B. External reporting to government, various outside parties, and shareholders.  
C. Internal reporting for use in planning and controlling routine operations.  
D. Internal and external reporting that may be used in making nonroutine decisions and in developing plans and policies.

In target costing,

A. Raw materials are recorded directly to cost of goods sold.  
B. Only raw materials, labor, and variable overhead cannot exceed a threshold target.  
C. Only raw materials cannot exceed a threshold target.  
D. The market price of the product is taken as a given.

Which of the following is not a type of process?

A. Make-to-order.  
B. Buffer.  
C. Make-to-stock.  
D. Hybrid.
Madack Company’s beginning and ending inventories for the month of November are

<table>
<thead>
<tr>
<th></th>
<th>November 1</th>
<th>November 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td>$67,000</td>
<td>$62,000</td>
</tr>
<tr>
<td>Work-in-process</td>
<td>145,000</td>
<td>171,000</td>
</tr>
<tr>
<td>Finished goods</td>
<td>85,000</td>
<td>78,000</td>
</tr>
</tbody>
</table>

Production data for the month of November follows:

- Direct labor: $200,000
- Actual overhead: $132,000
- Direct materials purchased: $163,000
- Transportation in: $4,000
- Purchase returns and allowances: $2,000

Madack uses one overhead control account and charges overhead to production at 70% of direct labor cost. The company does not formally recognize over/underapplied overhead until year-end.

[285] Gleim #: 5.3.88 -- Source: CMA 1295 3-23
(Refers to Fact Pattern #38)

Madack Company’s net charge to overhead control for the month of November is

- A. $8,000 debit, underapplied.
- B. $8,000 credit, underapplied.
- C. $8,000 debit, overapplied.
- D. $8,000 credit, overapplied.

[286] Gleim #: 3.1.3 -- Source: CMA 693 3-5

Inventoriable costs

- A. Are regarded as assets before the products are sold.
- B. Include only the conversion costs of manufacturing a product.
- C. Are expensed when products become part of finished goods inventory.
- D. Include only the prime costs of manufacturing a product.
A public accounting firm has two departments, Management Consulting Services (MCS) and Tax Advisory Services (TAS). These two departments use the services of two service departments, Computer Programming (CP) and Computer Operations (CO). The percentages of each service used by each department for a typical period are:

<table>
<thead>
<tr>
<th></th>
<th>CP</th>
<th>CO</th>
<th>MCS</th>
<th>TAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP</td>
<td>--</td>
<td>30%</td>
<td>50%</td>
<td>20%</td>
</tr>
<tr>
<td>CO</td>
<td>25%</td>
<td>--</td>
<td>45%</td>
<td>30%</td>
</tr>
</tbody>
</table>

The company prices its management consulting and tax advisory services on the basis of estimated costs of providing those services. Based upon this information, the most appropriate method for allocating service department costs is the

A. Step-down method.
B. Physical-units method.
C. Reciprocal method.
D. Estimated NRV method.

Using the FIFO method, Levittown’s equivalent units for conversion costs for November are

A. 3,800 units.
B. 3,400 units.
C. 4,400 units.
D. 4,000 units.

The appropriate method for the disposition of underapplied or overapplied overhead of a manufacturer

A. Is to cost of goods sold only.
B. Is apportioned to cost of goods sold and finished goods inventory.
C. Depends on the significance of the amount.
D. Is to finished goods inventory only.

A company produces three main joint products and one by-product. The by-product’s relative sales value is quite low compared with that of the main products. The preferable accounting for the by-product’s net realizable value is as

A. Revenue in the period it is sold.
B. A separate net realizable value upon which to allocate some of the common costs.
C. An addition to the revenues of the other products allocated on the basis of their respective net realizable values.
D. A reduction in the common cost to be allocated to the three main products.
[291] Gleim #: 4.4.87 -- Source: CMA 1296 3-29
Life-cycle costing

A. Is sometimes used as a basis for cost planning and product pricing.
B. Includes only manufacturing costs incurred over the life of the product.
C. Emphasizes cost savings opportunities during the manufacturing cycle.
D. Includes only manufacturing cost, selling expense, and distribution expense.

[292] Gleim #: 5.1.36 -- Source: CMA 0408 2-103

Xylon Company uses direct (variable) costing for internal reporting and absorption costing for the external financial statements. A review of the firm’s internal and external disclosures will likely find

A. A contribution margin rather than gross margin in the reports released to shareholders.
B. Internal income figures that vary closely with sales and external income figures that are influenced by both units sold and productive output.
C. A higher inventoriable unit cost reported to management than to the shareholders.
D. A difference in the treatment of fixed selling and administrative costs.

[Fact Pattern #39]
At the end of its fiscal year, Jubal Manufacturing recorded the data below:

<table>
<thead>
<tr>
<th>Cost</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime cost</td>
<td>$800,000</td>
</tr>
<tr>
<td>Variable manufacturing overhead</td>
<td>100,000</td>
</tr>
<tr>
<td>Fixed manufacturing overhead</td>
<td>160,000</td>
</tr>
<tr>
<td>Variable selling and other expenses</td>
<td>80,000</td>
</tr>
<tr>
<td>Fixed selling and other expenses</td>
<td>40,000</td>
</tr>
</tbody>
</table>

[293] Gleim #: 5.1.10 -- Source: CMA 1286 4-18
(Refers to Fact Pattern #39)

If Jubal uses variable costing, the inventoriable costs for the fiscal year are

A. $1,060,000
B. $800,000
C. $900,000
D. $980,000
During the month of May, Mercer Company completed 50,000 units costing $600,000, exclusive of spoilage allocation. Of these completed units, 25,000 were sold during the month. An additional 10,000 units, costing $80,000, were 50% complete at May 31. All units are inspected between the completion of manufacturing and transfer to finished goods inventory. Normal spoilage for the month was $20,000, and abnormal spoilage of $50,000 was also incurred during the month. The portion of total spoilage that should be charged against revenue in May is

A. $20,000  
B. $60,000  
C. $50,000  
D. $70,000

When using activity-based costing techniques, which one of the following departmental activities would be expected to use machine hours as a cost driver to allocate overhead costs to production?

A. Plant cafeteria.  
B. Material handling.  
C. Robotics painting.  
D. Machine setups.

Claremont Company has been asked to evaluate the profitability of a product that it manufactured and sold from Year 7 through Year 10. The product had a one-year warranty from date of sale. The following information appears in the financial records.

<table>
<thead>
<tr>
<th>Research, development, and design cost</th>
<th>Manufacturing and distribution costs</th>
<th>Warranty costs</th>
<th>Warranty cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yr 5 &amp; Yr 6</td>
<td>Yr 7 - Yr 10</td>
<td>Yr 7 - Yr 10</td>
<td>Yr 11</td>
</tr>
<tr>
<td>$5,000,000</td>
<td>$7,000,000</td>
<td>$200,000</td>
<td>$100,000</td>
</tr>
</tbody>
</table>

The life-cycle cost for this product is

A. $10,000,000  
B. $12,200,000  
C. $12,300,000  
D. $12,000,000
Using absorption (full) costing, Fortech Company’s inventoriable costs are

A. $450,000  
B. $400,000  
C. $530,000  
D. $590,000

In target costing,

A. The market price of the product is taken as a given.  
B. Only raw materials cannot exceed a threshold target.  
C. Raw materials are recorded directly to cost of goods sold.  
D. Only raw materials, labor, and variable overhead cannot exceed a threshold target.

Estimated unit costs for Cole Lab using full absorption costing and operating at a production level of 12,000 units per month:

<table>
<thead>
<tr>
<th>Cost Item</th>
<th>Estimated Unit Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct material</td>
<td>$32</td>
</tr>
<tr>
<td>Direct labor</td>
<td>20</td>
</tr>
<tr>
<td>Variable manufacturing overhead</td>
<td>15</td>
</tr>
<tr>
<td>Fixed manufacturing overhead</td>
<td>6</td>
</tr>
<tr>
<td>Variable selling</td>
<td>3</td>
</tr>
<tr>
<td>Fixed selling</td>
<td>4</td>
</tr>
</tbody>
</table>

Cole Lab’s estimated conversion costs per unit are

A. $44  
B. $41  
C. $48  
D. $35
All of the following are methods of allocating joint costs to joint products except

A. Physical quantities method.
B. Gross market value method.
C. Net realizable value method.
D. Separable production cost method.

Which of the following internal controls is not one typically eliminated when a just-in-time inventory system is introduced?

A. Hard copy receiving report.
B. Central receiving dock.
C. Statistical methods for quality assurance.
D. Sophisticated inventory tracking system.

What is Northcoast’s predetermined overhead application rate for the year?

A. 1.78  B. 2.09  C. 1.83  D. 2.15

Atmel, Inc. manufactures and sells two products. Data with regard to these products are given below.

<table>
<thead>
<tr>
<th>Product A</th>
<th>Product B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units produced and sold</td>
<td>30,000</td>
</tr>
<tr>
<td>Machine hours required per unit</td>
<td>2</td>
</tr>
<tr>
<td>Receiving orders per product line</td>
<td>50</td>
</tr>
<tr>
<td>Production orders per product line</td>
<td>12</td>
</tr>
<tr>
<td>Production runs</td>
<td>8</td>
</tr>
<tr>
<td>Inspections</td>
<td>20</td>
</tr>
</tbody>
</table>

Total budgeted machine hours are 100,000. The budgeted overhead costs are shown below.

<table>
<thead>
<tr>
<th>Overhead Cost</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving costs</td>
<td>$450,000</td>
</tr>
<tr>
<td>Engineering costs</td>
<td>$300,000</td>
</tr>
<tr>
<td>Machine setup costs</td>
<td>$25,000</td>
</tr>
<tr>
<td>Inspection costs</td>
<td>$200,000</td>
</tr>
<tr>
<td><strong>Total budgeted overhead costs</strong></td>
<td><strong>$975,000</strong></td>
</tr>
</tbody>
</table>
Atmel’s cost driver for engineering costs is the number of production orders per product line. Using activity-based costing, the engineering cost per unit for Product B is

A. $4.00  
B. $15.00  
C. $10.00  
D. $29.25

In cost terminology, conversion costs consist of

A. Direct and indirect labor.  
B. Direct labor and factory overhead.  
C. Direct labor and direct materials.  
D. Indirect labor and variable factory overhead.

Scott Company uses the following flexible budget formula for annual maintenance costs:

Total cost = $6,000 + $0.70 per machine hour

The current month’s budget is based on planned machine time of 30,000 hours. Monthly maintenance cost included in this flexible budget is

A. $27,000  
B. $21,000  
C. $20,500  
D. $21,500

Spoilage that is not expected to occur under normal, efficient operating conditions is considered

A. Actual spoilage.  
B. Residual spoilage.  
C. Normal spoilage.  
D. Abnormal spoilage.
Assuming Atlas Foods inventories Morefeed, the by-product, the joint cost to be allocated to Alfa using the net realizable value method is

A. $30,000  
B. $31,000  
C. $60,000  
D. $3,000

Assuming the company uses the FIFO method of inventory valuation, what amount of materials cost is included in A.P. Hill’s ending work-in-process inventory?

A. $1,860  
B. $3,300  
C. $5,500  
D. $6,450

A company is attempting to determine if there is a cause-and-effect relationship between scrap value and output produced. The following exhibit presents the company's scrap data for the last fiscal year:

<table>
<thead>
<tr>
<th>Month</th>
<th>Standard Dollar Value of Output</th>
<th>Percent Scrap (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov Year 7</td>
<td>$1,500,000</td>
<td>4.5</td>
</tr>
<tr>
<td>Dec Year 7</td>
<td>$1,650,000</td>
<td>2.5</td>
</tr>
<tr>
<td>Jan Year 8</td>
<td>$1,600,000</td>
<td>3.0</td>
</tr>
<tr>
<td>Feb Year 8</td>
<td>$1,550,000</td>
<td>2.5</td>
</tr>
<tr>
<td>Mar Year 8</td>
<td>$1,650,000</td>
<td>1.5</td>
</tr>
<tr>
<td>Apr Year 8</td>
<td>$1,500,000</td>
<td>4.0</td>
</tr>
<tr>
<td>May Year 8</td>
<td>$1,400,000</td>
<td>2.5</td>
</tr>
<tr>
<td>Jun Year 8</td>
<td>$1,300,000</td>
<td>3.5</td>
</tr>
<tr>
<td>Jul Year 8</td>
<td>$1,650,000</td>
<td>5.5</td>
</tr>
<tr>
<td>Aug Year 8</td>
<td>$1,000,000</td>
<td>4.5</td>
</tr>
<tr>
<td>Sep Year 8</td>
<td>$1,400,000</td>
<td>3.5</td>
</tr>
<tr>
<td>Oct Year 8</td>
<td>$1,600,000</td>
<td>2.5</td>
</tr>
</tbody>
</table>

The company's scrap value in relation to the standard dollar value of output produced appears to be

A. Unrelated to the standard dollar value of output.  
B. A semi-fixed cost.  
C. A fixed cost.  
D. A variable cost.
There are several methods for allocating service department costs to the production departments. The method that recognizes service provided by one service department to another but does not recognize reciprocal interdepartmental service is the

A. Variable method.
B. Reciprocal method.
C. Step-down method.
D. Direct method.

(Refers to Fact Pattern #33)
Alex Company’s balance in factory overhead control for January was

A. $5,000 credit - overapplied.
B. $5,000 debit - overapplied.
C. $5,000 debit - underapplied.
D. $5,000 credit - underapplied.

Which method of inventory costing treats direct manufacturing costs and manufacturing overhead costs, both variable and fixed, as inventoriable costs?

A. Absorption costing.
B. Direct costing.
C. Conversion costing.
D. Variable costing.

(Refers to Fact Pattern #11)
If Superb Hancock’s materials used in production cost $15,000 and its conversion costs incurred were $25,000, what amount of inventory (rounded) was transferred to the next department?

A. $36,280
B. $33,280
C. $40,000
D. $32,000
Joint costs are useful for

A. Determining inventory cost for accounting purposes.
B. Evaluating management by means of a responsibility reporting system.
C. Setting the selling price of a product.
D. Determining whether to continue producing an item.

A manufacturing firm may experience both normal and abnormal spoilage in its operations. The costs of both normal and abnormal spoilage are accounted for in the accounting records. The costs associated with any abnormal spoilage are

A. Allocated between the units transferred to finished goods and those remaining in work-in-process.
B. Assigned to the good units transferred to finished goods.
C. Charged to a special abnormal spoilage loss account.
D. Charged to the manufacturing overhead control account.

Assume that Longstreet uses the single-rate method of cost allocation and the allocation base is budgeted usage. How much photocopying cost will be allocated to Department B in the budget year?

A. $72,000
B. $122,000
C. $132,000
D. $138,667

The total variable cost currently expensed by Valyn Corporation on the variable costing basis was

A. $4,325,000
B. $4,500,000
C. $4,375,000
D. $4,550,000
Troughton Company manufactures radio-controlled toy dogs. Summary budget financial data for Troughton for the current year are as follows:

Sales (5,000 units at $150 each) $750,000  
Variable manufacturing cost 400,000  
Fixed manufacturing cost 100,000  
Variable selling and administrative cost 80,000  
Fixed selling and administrative cost 150,000

Troughton uses an absorption costing system with overhead applied based on the number of units produced, with a denominator level of activity of 5,000 units. Underapplied or overapplied manufacturing overhead is written off to cost of goods sold in the year incurred. The $20,000 budgeted operating income from producing and selling 5,000 toy dogs planned for this year is of concern to Trudy George, Troughton’s president. She believes she could increase operating income to $50,000 (her bonus threshold) if Troughton produces more units than it sells, thus building up the finished goods inventory. How much of an increase in the number of units in the finished goods inventory would be needed to generate the $50,000 budgeted operating income?

A. 556 units.  
B. 1,500 units.  
C. 600 units.  
D. 7,500 units.

Many companies recognize three major categories of costs of manufacturing a product. These are direct materials, direct labor, and overhead. Which of the following is an overhead cost in the production of an automobile?

A. The cost of the tires on each automobile.  
B. The delivery costs for the tires on each automobile.  
C. The cost of the laborers who place tires on each automobile.  
D. The cost of small tools used in mounting tires on each automobile.

(Refers to Fact Pattern #13)  
Assuming the company uses the FIFO method of inventory valuation, conversion costs included in A.P. Hill’s ending work-in-process inventory equal

A. $5,500  
B. $2,250  
C. $3,100  
D. $1,860
Using the weighted-average method, Kimbeth’s equivalent unit conversion cost for May is

A. $6.00  
B. $5.83  
C. $5.65  
D. $6.20

Products of relatively small total value that are produced simultaneously from a common manufacturing process with products of greater value and quantity are

A. Scrap.  
B. Waste.  
C. Abnormal spoilage.  
D. By-products.

Ramseur’s equivalent units for direct materials for the current month would be

A. 195,000 units.  
B. 200,000 units.  
C. 175,000 units.  
D. 181,500 units.

The schedule of cost of goods manufactured of Gruber Fittings, Inc. shows the following balances for its fiscal year-end:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct manufacturing labor</td>
<td>$280,000</td>
</tr>
<tr>
<td>Manufacturing overhead</td>
<td>$375,000</td>
</tr>
<tr>
<td>Ending work-in-process inventory</td>
<td>$230,000</td>
</tr>
<tr>
<td>Raw materials used in production</td>
<td>$450,000</td>
</tr>
<tr>
<td>Cost of goods manufactured</td>
<td>$1,125,000</td>
</tr>
</tbody>
</table>

The value of the work-in-process inventory at the beginning of the fiscal year was

A. $625,000  
B. $20,000  
C. $250,000  
D. $210,000
Factory Company makes two products, X and Z. X is being introduced this period, and Z has been in production for 2 years. For the period about to begin, 1,000 units of each product are to be manufactured. Assume that the only relevant overhead item is the cost of engineering change orders; that X and Z are expected to require eight and two change orders, respectively; that X and Z are expected to require 2 and 3 machine hours, respectively; and that the cost of a change order is $600. If Factory applies engineering change order costs on the basis of machine hours, the cross-subsidy per unit arising from this peanut-butter costing approach is

A. $1.20  
B. $4.80  
C. $3.60  
D. $2.40

A cost that always can be physically traced to a cost objective is

A. A variable cost.  
B. An indirect cost.  
C. A prime cost.  
D. A conversion cost.

In a process-costing system, the cost of abnormal spoilage should be

A. Included in the cost of units transferred out.  
B. Treated as a loss in the period incurred.  
C. Ignored.  
D. Prorated between units transferred out and ending inventory.

(Refers to Fact Pattern #13)  
Under the weighted-average method, how much conversion cost did A.P. Hill Corporation transfer out of Department Two during February?

A. $69,259  
B. $63,750  
C. $66,000  
D. $64,148
[329] Gleim #: 3.3.97 -- Source: CMA 1295 3-27

A cost that bears an observable and known relationship to a quantifiable activity base is a(n)

A. Sunk cost.  
B. Target cost.  
C. Indirect cost.  
D. Engineered cost.

[330] Gleim #: 4.3.84 -- Source: CMA 0408 2-142

The Chocolate Baker specializes in chocolate baked goods. The firm has long assessed the profitability of a product line by comparing revenues to the cost of goods sold. However, Barry White, the firm’s new accountant, wants to use an activity-based costing system that takes into consideration the cost of the delivery person. Listed below are activity and cost information relating to two of Chocolate Baker’s major products.

<table>
<thead>
<tr>
<th></th>
<th>Muffins</th>
<th>Cheesecake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>$53,000</td>
<td>$46,000</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>26,000</td>
<td>21,000</td>
</tr>
<tr>
<td>Delivery Activity:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of deliveries</td>
<td>150</td>
<td>85</td>
</tr>
<tr>
<td>Average length of delivery</td>
<td>10 minutes</td>
<td>15 minutes</td>
</tr>
<tr>
<td>Cost per hour for delivery</td>
<td>$20.00</td>
<td>$20.00</td>
</tr>
</tbody>
</table>

Using activity-based costing, which one of the following statements is correct?

A. The cheesecakes are $75 more profitable.  
B. The muffins are $1,925 more profitable.  
C. The muffins are $2,000 more profitable.  
D. The muffins have a higher profitability as a percentage of sales and therefore are more advantageous.

[331] Gleim #: 5.3.81 -- Source: Publisher

Which method of measuring the costs to be assigned to products or services uses budgeted rates for direct costs but applies those rates to the actual quantities of the inputs?

A. Normal costing.  
B. Actual costing.  
C. Extended normal costing.  
D. Standard costing.
[332] Gleim #: 3.3.73 -- Source: Publisher

The amount of raw materials left over from a production process or production cycle for which there is no further use is

A. Scrap.
B. Waste.
C. Abnormal spoilage.
D. Normal spoilage.

[333] Gleim #: 4.1.6 -- Source: CMA 0205 2-22

Kepler Optics makes lenses for telescopes. Because Kepler will only sell lenses of the highest quality, the normal spoilage during a reporting period is 1,000 units. At the beginning of the current reporting period, Kepler had 2,200 units in inventory, and during the period, production was started and completed on 4,000 units. Units in inventory at the end of the current reporting period were 1,500, and the units transferred out were 3,000. During this period, the abnormal spoilage for Kepler’s lens production was

A. 1,000 units.
B. 1,700 units.
C. 3,200 units.
D. 700 units.

[334] Gleim #: 4.4.92 -- Source: Publisher

(Refers to Fact Pattern #28)
At a unit price of $900, Dixon Porter’s life cycle costs are

A. $18,900,000
B. $26,910,000
C. $26,100,000
D. $28,350,000

[335] Gleim #: 6.6.61 -- Source: CMA 1296 3-22

The cost of scrap, rework, and tooling changes in a product quality cost system is categorized as a(n)

A. Internal failure cost.
B. Prevention cost.
C. Training cost.
D. External failure cost.
[336] Gleim #: 3.3.104 -- Source: CMA 690 5-27

Costs that arise from periodic budgeting decisions that have no strong input-output relationship are commonly called

A. Discretionary costs.
B. Opportunity costs.
C. Differential costs.
D. Committed costs.


(Refers to Fact Pattern #31)
The dollar amount of the costs of quality classified as preventive costs for the manufacturing firm would be

A. $701,000
B. $768,000
C. $736,000
D. $643,000

[338] Gleim #: 5.3.95 -- Source: Publisher

In a labor intensive industry in which more overhead (service, support, more expensive equipment, etc.) is incurred by the more highly skilled and paid employees, which activity base is most likely to be appropriate for applying overhead?

A. Machine hours.
B. Direct labor cost.
C. Direct labor hours.
D. Direct materials cost.

[339] Gleim #: 5.4.127 -- Source: CMA 1290 3-2

Allocation of service department costs to the production departments is necessary to

A. Coordinate production activity.
B. Determine overhead rates.
C. Maximize efficiency.
D. Control costs.

[340] Gleim #: 5.1.3 -- Source: CMA 697 3-3

Which method of inventory costing treats direct manufacturing costs and manufacturing overhead costs, both variable and fixed, as inventoriable costs?

A. Direct costing.
B. Absorption costing.
C. Conversion costing.
D. Variable costing.
Because of changes that are occurring in the basic operations of many firms, all of the following represent trends in the way indirect costs are allocated except

A. Preferring plant-wide application rates that are applied to machine hours rather than incurring the cost of detailed allocations.
B. Using several machine cost pools to measure product costs on the basis of time in a machine center.
C. Using throughput time as an application base to increase awareness of the costs associated with lengthened throughput time.
D. Treating direct labor as an indirect manufacturing cost in an automated factory.

Osawa’s operating income using absorption (full) costing is

A. $200,000
B. $600,000
C. $440,000
D. $840,000

Which one of the following categories of cost is most likely not considered a component of fixed factory overhead?

A. Power.
B. Rent.
C. Property taxes.
D. Depreciation.

Manchester Airlines is in the process of preparing a contribution margin income statement that will allow a detailed look at its variable costs and profitability of operations. Which one of the following cost combinations should be used to evaluate the variable cost per flight of the company’s Boston-Las Vegas flights?

A. Airplane depreciation, baggage handling, and airline marketing.
B. Fuel, food service, and airport landing fees.
C. Flight crew salary, fuel, and engine maintenance.
D. Communication system operation, food service, and ramp personnel.
The series of activities in which customer usefulness is added to the product is the definition of

A. Activity-based costing.
B. Process value analysis.
C. A value chain.
D. Integrated manufacturing.

Life-cycle costing

A. Includes only manufacturing cost, selling expense, and distribution expense.
B. Emphasizes cost savings opportunities during the manufacturing cycle.
C. Is sometimes used as a basis for cost planning and product pricing.
D. Includes only manufacturing costs incurred over the life of the product.

Under the weighted-average method, Albany Mining’s equivalent unit conversion cost for May is

A. $3.10
B. $3.31
C. $2.92
D. $3.00

Which of the following is not a goal of materials requirements planning?

A. Right part.
B. Right customer.
C. Right time.
D. Right quantity.

Under the FIFO method, Albany Mining’s equivalent unit cost of materials for May is

A. $2.30
B. $2.51
C. $2.25
D. $2.06
Which of the following terms is not connected with the employment of just-in-time (JIT) manufacturing?

A. Lean production.
B. Cells.
C. Kanban.
D. Safety stock.

The primary purpose for allocating common costs to joint products is to determine

A. The inventory cost of joint products for financial reporting.
B. The variance between budgeted and actual common costs.
C. Whether one of the joint products should be discontinued.
D. The selling price of a by-product.

An imputed cost is

A. The difference in total costs which results from selecting one alternative instead of another.
B. A cost that cannot be avoided because it has already been incurred.
C. A cost that continues to be incurred even though there is no activity.
D. A cost that does not entail any dollar outlay but is relevant to the decision-making process.

When the amount of overapplied factory overhead is significant, the entry to close overapplied factory overhead will most likely require

A. A debit to cost of goods sold.
B. Debits to cost of goods sold, finished goods inventory, and work-in-process inventory.
C. A credit to cost of goods sold.
D. Credits to cost of goods sold, finished goods inventory, and work-in-process inventory.
Ace, Inc. estimates its total materials handling costs at two production levels as follows:

<table>
<thead>
<tr>
<th>Cost</th>
<th>Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>$160,000</td>
<td>80,000</td>
</tr>
<tr>
<td>$132,000</td>
<td>60,000</td>
</tr>
</tbody>
</table>

What is the estimated total cost for handling 75,000 gallons?

A. $165,000  
B. $150,000  
C. $153,000  
D. $146,000

(Refers to Fact Pattern #36)

Using the weighted-average method, Levittown’s equivalent units for direct materials for November are

A. 3,400 units.  
B. 4,400 units.  
C. 6,000 units.  
D. 5,000 units.

In joint-product costing and analysis, which one of the following costs is relevant when deciding the point at which a product should be sold to maximize profits?

A. Purchase costs of the materials required for the joint products.  
B. Sales salaries for the period when the units were produced.  
C. Separable costs after the split-off point.  
D. Joint costs to the split-off point.
Chassen Company, a cracker and cookie manufacturer, has the following unit costs for the month of June:

<table>
<thead>
<tr>
<th></th>
<th>Variable cost</th>
<th>Variable marketing cost</th>
<th>Fixed manufacturing cost</th>
<th>Fixed marketing cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>$5.00</td>
<td>$3.50</td>
<td>$2.00</td>
<td>$4.00</td>
</tr>
<tr>
<td>Marketing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A total of 100,000 units were manufactured during June, 10,000 of which remain in ending inventory. Chassen uses the first-in, first-out (FIFO) inventory method, and the 10,000 units are the only finished goods inventory at month-end. Using the full absorption costing method, Chassen’s finished goods inventory value would be

A. $145,000
B. $85,000
C. $50,000
D. $70,000

(Refers to Fact Pattern #34)
Assume that Product T is treated as a by-product and that the company accounts for the by-product at net realizable value as a reduction of joint cost. Assume also that Products S and T must be processed further before they can be sold. What is Pickett’s total cost of Product R in April if joint cost allocation is based on net realizable values?

A. $370,370
B. $220,370
C. $595,000
D. $374,630

(Refers to Fact Pattern #24)
The equivalent units in the assembly department for conversion costs for the current month are

A. 42,800 units.
B. 34,800 units.
C. 40,800 units.
D. 43,200 units.
If Rochester Manufacturing uses the step-down method of allocating service costs beginning with quality control, the maintenance costs allocated to the assembly department would be

- $108,000
- $70,000
- $200,000
- $162,000

A manufacturing company is attempting to implement a just-in-time (JIT) purchase policy system by negotiating with its primary suppliers to accept long-term purchase orders which result in more frequent deliveries of smaller quantities of raw materials. If the JIT purchase policy is successful in reducing the total inventory costs of the manufacturing company, which of the following combinations of cost changes would be most likely to occur?

<table>
<thead>
<tr>
<th>Cost Category to Increase</th>
<th>Cost Category to Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchasing costs</td>
<td>Stockout costs</td>
</tr>
<tr>
<td>Quality costs</td>
<td>Ordering costs</td>
</tr>
<tr>
<td>Stockout costs</td>
<td>Carrying costs</td>
</tr>
<tr>
<td>Purchasing costs</td>
<td>Quality costs</td>
</tr>
</tbody>
</table>

A corporation allocates indirect corporate overhead costs to its operating divisions. The company uses a cause-and-effect criterion in the selection of appropriate allocation bases. Which of the following would be an appropriate allocation base to assign the costs of the corporate personnel department to the operating divisions using a cause-and-effect criterion?

- Total service years of employees in each division.
- Number of employees in each division.
- Total book value of identifiable division assets.
- Square footage of space occupied by each division.

Which of the following most appropriately describes the classification and behavior of shipping costs?

<table>
<thead>
<tr>
<th>Classification</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed cost</td>
<td>$30,000 per month plus $35.00 per sales order</td>
</tr>
<tr>
<td>Mixed cost</td>
<td>$58,000 per month plus $23.33 per sales order</td>
</tr>
<tr>
<td>Mixed cost</td>
<td>$16,000 per month plus $1.40 per unit sold</td>
</tr>
<tr>
<td>Variable cost</td>
<td>$1.66 per unit sold</td>
</tr>
</tbody>
</table>
The upper limit of a company’s productive output capacity given its existing resources is called

A. Cycle-time capacity.  
B. Excess capacity.  
C. Theoretical capacity.  
D. Practical capacity.

Madtack Company’s prime cost for November is

A. $363,000  
B. $370,000  
C. $168,000  
D. $170,000

Goggle-eyed Old Snapping Turtle, a sporting goods manufacturer, buys wood as a direct material for baseball bats. The Forming Department processes the baseball bats, and the bats are then transferred to the Finishing Department where a sealant is applied. The Forming Department began manufacturing 10,000 “Casey Sluggers” during the month of May. There was no beginning inventory.

Costs for the Forming Department for the month of May were as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td>$33,000</td>
</tr>
<tr>
<td>Conversion costs</td>
<td>$17,000</td>
</tr>
<tr>
<td>Total</td>
<td>$50,000</td>
</tr>
</tbody>
</table>

A total of 8,000 bats were completed and transferred to the Finishing Department; the remaining 2,000 bats were still in the forming process at the end of the month. All of the Forming Department’s direct materials were placed in process, but, on average, only 25% of the conversion cost was applied to the ending work-in-process inventory.

The cost of the work-in-process inventory in Snapping Turtle’s Forming Department at the end of May is

A. $2,500  
B. $10,000  
C. $20,000  
D. $7,600
Fowler Co. provides the following summary of its total budgeted production costs at three production levels:

<table>
<thead>
<tr>
<th>Volume in Units</th>
<th>Cost A</th>
<th>Cost B</th>
<th>Cost C</th>
<th>Cost D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000</td>
<td>$1,420</td>
<td>1,550</td>
<td>1,000</td>
<td>1,630</td>
</tr>
<tr>
<td>1,500</td>
<td>$2,130</td>
<td>2,200</td>
<td>1,000</td>
<td>2,445</td>
</tr>
<tr>
<td>2,000</td>
<td>$2,840</td>
<td>2,900</td>
<td>1,000</td>
<td>3,260</td>
</tr>
</tbody>
</table>

The cost behavior of each of the Costs A through D, respectively, is

A. Variable, semivariable, fixed, and semivariable.
B. Variable, fixed, fixed, and variable.
C. Semivariable, variable, fixed, and variable.
D. Variable, semivariable, fixed, and variable.

A company is considering the implementation of an activity-based costing and management program. The company

A. Would normally gain added insights into causes of cost.
B. Would probably find a lack of software in the marketplace to assist with the related recordkeeping.
C. Would likely use fewer cost pools than it did under more traditional accounting methods.
D. Should focus on manufacturing activities and avoid implementation with service-type functions.

Bell Co. changed from a traditional manufacturing philosophy to a just-in-time philosophy. What are the expected effects of this change on Bell’s inventory turnover and inventory as a percentage of total assets reported on Bell’s balance sheet?

<table>
<thead>
<tr>
<th>Inventory Turnover</th>
<th>Inventory Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Decrease</td>
<td>Decrease</td>
</tr>
<tr>
<td>B. Increase</td>
<td>Decrease</td>
</tr>
<tr>
<td>C. Decrease</td>
<td>Increase</td>
</tr>
<tr>
<td>D. Increase</td>
<td>Increase</td>
</tr>
</tbody>
</table>
A manufacturer can sell its single product for $660. Below are the cost data for the product:

Direct Materials $170
Direct Labor 225
Manufacturing Overhead 90

The relevant margin amount when beginning a theory of constraints (TOC) analysis is

A. $175
B. $345
C. $265
D. $490

If Dremmon uses absorption costing, its operating income earned in the last fiscal year was

A. $21,500
B. $28,000
C. $30,000
D. $27,000

Direct labor costs are wages paid to

<table>
<thead>
<tr>
<th>Machine Operators</th>
<th>Factory Supervisors</th>
<th>Corporate Vice-President</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>B. Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>C. No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>D. No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Which one of the following is an advantage of using variable costing?

A. Variable costing is more relevant to long-run pricing strategies.
B. Variable costing complies with the U.S. Internal Revenue Code.
C. Variable costing complies with generally accepted accounting principles.
D. Variable costing makes cost-volume relationships more easily apparent.
Nile Co. is a manufacturer whose cost assignment and product costing procedures follow activity-based costing principles. Activities have been identified and classified as being either value-adding or non-value-adding as to each product. Which of the following activities used in Nile’s production process is non-value-adding?

A. Drill press activity.
B. Design engineering activity.
C. Raw materials storage activity.
D. Heat treatment activity.

Logo employs the direct method of allocating service department costs. The overhead of the Systems Department would be allocated by dividing the overhead amount by

A. 9,000 hours.
B. 9,300 hours.
C. 8,100 hours.
D. 1,200 hours.

Adam Corporation manufactures computer tables and has the following budgeted indirect manufacturing cost information for next year:

<table>
<thead>
<tr>
<th></th>
<th>Support Departments</th>
<th>Operating Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maintenance</td>
<td>Systems</td>
</tr>
<tr>
<td>Budgeted overhead</td>
<td>$360,000</td>
<td>$95,000</td>
</tr>
<tr>
<td>Support work finished:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>From Maintenance</td>
<td></td>
<td>10%</td>
</tr>
<tr>
<td>From Systems</td>
<td>5%</td>
<td>45%</td>
</tr>
</tbody>
</table>

If Adam uses the direct method to allocate support department costs to production departments, the total overhead (rounded to the nearest dollar) for the Machining Department to allocate to its products would be

A. $422,750
B. $445,000
C. $418,000
D. $442,053
The two most appropriate factors for budgeting manufacturing overhead expenses would be

A. Management judgment and contribution margin.
B. Management judgment and sales dollars.
C. Management judgment and production volume.
D. Machine hours and production volume.

Which of the following is not a phase in a value-chain analysis?

A. Identify means for improving product cost efficiency.
B. Identify the firm’s competitive advantage.
C. Identify activities that are candidates for cost reduction.
D. Identify ways to generate additional customer value.

Cotton Company has two service departments and three operating departments. In allocating service department costs to the operating departments, which of the following three methods (direct, step-down, reciprocal) will result in the same amount of service department costs being allocated to each operating department, regardless of the order in which the service department costs are allocated?

A. Direct method only.
B. Step-down and reciprocal methods only.
C. Direct and step-down methods only.
D. Direct and reciprocal methods only.

Madtack Company’s cost of goods sold for November is

A. $484,000
B. $491,000
C. $502,000
D. $476,000

The allocation of costs to particular cost objects allows a firm to analyze all of the following except

A. Why a particular product should be purchased rather than manufactured in-house.
B. Whether a particular department should be expanded.
C. Whether a product line should be discontinued.
D. Why the sales of a particular product have increased.
Butteco has the following cost components for 100,000 units of product for the year:

Direct materials $200,000  
Direct labor 100,000  
Manufacturing overhead 200,000  
Selling and administrative expense 150,000

All costs are variable except for $100,000 of manufacturing overhead and $100,000 of selling and administrative expenses. The total costs to produce and sell 110,000 units for the year are

A. $540,000  
B. $715,000  
C. $650,000  
D. $695,000

Production levels are expected to increase within the relevant range. What are the anticipated effects on the following?

<table>
<thead>
<tr>
<th>Fixed Costs</th>
<th>Variable Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>per Unit</td>
<td>per Unit</td>
</tr>
<tr>
<td>A. Increase</td>
<td>Increase</td>
</tr>
<tr>
<td>B. Decrease</td>
<td>Decrease</td>
</tr>
<tr>
<td>C. Increase</td>
<td>No change</td>
</tr>
<tr>
<td>D. Decrease</td>
<td>No change</td>
</tr>
</tbody>
</table>

Jansen, Inc. pays bonuses to its managers based on operating income. The company uses absorption costing, and overhead is applied on the basis of direct labor hours. To increase bonuses, Jansen’s managers may do all of the following except

A. Increase production schedules independent of customer demands.  
B. Decrease production of those items requiring the most direct labor.  
C. Produce those products requiring the most direct labor.  
D. Defer expenses such as maintenance to a future period.

“Controllable costs” are costs that

A. Fluctuate in total in response to small changes in the rate of utilization of capacity.  
B. Management decides to incur in the current period to enable the company to achieve objectives other than the filling of orders placed by customers.  
C. Are likely to respond to the amount of attention devoted to them by a specified manager.  
D. Will be unaffected by current managerial decisions.
Roberta Johnson is the manager of Sleep-Well Inn, one of a chain of motels located throughout the U.S. An example of an operating cost at Sleep-Well that is both direct and fixed is

A. Toilet tissue.
B. Johnson’s salary.
C. Water.
D. Advertising for the Sleep-Well Inn chain.

Valyn Corporation’s total fixed costs expensed this year on the absorption costing basis were

A. $2,095,000
B. $2,030,000
C. $2,055,000
D. $2,120,000

Johnson waits two hours in line to buy a ticket to an NCAA Final Four Tournament. The opportunity cost of buying the $200 ticket is

A. The value of the $200 to the ticket agent.
B. Johnson’s best alternative use of the 2 hours it took to wait in line.
C. Johnson’s best alternative use of both the $200 and the 2 hours spent in line.
D. Johnson’s best alternative use of the $200.

If Adam uses the step-down method, beginning with the Maintenance Department, to allocate support department costs to production departments, the total overhead (rounded to the nearest dollar) for the Machining Department to allocate to its products would be

A. $445,000
B. $415,526
C. $422,750
D. $442,053
Jones Tax Company has three divisions – Compliance, Tax Planning, and Financial Consulting. Based on the divisional data presented below, which one of the allocation bases for common company expenses would likely have the least negative behavioral impact on the Financial Consulting Division manager?

<table>
<thead>
<tr>
<th></th>
<th>Tax</th>
<th>Financial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance</td>
<td>$4,500,000</td>
<td>$6,000,000</td>
</tr>
<tr>
<td>Planning</td>
<td>1,500,000</td>
<td>3,750,000</td>
</tr>
<tr>
<td>Consulting</td>
<td>68</td>
<td>76</td>
</tr>
<tr>
<td>Revenues</td>
<td>$4,500,000</td>
<td>$4,500,000</td>
</tr>
<tr>
<td>Variable expenses</td>
<td>1,500,000</td>
<td>2,250,000</td>
</tr>
<tr>
<td>No. of employees</td>
<td>68</td>
<td>56</td>
</tr>
</tbody>
</table>

A. Revenues.
B. Number of employees.
C. Equal sharing.
D. Contribution margin.

When Nash Glassworks Company allocates fixed costs, management will select a capacity level to use as the denominator volume. All of the following are appropriate as the capacity level that approximates actual volume levels except

A. Expected annual activity.
B. Normal capacity.
C. Master-budget capacity.
D. Theoretical capacity.

The portion of Petro-Chem’s joint production costs assigned to Two Oil based upon the relative sales value of output would be

A. $4,800,000
B. $4,000,000
C. $2,286,000
D. $2,500,000
Which of the following is not a correct comparison of a just-in-time system with a traditional system?

<table>
<thead>
<tr>
<th>Traditional</th>
<th>Just-in-Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Some scrap tolerated</td>
<td>Zero defects desired</td>
</tr>
<tr>
<td>B. Inventory is an asset</td>
<td>Inventory is a liability</td>
</tr>
<tr>
<td>C. Lot size based on immediate need</td>
<td>Lot size based on formulas</td>
</tr>
<tr>
<td>D. Longer lead times</td>
<td>Shorter lead times</td>
</tr>
</tbody>
</table>

(Refers to Fact Pattern #2)

The costs included in Huron’s fixed overhead are:

A. Prime costs.
B. Committed costs.
C. Joint costs.
D. Opportunity costs.

A company has two service departments (S1 and S2) and two production departments (P1 and P2). Departmental data for January were as follows:

<table>
<thead>
<tr>
<th></th>
<th>S1</th>
<th>S2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs incurred:</td>
<td>$27,000</td>
<td>$18,000</td>
</tr>
<tr>
<td>Service provided to:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S1</td>
<td>--</td>
<td>20%</td>
</tr>
<tr>
<td>S2</td>
<td>10%</td>
<td>--</td>
</tr>
<tr>
<td>P1</td>
<td>50%</td>
<td>30%</td>
</tr>
<tr>
<td>P2</td>
<td>40%</td>
<td>50%</td>
</tr>
</tbody>
</table>

What are the total allocated service department costs to P2 if the company uses the reciprocal method of allocating its service department costs? (Round calculations to the nearest whole number.)

A. $19,800
B. $21,949
C. $22,500
D. $23,051
Darden Manufacturing, a calendar-year corporation, had $17,000 of spoilage during April that production management characterized as abnormal. The spoilage was incurred on Job No. 532, which was sold 3 months later for $459,000. Which of the following correctly describes the impact of the spoilage on Darden’s unit manufacturing cost for Job No. 532 and on the year’s operating income?

<table>
<thead>
<tr>
<th>Unit Manufacturing Cost</th>
<th>Operating Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Increase</td>
<td>No effect</td>
</tr>
<tr>
<td>B. No effect</td>
<td>Decrease</td>
</tr>
<tr>
<td>C. No effect</td>
<td>Not enough information to judge</td>
</tr>
<tr>
<td>D. Increase</td>
<td>Decrease</td>
</tr>
</tbody>
</table>

The term “gross margin” for a manufacturing firm refers to excess of sales over:

A. All variable costs, including variable selling and administrative expenses.
B. Cost of goods sold, including fixed indirect manufacturing costs.
C. Cost of goods sold, excluding fixed indirect manufacturing costs.
D. Manufacturing costs, excluding fixed manufacturing costs.

The advertising and promotion costs for the product selected by Huron will be:

A. Discretionary costs.
B. Incremental costs.
C. Committed costs.
D. Opportunity costs.

Three of the basic measurements used by the theory of constraints (TOC) are:

A. Throughput (or throughput contribution), inventory (or investments), and operational expense.
B. Gross margin (or gross profit), return on assets, and total sales.
C. Fixed manufacturing overhead per unit, fixed general overhead per unit, and unit gross margin (or gross profit).
D. Number of constraints (or subordinates), number of nonconstraints, and operating leverage.
What is the amount of underapplied overhead allocated to Northcoast’s cost of goods sold?

A. $0
B. $156,400
C. $39,100
D. $195,500

A manufacturing company employs variable costing for internal reporting and analysis purposes. However, it converts its records to absorption costing for external reporting. The Accounting Department always reconciles the two operating income figures to assure that no errors have occurred in the conversion. The fixed manufacturing overhead cost per unit was based on the planned level of production of 480,000 units. Financial data for the year are presented below:

<table>
<thead>
<tr>
<th></th>
<th>Budget</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales (in units)</td>
<td>495,000</td>
<td>510,000</td>
</tr>
<tr>
<td>Production (in units)</td>
<td>480,000</td>
<td>500,000</td>
</tr>
<tr>
<td>Variable Costing</td>
<td>$10.00</td>
<td>$10.00</td>
</tr>
<tr>
<td>Fixed manufacturing overhead</td>
<td>0</td>
<td>6.00</td>
</tr>
<tr>
<td>Total unit manufacturing costs</td>
<td>$10.00</td>
<td>$16.00</td>
</tr>
</tbody>
</table>

The difference between the operating income calculated under the variable costing method and the operating income calculated under the absorption costing method would be

A. $120,000
B. $90,000
C. $60,000
D. $57,600

Assuming Atlas Foods inventories Morefeed, the by-product, the joint cost to be allocated to Betters using the weighted-quantity method based on caloric value per pound is

A. $50,400
B. $39,208
C. $39,600
D. $40,920
[403] **Gleim #: 3.2.47 -- Source: Publisher**

A company has the following budget formula for annual electricity expense in its shop:

\[
\text{Expense} = 7,200 + (\text{Units produced} \times 0.60)
\]

If management expects to produce 20,000 units during February, the appropriate monthly flexible budget allowance for the purpose of performance evaluation should be

A. $19,200  
B. $12,000  
C. $12,600  
D. $7,200

[404] **Gleim #: 5.1.11 -- Source: CMA 1286 4-19**

(Refers to Fact Pattern #39)

Using absorption (full) costing, Jubal’s inventoriable costs are

A. $1,060,000  
B. $1,180,000  
C. $800,000  
D. $900,000

[405] **Gleim #: 6.3.33 -- Source: Publisher**

(Refers to Fact Pattern #27)

Tullahoma Company has offered to perform the Operation 2 function on 1,000 units at a unit price of $40, excluding direct materials cost. Chattanooga Company has offered to perform the Operation 1 function on 1,000 units at a price of $7, excluding direct materials cost. Chickamauga Company has made an offer to perform the Operation 1 function on 5,000 units at a unit cost of $5 (excluding direct materials cost). Which of these mutually exclusive offers is acceptable to Rosecrans?

A. Chickamauga’s offer.  
B. None of the offers should be accepted.  
C. Tullahoma’s offer.  
D. Chattanooga’s offer.

[406] **Gleim #: 5.1.4 -- Source: CMA 1295 3-28**

The difference between the sales price and total variable costs is

A. Gross operating profit.  
B. The breakeven point.  
C. The contribution margin.  
D. Net profit.
An accounting system that collects financial and operating data on the basis of the underlying nature and extent of the cost drivers is

A. Variable costing.  
B. Cycle-time costing.  
C. Activity-based costing.  
D. Direct costing.

Sanscom Corporation utilizes an activity-based costing system for applying costs to its two products, P and Q. In the assembly department, material handling costs vary directly with the number of parts inserted into the product. Machinery is recalibrated and oiled each weekend regardless of the number of parts inserted during the previous week. Both material handling and machinery maintenance costs are charged to the product on the basis of the number of parts inserted. Due to reengineering of the production process for Product P, the number of insertion parts per finished unit has been reduced. How will the redesign of the production process for Product P affect the activity-based cost of Product Q?

A. Material handling cost per Q unit will increase, and machinery maintenance cost per Q unit will increase.  
B. Material handling cost per Q unit will increase, and machinery maintenance cost per Q unit will remain unchanged.  
C. Material handling cost per Q will remain unchanged, and machinery maintenance cost per Q unit will increase.  
D. Material handling cost per Q will remain unchanged, and machinery maintenance cost per Q unit will remain unchanged.

The cost of the units transferred to Snapping Turtle’s Finishing Department is

A. $53,000  
B. $50,000  
C. $40,000  
D. $42,400

The assignment of raw material costs to the major end products resulting from refining a barrel of crude oil is best described as

A. Incremental costing.  
B. Joint costing.  
C. Differential costing.  
D. Indirect costing.
Cost allocation is the process of assigning indirect costs to a cost object. The indirect costs are grouped in cost pools and then allocated by a common allocation base to the cost object. The base that is employed to allocate a homogeneous cost pool should

A. Have a high correlation with the cost items in the cost pool as the sole criterion for selection.
B. Be a nonfinancial measure (e.g., number of setups) because a nonfinancial measure is more objective.
C. Assign the costs in the pool uniformly to cost objects even if the cost objects use resources in a nonuniform way.
D. Have a cause-and-effect relationship with the cost items in the cost pool.

How much is Northcoast’s overhead over/underapplied?

A. $195,500 underapplied.
B. $195,500 overapplied.
C. $168,800 overapplied.
D. $168,800 underapplied.

In a theory of constraints (TOC) analysis, the bottleneck operation (the constraint) corresponds to which part of the drum-buffer-rope model?

A. Buffer.
B. Drum.
C. Rope.
D. No part of TOC analysis corresponds to the drum-buffer-rope model.

When comparing absorption costing with variable costing, which of the following statements is not true?

A. When sales volume is more than production volume, variable costing will result in higher operating profit.
B. A manager who is evaluated based on variable costing operating profit would be tempted to increase production at the end of a period in order to get a more favorable review.
C. Under absorption costing, operating profit is a function of both sales volume and production volume.
D. Absorption costing enables managers to increase operating profits in the short run by increasing inventories.
Render, Inc. has four support departments (maintenance, power, human resources, and legal) and three operating departments. The support departments provide services to the operating departments as well as to the other support departments. The method of allocating the costs of the support departments that best recognizes the mutual services rendered by support departments to other support departments is the

A. Reciprocal allocation method.
B. Direct allocation method.
C. Step-down allocation method.
D. Dual-rate allocation method.

Mello Joy produces 200,000 units of a good that has the following costs:

<table>
<thead>
<tr>
<th>Cost Type</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct material costs</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Direct manufacturing labor costs</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Indirect manufacturing labor costs</td>
<td>600,000</td>
</tr>
</tbody>
</table>

Mello Joy’s per unit prime costs and conversion costs, respectively, are

A. $8 and $18.
B. $10 and $8.
C. $15 and $8.
D. $8 and $15.

Using the weighted-average method, Levittown’s equivalent units for conversion costs for November are

A. 3,800 units.
B. 4,000 units.
C. 3,400 units.
D. 4,400 units.

Target pricing

A. Is more effective when applied to mature, long-established products.
B. Is often used when costs are difficult to control.
C. Is a pricing strategy used to create competitive advantage.
D. Considers short-term variable costs and excludes fixed costs.
[419] Gleim #: 4.3.85 -- Source: CMA 0408 2-143
(Refers to Fact Pattern #41)
Using activity-based costing, Atmel’s per unit overhead cost allocation of receiving costs for Product A is

A. $10.75  
B. $28.13  
C. $19.50  
D. $3.75

[420] Gleim #: 3.2.58 -- Source: CMA 0408 2-086
Which one of the following refers to a cost that remains the same as the volume of activity decreases within the relevant range?

A. Average cost per unit.  
B. Unit fixed cost.  
C. Total variable cost.  
D. Variable cost per unit.

[421] Gleim #: 3.3.102 -- Source: CIA 1189 IV-7
A manufacturing process normally produces defective units equal to 1% of production. Defective units are subsequently reworked and sold. The cost of reworking these defective units should be charged to

A. Finished goods control.  
B. Factory overhead control.  
C. Cost of goods sold.  
D. Work-in-process control.
New-Rage Cosmetics has used a traditional cost accounting system to apply quality control costs uniformly to all products at a rate of 14.5% of direct labor cost. Monthly direct labor cost for Satin Sheen makeup is $27,500. In an attempt to distribute quality control costs more equitably, New-Rage is considering activity-based costing. The monthly data shown in the chart below have been gathered for Satin Sheen makeup.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost Driver</th>
<th>Cost Rates</th>
<th>Quantity for Satin Sheen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incoming material inspection</td>
<td>Type of material</td>
<td>$11.50 per type</td>
<td>12 types</td>
</tr>
<tr>
<td>In-process inspection</td>
<td>Number of units</td>
<td>$0.14 per unit</td>
<td>17,500 units</td>
</tr>
<tr>
<td>Product certification</td>
<td>Per order</td>
<td>$77 per order</td>
<td>25 orders</td>
</tr>
</tbody>
</table>

The monthly quality control cost assigned to Satin Sheen makeup using activity-based costing (ABC) is

A. $25.50 higher than the cost using the traditional system.
B. $88.64 per order.
C. $8,500.50
D. $25.50 lower than the cost using the traditional system.

Capacity expansion is also referred to as

A. Market development.
B. Market penetration.
C. Diversification.
D. Product development.

Using the FIFO method, Kimbeth’s equivalent unit cost of materials for May is

A. $4.50
B. $4.80
C. $4.12
D. $4.60
Breegle Company produces three products (B-40, J-60, and H-102) from a single process. Breegle uses the physical volume method to allocate joint costs of $22,500 per batch to the products. Based on the following information, which product(s) should Breegle continue to process after the splitoff point in order to maximize profit?

<table>
<thead>
<tr>
<th></th>
<th>B-40</th>
<th>J-60</th>
<th>H-102</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical units produced per batch</td>
<td>1,500</td>
<td>2,000</td>
<td>3,200</td>
</tr>
<tr>
<td>Sales value per unit at splitoff</td>
<td>$10.00</td>
<td>$4.00</td>
<td>$7.25</td>
</tr>
<tr>
<td>Cost per unit of further processing after splitoff</td>
<td>3.05</td>
<td>1.00</td>
<td>2.50</td>
</tr>
<tr>
<td>Sales value per unit after further processing</td>
<td>12.25</td>
<td>5.70</td>
<td>9.75</td>
</tr>
</tbody>
</table>

A. B-40 only.
B. J-60 only.
C. B-40 and H-102.
D. H-102 only.

One reason to outsource is so a firm can focus on its

A. Core competencies.
B. Undifferentiated activities.
C. Customers.
D. Suppliers.

Given the following data for Scurry Company, what is the cost of goods sold?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning inventory of finished goods</td>
<td>$100,000</td>
</tr>
<tr>
<td>Cost of goods manufactured</td>
<td>700,000</td>
</tr>
<tr>
<td>Ending inventory of finished goods</td>
<td>200,000</td>
</tr>
<tr>
<td>Beginning work-in-process inventory</td>
<td>300,000</td>
</tr>
<tr>
<td>Ending work-in-process inventory</td>
<td>50,000</td>
</tr>
</tbody>
</table>

A. $800,000
B. $600,000
C. $500,000
D. $950,000
[428] Gleim #: 4.2.50 -- Source: CMA 0408 2-127
(Refers to Fact Pattern #8)
Under the weighted-average method, Krause’s total raw material costs in the ending work-in-process inventory for December is

A. $120
B. $36
C. $60
D. $72

[429] Gleim #: 5.1.8 -- Source: CMA 1292 3-5

Absorption costing and variable costing are two different methods of assigning costs to units produced. Of the 4 cost items listed below, identify the one that is not correctly accounted for as a product cost.

<table>
<thead>
<tr>
<th>Part of Product Cost Under</th>
<th>Absorption Costing</th>
<th>Variable Costing</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Packaging and shipping costs</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>B. Direct labor cost</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>C. Insurance on factory</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>D. Manufacturing supplies</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

[430] Gleim #: 5.1.26 -- Source: CMA 1283 4-2
(Refers to Fact Pattern #40)
Cole Lab’s estimated prime costs per unit are

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

[431] Gleim #: 5.3.96 -- Source: Publisher

The denominator of the overhead application rate can be based on one of several production capacities. Which would minimize expected over- or underapplied overhead?

A. Normal volume.
B. Expected volume.
C. Theoretical capacity.
D. Practical capacity.
Which of the following statements regarding benchmarking is false?

A. The benchmarking organization against which a firm is comparing itself must be a direct competitor.
B. Benchmarking involves continuously evaluating the practices of best-in-class organization and adapting company processes to incorporate the best of these practices.
C. Benchmarking, in practice, usually involves a company forming benchmarking teams.
D. Benchmarking is an ongoing process that entails quantitative and qualitative measurement of the difference between the company’s performance of an activity and the performance by the best in the world or the best in the industry.

When considering normal and abnormal spoilage, which one of the following is theoretically the best accounting method for spoilage in a process-costing system?

A. Normal spoilage costs should be charged to a separate expense account and abnormal spoilage cost should be charged to good units.
B. Both normal and abnormal spoilage cost should be charged to a separate expense account.
C. Normal spoilage cost should be charged to good units and abnormal spoilage cost should be charged to a separate expense account.
D. Both normal and abnormal spoilage costs should be charged to good units.
Answer (A) is incorrect because Differential (or incremental) cost is the difference in total cost between two decisions.

Answer (B) is correct. A marginal cost is the sum of the costs necessary to effect a one-unit increase in the activity level.

Answer (C) is incorrect because Differential (or incremental) cost is the difference in total cost between two decisions.

Answer (D) is incorrect because Opportunity cost is the maximum benefit forgone by using a scarce resource for a given purpose. It is the benefit, for example, the contribution to income, provided by the best alternative use of that resource.

Answer (A) is correct. Conversion costs consist of direct labor and factory overhead, the costs of converting raw materials into finished goods. Normally, a company does not consider only conversion costs in making pricing decisions, but if the customer were to furnish the raw materials, conversion cost pricing would be appropriate.

Answer (B) is incorrect because Conversion cost pricing does not place any emphasis on raw materials cost.

Answer (C) is incorrect because Factory overhead is an indirect cost that is an element of conversion costs.

Answer (D) is incorrect because Direct labor is an element of conversion costs.

Answer (A) is incorrect because The number of 177,600 units omits work on EWIP.

Answer (B) is incorrect because The physical units completed equal 184,000.

Answer (C) is incorrect because The number of 171,200 units omits work on BWIP.

Answer (D) is correct. Under FIFO, equivalent units are determined based only on work performed during the current period. They include work performed to complete BWIP, work on units started and completed during the period, and work done on EWIP. Thus, total FIFO equivalent units of conversion cost are

\[
\begin{align*}
\text{BWIP} & \quad 32,000 \text{ units} \times 80\% = 25,600 \\
(184,000 - 32,000 \text{ in BWIP}) & \quad 152,000 \text{ units} \times 100\% = 152,000 \\
\text{EWIP} & \quad 48,000 \text{ units} \times 40\% = 19,200 \\
\text{Total equivalent units} & = 196,800
\end{align*}
\]

- Answer (A) is incorrect because the amount of $660,000 results from allocating overhead based on actual rather than budgeted usage.
- Answer (B) is incorrect because the amount of $645,000 results from simply multiplying total unit cost by the budgeted total machine hours.
- Answer (C) is correct. The results from the production run of 1,000 units allow Baldwin to calculate its per-unit costs for materials ($1,000 ÷ 1,000 units = $1.00) and labor ($1,500 ÷ 1,000 units = $1.50). Overhead can then be derived as follows:

<table>
<thead>
<tr>
<th>Total cost per unit</th>
<th>$4.30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less: direct materials</td>
<td>(1.00)</td>
</tr>
<tr>
<td>Less: direct labor</td>
<td>(1.50)</td>
</tr>
<tr>
<td>Overhead per unit</td>
<td>$1.80</td>
</tr>
</tbody>
</table>

The number of machine hours required to manufacture a single unit is .45 (450 hours ÷ 1,000 units). Therefore, $1.80 represents 45% of the cost of a machine hour ($1.80 ÷ .45 = $4.00). Since 150,000 hours were budgeted, total budgeted overhead for the year was $600,000 (150,000 hours × $4.00 per hour).

- Answer (D) is incorrect because the amount of $577,500 results from treating the .45 units per hour ratio as a cost, deducting it from the total unit cost, then improperly multiplying this total unit cost by the budgeted total machine hours.

[5] Gleim #: 3.4.110 -- Source: CMA 1294 3-1

- Answer (A) is incorrect because separable costs are incurred beyond the point at which jointly produced items become separately identifiable.
- Answer (B) is incorrect because conversion costs consist of direct labor and overhead.
- Answer (C) is correct. Raw materials and direct labor (such as machining and assembly) are a manufacturer’s prime costs.
- Answer (D) is incorrect because committed costs result when an entity holds fixed assets; examples include long-term lease payments and depreciation.
[6] Gleim #: 5.3.76 -- Source: CMA 1296 3-19

- Answer (A) is incorrect because a single plant-wide application rate is acceptable, even with high overhead, if all overhead is highly correlated with a single application base.
- Answer (B) is incorrect because whether production is machine intensive affects the nature but not necessarily the number of cost drivers.
- Answer (C) is correct. Overhead is usually assigned to products based on a predetermined rate or rates. The activity base for overhead allocation should have a high correlation with the incurrence of overhead. Given only one cost driver, one overhead application rate is sufficient. If products differ in the resources consumed in individual departments, multiple rates are preferable.
- Answer (D) is incorrect because a standard cost system can be based on individual or multiple application rates.


- Answer (A) is incorrect because the dollar sales volume is not necessarily related to distribution. It is more likely related to marketing.
- Answer (B) is incorrect because the number of sales persons is not related to distribution. It is more closely related to marketing.
- Answer (C) is correct. The number of shipments is an appropriate cost driver. A cause-and-effect relationship may exist between the number of shipments and distribution costs.
- Answer (D) is incorrect because the number of customer phone calls has little relation to distribution. It is probably more closely related to customer service.
[8] Gleim #: 5.1.21 -- Source: CMA 1285 4-15

- Answer (A) is incorrect because the amount of $800,000 is the operating income if fixed costs of manufacturing are not deducted.

- Answer (B) is incorrect because the amount of $600,000 is the operating income that results from capitalizing 40% of both fixed manufacturing costs and selling and administrative costs.

- Answer (C) is correct. The contribution margin from manufacturing (sales – variable costs) is $10 ($40 – $30) per unit sold, or $1,200,000 (120,000 units × $10). The fixed costs of manufacturing ($600,000) and selling and administrative costs ($400,000) are deducted from the contribution margin to arrive at an operating income of $200,000. The difference between the absorption income of $440,000 and the $200,000 of variable costing income is attributable to capitalization of the fixed manufacturing costs under the absorption method. Because 40% of the goods produced are still in inventory (80,000 ÷ 200,000), 40% of the $600,000 in fixed costs, or $240,000, was capitalized under the absorption method.

- Answer (D) is incorrect because the amount of $440,000 is the operating income under absorption costing.

[9] Gleim #: 3.2.57 -- Source: CMA 0408 2-085

- Answer (A) is correct. To properly understand the nature of a cost, its behavior in total and on a per-unit basis can be examined. Dividing the total costs incurred by the activity levels yields the following per-unit results:

<table>
<thead>
<tr>
<th></th>
<th>10,000</th>
<th>12,000</th>
<th>15,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost A</td>
<td>$2.50</td>
<td>$2.42</td>
<td>$2.33</td>
</tr>
<tr>
<td>Cost B</td>
<td>1.00</td>
<td>1.25</td>
<td>1.00</td>
</tr>
<tr>
<td>Cost C</td>
<td>1.50</td>
<td>1.50</td>
<td>1.50</td>
</tr>
</tbody>
</table>

Cost A increases disproportionately across the relevant range in total and decreases proportionately on a per-unit basis; A is thus a semivariable cost. Cost C increases steadily across the relevant range in total but remains constant on a per-unit basis; C is thus a variable cost.

- Answer (B) is incorrect because Cost A is semivariable and Cost C is variable.

- Answer (C) is incorrect because Cost C is variable.

- Answer (D) is incorrect because Cost A is semivariable.
[10] Gleim #: 6.3.40 -- Source: Publisher

- Answer (A) is incorrect because Finishing only requires 11 hours for one of each model fixture to pass through.
- Answer (B) is incorrect because Boring only requires 18 hours for one of each model fixture to pass through.
- Answer (C) is correct. The constraint is the part of a process that holds up the rest of the process. Since Bombastic Bathrooms is producing equal quantities of the four fixtures, the machining department is the bottleneck. It requires a total of 19 hours for one of each model to move through. The boring department requires 18, finishing 11, and inspection & packing 4.
- Answer (D) is incorrect because Inspection & packing only requires 4 hours for one of each model fixture to pass through.

[11] Gleim #: 5.2.56 -- Source: Publisher

- Answer (A) is incorrect because The amount of $3,375,000 is the total joint cost assigned to the output of Grade Two based on the relative physical volume of units sold.
- Answer (B) is incorrect because The amount of $1,636,000 is based on the relative sales values of units sold.
- Answer (C) is incorrect because The amount of $3,512,000 is the total joint cost assigned to the output of Grade Two.
- Answer (D) is correct. Total joint production costs incurred were $9,000,000 ($4,000,000 + $2,000,000 + $3,000,000). The sales values of the three products are as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Sales Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade One</td>
<td>$9,000,000</td>
</tr>
<tr>
<td>Grade Two</td>
<td>9,600,000</td>
</tr>
<tr>
<td>Grade Three</td>
<td>6,000,000</td>
</tr>
<tr>
<td><strong>Total sales value</strong></td>
<td><strong>$24,600,000</strong></td>
</tr>
</tbody>
</table>

Accordingly, costs assigned to Grade Two on a relative sales value basis (rounded) equal $3,512,000 [($4,000,000 + $3,000,000 + $2,000,000) × ($9,600,000 ÷ $24,600,000)]. Thus, the value of the ending inventory of Grade Two should be $1,756,000 [120,000 barrels in EI ÷ ($3,512,000 ÷ 240,000 barrels produced)].
[12] Gleim #: 3.4.118 -- Source: CMA 1273 4-1

- Answer (A) is correct. In a variable costing system, only the variable costs are recorded as product costs. All fixed costs are expensed in the period incurred. Because changes in the relationship between production levels and sales levels do not cause changes in the amount of fixed manufacturing cost expensed, profits more directly follow the trends in sales.

- Answer (B) is incorrect because Idle facility variation is a characteristic of absorption costing systems.

- Answer (C) is incorrect because Neither variable nor absorption costing includes administrative costs in inventory.

- Answer (D) is incorrect because The cost of a unit of product changing owing to a change in the number of units manufactured is a characteristic of absorption costing systems.


- Answer (A) is incorrect because Since the cost in question is strictly variable within the relevant range, the unit cost remains the same.

- Answer (B) is incorrect because Since the cost in question is strictly variable within the relevant range, the total cost will increase as the volume increases.

- Answer (C) is incorrect because Since the cost in question is strictly variable within the relevant range, the average cost per unit is the same as the incremental cost.

- Answer (D) is correct. Variable cost per unit remains constant in the short run regardless of the level of production.


- Answer (A) is correct. Sanford’s departmental overhead allocations are determined by the proportion of the total driver expended by each department on this job. Tooling’s allocation is $197.50 [8,690 × (10 ÷ 440)].

- Answer (B) is incorrect because The amount of $44.00 is the allocation for the Fabricating Department.

- Answer (C) is incorrect because The amount of $501.00 results from improperly using the combined hours for the two departments to allocate the departmental costs.

- Answer (D) is incorrect because The amount of $241.50 is the total for Tooling and Fabricating combined.

- Answer (A) is correct. Cost drivers should be related to the costs accumulated in cost pools. The number of parts used has a direct cause-and-effect relationship with materials handling costs. The more parts used, the more handling is involved.

- Answer (B) is incorrect because The number of vendors might be appropriate for receiving and inspection, but materials handling in this situation encompasses more than costs related to the number of vendors.

- Answer (C) is incorrect because Direct labor hours is a traditional base for assigning overhead costs to production. However, it is not necessarily an appropriate basis for assigning overhead costs because direct labor is a small percentage of the total cost of most products.

- Answer (D) is incorrect because Number of units produced is an output related measure. Materials handling costs should be related to an input measure.


- Answer (A) is incorrect because Ending inventory was $1,000,000.

- Answer (B) is incorrect because Ending inventory was $1,000,000.

- Answer (C) is correct. Using variable costing, the unit cost of ending inventory is $25 ($12 direct materials + $9 direct labor + $4 variable overhead). Given beginning inventory of 35,000 units, the ending inventory equals 40,000 units (35,000 BI + 130,000 produced – 125,000 sold). Thus, ending inventory was $1,000,000 (40,000 units × $25).

- Answer (D) is incorrect because Ending inventory was $1,000,000.

[17] Gleim #: 5.4.138 -- Source: CMA 0408 2-164

- Answer (A) is incorrect because The services rendered by service departments to each other are simply allocated to production departments under the direct method.

- Answer (B) is incorrect because The costs of production departments are not allocated to each other under the direct method.

- Answer (C) is correct. The direct method of service department allocation is the simplest. Service department costs are allocated directly to the producing departments without regard for services rendered by service departments to each other. Service department costs are allocated to production departments based on an allocation base appropriate to each service department’s function.

- Answer (D) is incorrect because The costs of production departments are not allocated to service departments under any of the allocation methods.
[18] Gleim #: 3.1.17 -- Source: CMA 0205 2-12

- Answer (A) is incorrect because Prime cost is the sum of direct materials and direct labor.
- Answer (B) is correct. The costs of holding or storing inventory are carrying costs. Examples include the costs of capital, insurance, warehousing, breakage, and obsolescence.
- Answer (C) is incorrect because Stockout cost is either the lost revenue from a missed sale or the express shipping costs of making a product available on an urgent basis.
- Answer (D) is incorrect because Quality cost is the cost of assuring a product meets standards of quality; quality costs consist of prevention costs, appraisal costs, internal failure costs, and external failure costs.


- Answer (A) is incorrect because JIT is a decentralized demand-pull system. It is driven by actual demand.
- Answer (B) is correct. Materials requirements planning (MRP) is a system that translates a production schedule into requirements for each component needed to meet the schedule. It is usually implemented in the form of a computer-based information system designed to plan and control raw materials used in production. It assumes that forecasted demand is reasonably accurate and that suppliers can deliver based upon this accurate schedule. MRP is a centralized push-through system; output based on forecasted demand is pushed through to the next department or to inventory.
- Answer (C) is incorrect because The EOQ model focuses on the trade-off between carrying and ordering costs.
- Answer (D) is incorrect because Linear programming is a decision model concerned with allocating scarce resources to maximize profit or minimize costs.

[20] Gleim #: 4.2.52 -- Source: CMA 0408 2-137

- Answer (A) is incorrect because The EUP using the weighted-average method is 104 units.
- Answer (B) is correct. Units transferred out of a department are by definition 100% complete for purposes of conversion costs for that department. The equivalent units of production (EUP) for conversion for units transferred out is therefore 100 (100 units × 100%). Under the FIFO method, the EUP of ending work-in-process must also be included. This number is 4 (10 units × 40%), which, added to the 100 transferred out, gives an EUP of 104. This is the EUP that would be used under the weighted-average method, but for FIFO beginning work-in-process must be taken out. For conversion, this is 12 units (20 units × 60%), making a total FIFO-basis EUP for the month of 92 (104 â€“ 12).
- Answer (C) is incorrect because The EUP for materials is 110 units.
- Answer (D) is incorrect because The number of units transferred out is 100 units.

- Answer (A) is incorrect because Labor costs are not related to repairs and maintenance expense.
- Answer (B) is incorrect because The straight-time wages times the overtime hours should still be treated as direct labor.
- Answer (C) is incorrect because Only the straight-time wages times the overtime hours is charged to direct labor.
- Answer (D) is correct. Direct labor costs are wages paid to labor that can feasibly be specifically identified with the production of finished goods. Factory overhead consists of all costs, other than direct materials and direct labor, that are associated with the manufacturing process. Thus, straight-time wages would be treated as direct labor; however, because the overtime premium cost is a cost that should be borne by all production, the overtime hours times the overtime premium should be charged to manufacturing overhead.

[22] Gleim #: 5.1.34 -- Source: CMA 0408 2-101

- Answer (A) is incorrect because Under variable costing, variable S&A is not treated as a product cost.
- Answer (B) is correct. Under variable costing, only variable costs (direct materials, direct labor, and variable overhead) are considered product costs.
- Answer (C) is incorrect because Under variable costing, fixed overhead is not treated as a product cost.
- Answer (D) is incorrect because Under variable costing, variable overhead is also treated as a product cost.

[23] Gleim #: 5.4.121 -- Source: CMA 697 3-9

- Answer (A) is incorrect because This amount is far greater than could be allocated to a service department with one employee.
- Answer (B) is incorrect because Under the step-down method, other service departments share in the allocation of costs.
- Answer (C) is incorrect because This amount is far greater than could be allocated to a service department with one employee.
- Answer (D) is correct. Under the step-down method, service costs are allocated to all departments. However, no reciprocal allocations among service departments are performed. The process usually begins with the department that provides the greatest percentage of its services to other service departments. Thus, the Repair Department is the logical starting point. Given that service costs are allocated to each department (service or production) on the basis of its proportion of employees (excluding employees in the allocating department), the allocation of the Repair Department’s overhead to the Tool Department is $875 \{(1 \text{ employee} ÷ (1 + 2 + 25 + 12)) \times 35,000\}.$
[24] Gleim #: 3.3.100 -- Source: CMA 694 3-8

- Answer (A) is incorrect because Committed costs have not been amortized.
- Answer (B) is incorrect because Engineered costs are those that have a measurable relationship between inputs and outputs.
- Answer (C) is correct. Committed costs result when a going concern holds fixed assets such as property, plant, and equipment. The related committed costs include depreciation, long-term lease payments, and insurance. Such costs establish the present level of operating capacity and cannot be altered in the short run.
- Answer (D) is incorrect because Discretionary costs are those that do not have a clear cause and effect relationship between inputs and outputs.

[25] Gleim #: 6.5.49 -- Source: Publisher

- Answer (A) is incorrect because Activity analysis determines what is done, by whom, at what cost in time and other resources, and the value added by each activity.
- Answer (B) is correct. Value engineering is a means of reaching targeted cost levels. It is a systematic approach to assessing all aspects of the value chain cost buildup for a product.
- Answer (C) is incorrect because Life-cycle costing is a basis for cost planning and product pricing.
- Answer (D) is incorrect because Process value analysis is a way of understanding how a company generates its output.

[26] Gleim #: 5.1.5 -- Source: CMA 697 3-10

- Answer (A) is incorrect because Fixed overhead is treated differently under the two methods.
- Answer (B) is correct. Under variable costing, inventories are charged only with the variable costs of production. Fixed manufacturing costs are expensed as period costs. Absorption costing charges to inventory all costs of production. If finished goods inventory increases, absorption costing results in higher income because it capitalizes some fixed costs that would have been expensed under variable costing. When inventory declines, variable costing results in higher income because some fixed costs capitalized under the absorption method in prior periods are expensed in the current period.
- Answer (C) is incorrect because Gross margins will be different. Fixed factory overhead is expensed under variable costing and capitalized under the absorption method.
- Answer (D) is incorrect because Variable costs are the same under either method.
[27] Gleim #: 3.1.1 -- Source: CMA 692 3-5

- Answer (A) is incorrect because Behavior in response to volume changes is a factor only if the cost object is a product.
- Answer (B) is incorrect because The timing of an expense is not a means of classifying a cost as direct or indirect.
- Answer (C) is incorrect because Both direct and indirect costs can be either avoidable or unavoidable, depending upon the cost object.
- Answer (D) is correct. A direct cost can be specifically associated with a single cost object in an economically feasible way. An indirect cost cannot be specifically associated with a single cost object. Thus, the specific cost object influences whether a cost is direct or indirect. For example, a cost might be directly associated with a single plant. The same cost, however, might not be directly associated with a particular department in the plant.

[28] Gleim #: 6.3.37 -- Source: Publisher

- Answer (A) is correct. Production flow through a constraint is managed using the drum-buffer-rope (DBR) system. The drum (i.e., the beat to which a production process marches) is the bottleneck operation. The constraint sets the pace for the entire process. The buffer is a minimal amount of work-in-process input to the drum that is maintained to ensure that it is always in operation. The rope is the sequence of activities preceding and including the bottleneck operation that must be coordinated to avoid inventory buildup.
- Answer (B) is incorrect because Just-in-time is an inventory control mode.
- Answer (C) is incorrect because Materials requirements planning is a computer-based information system designed to plan and control raw materials used in a production setting.
- Answer (D) is incorrect because Lean production is an approach to plant layout that eliminates waste of materials, labor, factory space, and machine usage.

[29] Gleim #: 5.3.105 -- Source: CMA 0408 2-148

- Answer (A) is correct. All the cost objects gathered in a cost pool should be similar enough that a single allocation base can be selected that will appropriately allocate all of them.
- Answer (B) is incorrect because The simplicity of an allocation method is usually inversely proportional to its accuracy in assigning costs.
- Answer (C) is incorrect because Using the same allocation base for both fixed and variable costs is almost always a guarantee of inaccurate costing.
- Answer (D) is incorrect because In a well-designed costing system, a cost pool will have fewer rather than more drivers.
Answer (A) is incorrect because the throughput margin per time spent in the constraint for the aluminum fixture is only $31.67 ($190 ÷ 6 hours).

Answer (B) is incorrect because the throughput margin per time spent in the constraint for the brass fixture is only $37.50 ($150 ÷ 4 hours).

Answer (C) is incorrect because the throughput margin per time spent in the constraint for the chrome fixture is only $26 ($130 ÷ 5 hours).

Answer (D) is correct. Under a theory of constraints analysis, the product with the greatest absolute throughput margin is not of the highest interest. Bottlenecks hold up production, so no matter how great the margin on a product is, if it cannot get through the production process, it cannot earn that margin. The relevant figure is throughput margin per time spent in the constraint. In Bombastic’s case, the most profitable product using this metric is the nickel fixture ($180 ÷ 4 hours = $45).

Answer (A) is incorrect because items such as additional processing costs, competitive conditions in sales markets, and the relative contribution margins of all products derived from the common process must be considered in setting selling prices.

Answer (B) is correct. Joint costs are useful for inventory costing when two or more identifiable products emerge from a common production process. The joint costs of production must be allocated on some basis, such as relative sales value.

Answer (C) is incorrect because management of one department may have no control over joint costs.

Answer (D) is incorrect because items such as additional processing costs, competitive conditions in sales markets, and the relative contribution margins of all products derived from the common process must be considered in determining whether to continue producing an item.

Answer (A) is incorrect because the amount of $52,080 assumes that a weighting method using caloric value is used.

Answer (B) is incorrect because the amount of $31,000 is the amount allocated to Alfa when the by-product is not inventoried.

Answer (C) is correct. The NRV of Alfa is $20,000 [10,000 pounds × ($4 selling price – $2 additional processing costs)], and the NRV of Betters is $40,000 [5,000 pounds × ($10 selling price – $2 additional processing costs)]. If the joint cost is not adjusted for the value of the by-production, the amount allocated to Betters is $62,000 {[$40,000 ÷ ($20,000 + $40,000)] × $93,000}.

Answer (D) is incorrect because the amount of $30,000 is the amount allocated to Alfa when the by-product is inventoried.
[33] Gleim #: 4.2.25 -- Source: Publisher

- Answer (A) is incorrect because Some units remain in work-in-process.
- Answer (B) is incorrect because The amount of $8,000 assumes that ending work-in-process contains 2,000 equivalent units of conversion costs.
- Answer (C) is correct. The cost transferred out was $33,280. Hence, the ending inventory must equal the production costs for the month (given no beginning inventories), minus costs transferred out, or $6,720 \([($15,000 \text{ materials} + $25,000 \text{ conversion cost}) - $33,280]\).
- Answer (D) is incorrect because The amount of $3,720 assumes that ending work-in-process contains only conversion costs.

[34] Gleim #: 6.1.14 -- Source: Publisher

- Answer (A) is correct. Plant layout in a JIT-lean production environment is not arranged by functional department or process but by manufacturing cells (work cells). Cells are sets of machines, often group in semicircles, that produce a given product or product type.
- Answer (B) is incorrect because While a kanban system is sometimes part of a JIT arrangement, the term does not refer to the physical rearrangement of machinery.
- Answer (C) is incorrect because While electronic data interchange (EDI) facilitates the vendor relations that make JIT possible, the term does not refer to the physical rearrangement of machinery.
- Answer (D) is incorrect because Ticket is the meaning of the Japanese term kanban, which does not refer to the physical rearrangement of machinery.

[35] Gleim #: 5.2.62 -- Source: CMA 1293 3-6

- Answer (A) is correct. The gross market value of Alfa is $40,000 \((10,000 \text{ pounds} \times $4)\), Betters has a total gross value of $50,000 \((5,000 \text{ pounds} \times $10)\), and Morefeed has a split-off value of $3,000. If the value of Morefeed is inventoried and treated as a reduction in joint cost, the allocable joint cost is $90,000 \((93,000 – $3,000)\). The total gross value of the two main products is $90,000 \((40,000 + 50,000)\). Of this total value, $40,000 should be allocated to Alfa \([($40,000 \div 90,000) \times 90,000]\).
- Answer (B) is incorrect because The amount of $36,000 is based on 40%, not 4/9.
- Answer (C) is incorrect because The amount of $41,333 fails to adjust the joint cost by the value of the by-product.
- Answer (D) is incorrect because The amount of $50,000 is the joint cost allocated to Betters.
[36] Gleim #: 5.1.48 -- Source: CMA 0408 2-116

- Answer (A) is incorrect because the behavior of the balance in ending inventory cannot be predicted based on the use of absorption or variable costing in the situations given.

- Answer (B) is correct. The behavior of the balance in ending inventory cannot be predicted based on the use of absorption or variable costing in the situations given.

- Answer (C) is incorrect because the behavior of the balance in ending inventory cannot be predicted based on the use of absorption or variable costing in the situations given.

- Answer (D) is incorrect because the behavior of the balance in ending inventory cannot be predicted based on the use of absorption or variable costing in the situations given.

[37] Gleim #: 5.3.87 -- Source: CMA 696 3-2

- Answer (A) is incorrect because a normal capacity rate results in a larger ending inventory and a greater net income than a theoretical or practical capacity rate.

- Answer (B) is incorrect because the master-budget rate exceeds the theoretical capacity rate. It results in a greater ending inventory and a greater net income.

- Answer (C) is incorrect because a practical capacity rate results in a lower ending inventory and a lower net income than a normal capacity rate.

- Answer (D) is correct. The choice of practical rather than master budget capacity as the denominator level will result in a lower absorption costing net income. Practical capacity is the maximum level at which output is produced efficiently, with an allowance for unavoidable interruptions, for example, for holidays and scheduled maintenance. Because this level will be higher than master-budget (expected) capacity, its use will usually result in the underapplication of fixed overhead. For example, given costs of $100,000 and master-budget capacity of 800,000 units, $.125 per unit is the application rate. If practical capacity is 1,250,000 units, the application rate is $.08 per unit. If actual production is 800,000 units, fixed overhead will not be over- or underapplied given the use of master-budget capacity. However, there will be $36,000 (450,000 units × $.08) of underapplied fixed overhead if practical capacity is the denominator level. Consequently, given that the beginning inventory is zero and that production exceeded sales, less fixed overhead will be inventoried at the lower practical capacity rate than at the master-budget rate. Thus, master-budget net income will be greater.
[38] Gleim #: 5.2.68 -- Source: CMA 0408 2-118

- Answer (A) is incorrect because Prime costs, that is, direct materials and direct labor, go into every production process; they do not distinguish joint products from by-products.

- Answer (B) is incorrect because Salvage value of equipment is not a useful criterion when setting prices for an ongoing production process.

- Answer (C) is correct. A by-product is one of relatively small total value. The first question that must be answered in regard to by-products is: Do the benefits of further processing and bringing them to market exceed the costs, that is, is the incremental revenue worth the effort? Market price determines this. The same can essentially be said for the main products of the production process.

- Answer (D) is incorrect because Historical cost is involved in both joint and by-product costing.

[39] Gleim #: 3.1.14 -- Source: Publisher

- Answer (A) is incorrect because The amount of $170,000 includes the salaries of machinery mechanics.

- Answer (B) is correct. Direct labor costs are wages paid to labor that can feasibly be specifically identified with the production of finished goods. Because the wages of machine operators are identifiable with the production of finished goods, their $145,000 of salaries are a direct labor cost. However, because the salaries and wages of the factory supervisors and machinery mechanics are not identifiable with the production of finished goods, their $60,000 and $25,000 of salaries are not direct labor costs.

- Answer (C) is incorrect because The amount of $205,000 includes the salaries of factory supervisors.

- Answer (D) is incorrect because The amount of $230,000 includes the salaries of machinery mechanics and factory supervisors.
Answer (A) is incorrect because The amount of $111,350 is based on the weighted-average method.

Answer (B) is incorrect because The amount of $114,615 is based on the equivalent units for conversion costs.

Answer (C) is correct. For materials, the equivalent-unit calculation under the FIFO method is

<table>
<thead>
<tr>
<th>Description</th>
<th>Units</th>
<th>Percentage</th>
<th>Equivalent Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning WIP</td>
<td>10,000</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Started and completed</td>
<td>75,000</td>
<td>100%</td>
<td>75,000</td>
</tr>
<tr>
<td>Ending WIP</td>
<td>5,000</td>
<td>100%</td>
<td>5,000</td>
</tr>
<tr>
<td>FIFO EUP for materials</td>
<td></td>
<td></td>
<td>80,000</td>
</tr>
</tbody>
</table>

The materials cost includes $30,000 in beginning inventory, all of which would have been transferred out. The $88,000 incurred during the month is divided by the 80,000 equivalent units to arrive at a unit cost for the current period of $1.10. Thus, given that 75,000 equivalent units (85,000 physical units transferred out – 10,000 EU in BWIP completed in the prior period) of current-period production were completed and transferred, total materials cost transferred out equals $112,500 [$30,000 BWIP + (75,000 FIFO EU × $1.10)].

Answer (D) is incorrect because The amount of $88,000 is the amount of materials costs incurred during the month.

Answer (A) is incorrect because Total variable cost is depicted as a straight line.

Answer (B) is incorrect because Per-unit variable cost is depicted as a horizontal line.

Answer (C) is correct. Variable costs in total vary directly and proportionally with changes in volume. This is depicted as a straight line sloping upward to the right. Variable cost per unit, however, remains constant in the short run regardless of the level of production. This is depicted as a horizontal line.

Answer (D) is incorrect because Per-unit variable cost is depicted as a horizontal line.

Answer (A) is incorrect because Nonmanufacturing variable costs are also part of the calculation.

Answer (B) is incorrect because Revenues minus cost of goods sold is gross profit (margin).

Answer (C) is incorrect because A direct cost is a cost that can be feasibly associated with a single cost object.

Answer (D) is correct. Contribution margin is the excess of revenues over all variable costs (including both manufacturing and nonmanufacturing variable costs) that vary with an output-related cost driver. The contribution margin equals the revenues that contribute toward covering the fixed costs and providing a net income.
Answer (A) is incorrect because The amount of $305 results from improperly using direct labor hours to allocate the engineering, handling, and setup costs.

Answer (B) is incorrect because The amount of $293 results from improperly using the units of production to allocate the engineering, handling, and setup costs.

Answer (C) is correct. Charges for direct materials and direct labor are traceable to each type of machine ($8,000 and $12,000 respectively for the ultrasound). The departmental costs must be allocated based on each machine’s proportional driver level. Engineering design costs can be allocated to the ultrasound machine at a rate of 33.3% \( \frac{1}{1 + 2} \), material handling at a rate of 60% \( \frac{600}{600 + 400} \), and setup at a rate of 46.7% \( \frac{7}{7 + 8} \). Pelder’s cost for a single ultrasound machine can thus be calculated as follows:

<table>
<thead>
<tr>
<th></th>
<th>For 100 Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td>$ 80</td>
</tr>
<tr>
<td>Direct labor</td>
<td>120</td>
</tr>
<tr>
<td>Engineering changes</td>
<td>20</td>
</tr>
<tr>
<td>Material handling</td>
<td>30</td>
</tr>
<tr>
<td>Setup</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$264</strong></td>
</tr>
</tbody>
</table>

Answer (D) is incorrect because The amount of $225 results from using x-ray direct labor rather than ultrasound direct labor.

Answer (A) is incorrect because The wages earned by a painter working for a painting contractor are properly classified as both a prime cost and a conversion cost.

Answer (B) is correct. Manufacturing costs are often grouped into the following classifications: prime cost, which equals direct materials plus direct labor (i.e., those costs directly attributable to a product) and conversion cost, which equals direct labor plus manufacturing overhead (i.e., the costs of converting raw materials into the finished product). The wages earned by a painter working for a painting contractor are thus properly classified as both a prime cost and a conversion cost.

Answer (C) is incorrect because The wages earned by a painter working for a painting contractor are properly classified as both a prime cost and a conversion cost.

Answer (D) is incorrect because The wages earned by a painter working for a painting contractor are properly classified as both a prime cost and a conversion cost.
Answer (A) is correct. Before they are incurred, R&D costs are often considered to be discretionary. However, Huron’s R&D costs have already been incurred. Thus, they are sunk costs. A sunk cost is a past cost or a cost that the entity has irrevocably committed to incur. Because it is unavoidable, it is not relevant to future decisions.

Answer (B) is incorrect because Conversion costs are composed of direct labor and factory overhead, that is, costs incurred to convert materials into a finished product.

Answer (C) is incorrect because Relevant costs are expected future costs that vary with the action taken. A cost that has already been incurred is not relevant to future decisions.

Answer (D) is incorrect because Avoidable costs may be eliminated by not engaging in an activity or by performing it more efficiently.

Answer (A) is incorrect because Individual cost drivers for all relationships must be known to use multiple application rates.

Answer (B) is incorrect because One rate may be cost beneficial when a single product proceeds through homogeneous processes.

Answer (C) is correct. Multiple rates are appropriate when a process differs substantially among departments or when products do not go through all departments or all processes. The trend in cost accounting is toward activity-based costing, which divides production into numerous activities and identifies the cost driver(s) most relevant to each. The result is a more accurate tracing of costs.

Answer (D) is incorrect because If cost drivers are the same for all processes, multiple rates are unnecessary.
[47] Gleim #: 5.1.29 -- Source: CMA 1285 4-27

- Answer (A) is incorrect because The amount of $75,000 equals total manufacturing costs of goods manufactured. However, the cost of goods manufactured equals total manufacturing costs plus BWIP minus EWIP.

- Answer (B) is incorrect because The amount of $100,000 is calculated without taking the ending work-in-process inventory into account.

- Answer (C) is incorrect because The amount of $225,000 is the value of work-in-process inventory at January 1.

- Answer (D) is correct. Cost of goods manufactured ($2,425,000) equals total manufacturing costs ($2,500,000) plus beginning work-in-process (75% of EWIP) minus ending work-in-process. The ending work-in-process is $300,000.

\[
\begin{align*}
2,500,000 + .75 \text{EWIP} - \text{EWIP} &= 2,425,000 \\
2,500,000 - .25 \text{EWIP} &= 2,425,000 \\
\text{EWIP} &= \frac{75,000}{.25} \\
\text{EWIP} &= 300,000
\end{align*}
\]

[48] Gleim #: 5.4.131 -- Source: CMA 0408 2-153

- Answer (A) is incorrect because Use of the dual-rate depends on cost behavior, not the number of products.

- Answer (B) is incorrect because The dual-rate method is used with exactly two cost pools, one for fixed costs and one for variable costs.

- Answer (C) is correct. The dual-rate method of allocating costs from one department to another involves classifying the costs to be allocated into two pools, one variable and one fixed.

- Answer (D) is incorrect because Use of the dual-rate depends on cost behavior, not the number of departments.


- Answer (A) is incorrect because Failing to consider the 100 units of B already in inventory results in 800.

- Answer (B) is incorrect because Failing to consider the 20 units of X and the 100 units of B results in 830.

- Answer (C) is incorrect because Failing to consider the 20 units of X already in inventory results in 1,000.

- Answer (D) is correct. Starr already has 20 units of the finished product in inventory so 80 will need to be manufactured to fill this order. The amount of Subunit B that must be purchased is \([80 \times 5] - 100 \text{ on hand}] = 300. The amount of Subunit E that must be purchased is therefore \([(300 \times 2) - 50 \text{ on hand}] = 550.\)
[50] Gleim #: 5.1.22 -- Source: CMA 1286 4-18

- Answer (A) is correct. Under variable costing, the only costs that are capitalized are the variable costs of manufacturing. These include:
  
<table>
<thead>
<tr>
<th>Component</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials used</td>
<td>$300,000</td>
</tr>
<tr>
<td>Direct labor</td>
<td>100,000</td>
</tr>
<tr>
<td>Variable manufacturing overhead</td>
<td>50,000</td>
</tr>
<tr>
<td><strong>Total inventoriable costs</strong></td>
<td><strong>$450,000</strong></td>
</tr>
</tbody>
</table>

- Answer (B) is incorrect because the amount of $530,000 is the inventoriable cost under absorption (full) costing.

- Answer (C) is incorrect because the amount of $400,000 does not include $50,000 of variable manufacturing overhead.

- Answer (D) is incorrect because the $40,000 of variable selling and administrative costs should not be included in the inventoriable costs.

[51] Gleim #: 3.4.109 -- Source: CMA 1295 3-15

- Answer (A) is incorrect because the linear method is not one of the methods used to allocate departmental costs.

- Answer (B) is correct. The three most common methods of allocating service department costs are the direct method, the step method, and the reciprocal method (also called the simultaneous equations method). The reciprocal method is theoretically the preferred method because it recognizes reciprocal services among service departments.

- Answer (C) is incorrect because the direct method does not recognize the fact that service departments might provide services to each other; all costs are assigned directly to production departments.

- Answer (D) is incorrect because the variable method is a nonsense term as used here.
[52] Gleim #: 3.4.122 -- Source: CMA 1291 3-11

- Answer (A) is incorrect because Budgeted and standard costs should in principle be the same, but in practice they will differ when standard costs are not expected to be currently attainable.

- Answer (B) is correct. Standard costs are predetermined, attainable unit costs. Standard cost systems isolate deviations (variances) of actual from expected costs. One advantage of standard costs is that they facilitate flexible budgeting. Accordingly, standard and budgeted costs should not differ when standards are currently attainable. However, in practice, budgeted (estimated actual) costs may differ from standard costs when operating conditions are not expected to reflect those anticipated when the standards were developed.

- Answer (C) is incorrect because Budgeted costs are expected future costs, not historical costs.

- Answer (D) is incorrect because Standard costs are determined independently of the budget.

[53] Gleim #: 5.4.110 -- Source: CMA 1292 3-2

- Answer (A) is correct. Service department costs are considered part of factory overhead and should be allocated to the production departments that use the services. A basis reflecting cause and effect should be used to allocate service department costs. For example, the number of kilowatt hours used by each producing department is probably the best allocation base for electricity costs.

- Answer (B) is incorrect because Making allocations on the basis of units sold may not meet the cause-and-effect criterion.

- Answer (C) is incorrect because The salary of service department employees is the cost allocated, not a basis of allocation.

- Answer (D) is incorrect because Making allocations on the basis of materials usage may not meet the cause-and-effect criterion.

[54] Gleim #: 4.3.82 -- Source: CMA 0408 2-140

- Answer (A) is incorrect because The number of different materials used to manufacture a product can be a cost driver. Different materials often require different setups and thus a proportional amount of employee time.

- Answer (B) is incorrect because The number of vendors supplying the materials used to manufacture the product can be a cost driver. Each supplier requires servicing by buyers and other personnel, and thus the number of suppliers directly reflects the level of production activity.

- Answer (C) is incorrect because The units of materials used to manufacture a product can be a cost driver. Units of material used directly reflects the amount of employee time spent on the production process.

- Answer (D) is correct. Activity-based costing is founded on the idea that drivers for indirect cost assignment should be based on some level of activity. Cost of materials does not directly reflect a level of a given activity.
Answer (A) is incorrect because the figure of $10.46 per machine hour results from dividing the actual overhead by the budgeted machine hours.

Answer (B) is incorrect because the figure of $7.39 per machine hour results from dividing budgeted overhead by the actual machine hours.

Answer (C) is correct. The predetermined overhead rate is found by dividing total budget overhead by budgeted machine hours. Thus, the budgeted overhead of $961,200 is divided by the budgeted machine hours of 108,000. The predetermined overhead rate is therefore $8.90 per machine hour.

Answer (D) is incorrect because the figure of $8.69 per machine hour results from dividing the actual overhead by the actual machine hours.

---

Answer (A) is correct. ABC assigns overhead costs on the basis of multiple cost drivers instead of only one driver. Using the three cost drivers in the question produces the following calculation:

<table>
<thead>
<tr>
<th>Number of types</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>of materials (12 × $12)</td>
<td>144</td>
</tr>
<tr>
<td>Number of units (17,500 × $14)</td>
<td>2,450</td>
</tr>
<tr>
<td>Number of orders (30 × $77)</td>
<td>2,310</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,904</strong></td>
</tr>
</tbody>
</table>

Under the old method of allocation based on direct labor, the allocated amount would have been 4,500 ($30,000 × 15%), or $404 lower than under ABC.

Answer (B) is incorrect because the quality control cost under the traditional system is $4,500.

Answer (C) is incorrect because ABC yields an allocation $404 higher than the traditional system.

Answer (D) is incorrect because the amount of $150 per order equals $4,500 divided by 30 orders.
[57] Gleim #: 6.1.11 -- Source: Publisher

- Answer (A) is incorrect because the use of safety stock is considered a nonvalue-adding activity under a JIT system, and interruptions in supply are not considered inevitable.

- Answer (B) is correct. In a JIT system, the suppliers’ dependability is crucial. Organizations that adopt JIT systems develop close relationships with a few carefully chosen suppliers who are extensively involved in the buyer’s processes.

- Answer (C) is incorrect because a JIT system does not necessarily require the employment of kanban inventory management. Also, kanban is essentially a manual system.

- Answer (D) is incorrect because in a JIT system, the suppliers’ dependability is crucial. Organizations that adopt JIT systems develop close relationships with a few carefully chosen suppliers who are extensively involved in the buyer’s processes.

[58] Gleim #: 4.2.42 -- Source: CIA 1196 III-86

- Answer (A) is incorrect because waste has no monetary value and may have a disposal cost associated with it.

- Answer (B) is incorrect because reworked units are defective units that require further processing for them to be sold. This company does not rework defective units.

- Answer (C) is correct. The units that failed inspection are classified as normal scrap because they have minimal value and can be sold without further reworking. The defective units are less than the 4% tolerance limit for normal spoilage (5,000 defective units ÷ 200,000 total units = 2.5%, < 4% tolerance limit). Scrap can be sold, disposed of, or reused.

- Answer (D) is incorrect because abnormal spoilage is not a normal result of efficient operations. In this case, the percentage of spoiled units is within the normal tolerance limit.

[59] Gleim #: 3.1.15 -- Source: Publisher

- Answer (A) is incorrect because the amount of $234,000 includes factory overhead.

- Answer (B) is incorrect because the amount of $120,000 excludes direct labor.

- Answer (C) is incorrect because the amount of $108,000 excludes direct materials.

- Answer (D) is correct. Product costs can be associated with a specific product. Product costs include direct materials and direct labor. Factory overhead cannot be traced to specific products and therefore is allocated to all products produced. Thus, the amount of costs traceable to specific products in the production process is $228,000 ($120,000 + $108,000).
[60] Gleim #: 4.2.31 -- Source: Publisher

- Answer (A) is incorrect because the amount of $156,960 is based on the unit costs under the weighted-average method.

- Answer (B) is correct. Under FIFO, the equivalent-unit materials cost is $2.25, and the EWIP contains 43,200 equivalent units of materials. The equivalent-unit conversion cost is $2.92, and the EWIP contains 19,200 equivalent units of conversion cost. Consequently, EWIP equals $153,264 \[ (43,200 \times 2.25) + (19,200 \times 2.92) \].

- Answer (C) is incorrect because the amount of $155,424 is based on a weighted-average calculation for materials and a FIFO calculation for conversion cost.

- Answer (D) is incorrect because the amount of $154,800 is based on a FIFO calculation for materials and a weighted-average calculation for conversion cost.

[61] Gleim #: 6.1.12 -- Source: Publisher

- Answer (A) is incorrect because reduced setup time is a benefit of lean production.

- Answer (B) is incorrect because on-time delivery mostly improves under lean production.

- Answer (C) is incorrect because central support departments are reduced or eliminated under lean production.

- Answer (D) is correct. Since every worker in a manufacturing cell must be able to operate every piece of machinery in the cell, reduced training costs do not necessarily accompany the deployment of lean production.

[62] Gleim #: 3.1.37 -- Source: CMA 0408 2-089

- Answer (A) is correct. The total costs identified with products are unaffected by the treatment of indirect and common costs. The ability to identify a cost with a product is determined by traceability.

- Answer (B) is incorrect because cost allocation makes for poor decision making.

- Answer (C) is incorrect because reimbursement policies are established contractually.

- Answer (D) is incorrect because product costing for external financial reporting purposes are dictated by GAAP.
Answer (A) is incorrect because the amount of $8,000,000 results from improperly including costs other than variable manufacturing costs.

Answer (B) is incorrect because the amount of $6,000,000 results from improperly including a portion of marketing costs.

Answer (C) is incorrect because the amount of $11,000,000 results from improperly including costs other than variable manufacturing costs.

Answer (D) is correct. Under variable costing, only variable manufacturing costs are capitalized as part of inventory. Thus, Bethany’s ending inventory is valued at $5,000,000.

Answer (A) is incorrect because the salaries alone will increase by 5%.

Answer (B) is incorrect because since the sales salaries are increasing by only 5%, the combination of salaries and commissions cannot be greater than 20%.

Answer (C) is incorrect because the combination of the 5% increase in salaries and the 10% increase in commissions cannot exceed 10%.

Answer (D) is correct. Sales salaries will increase by exactly 5%. The per-unit commission amount will remain constant, but sales commissions in total are expected to increase by 10%. Thus, total sales salaries and commissions will increase somewhere between 5% and 10%.

Answer (A) is incorrect because advertising in the local yellow pages is a fixed cost across the relevant range of decision making.

Answer (B) is incorrect because the security guard’s salary is the same regardless of the number of guests.

Answer (C) is incorrect because postage for reservation confirmations varies directly with the number of reservations, making it a variable cost.

Answer (D) is correct. Mixed (semivariable) costs combine fixed and variable elements, e.g., rental expense on a car that carries a flat fee per month plus an additional fee for each mile driven. The electricity bill at the motel will always carry a certain monthly minimum and a variable portion that will fluctuate directly with the number of guests.
[66] Gleim #: 4.3.71 -- Source: CMA 694 3-26

- Answer (A) is incorrect because the amount of $1,500 is the allocation per unit of specialty windows.
- Answer (B) is incorrect because the amount of $2,500 is not based on the number of material moves.
- Answer (C) is correct. An activity-based costing (ABC) system allocates overhead costs on the basis of some causal relationship between the incurrence of cost and activities. Because the moves for wall mirrors constitute 25% (5 ÷ 20) of total moves, the mirrors should absorb 25% of the total materials handling costs. Thus, $12,500 ($50,000 × 25%) is allocated to mirrors. The remaining $37,500 is allocated to specialty windows. Dividing the $12,500 by 25 units produces a cost of $500 per unit of mirrors.
- Answer (D) is incorrect because the amount of $1,000 uses direct labor as the allocation basis.

[67] Gleim #: 4.2.56 -- Source: CMA 0408 2-133

- Answer (A) is incorrect because the figure 90,000 is the total units to account for.
- Answer (B) is correct. Beginning work-in-process, being 90% complete, already had Material B added, so it is not counted in the EUP calculation for Material B for the month. By the same token, ending work-in-process, being only 60% complete, had not yet had Material B added, and thus it is also not counted in the EUP calculation for Material B. The EUP for Material B is therefore only the 65,000 units started and completed during the month.
- Answer (C) is incorrect because the figure 85,000 results from improperly beginning with all 70,000 units started during the period instead of only the 65,000 that passed the point where Material B is added.
- Answer (D) is incorrect because the figure 70,000 is the number of units started during the month.

[68] Gleim #: 4.1.4 -- Source: CIA 592 IV-6

- Answer (A) is incorrect because an accounting entry is not needed. The amount is not material.
- Answer (B) is incorrect because a quantity variance is not recorded for scrap that is anticipated. Furthermore, work-in-process inventory is credited only when scrap is unique to a job.
- Answer (C) is correct. Making a memorandum entry at the time of recovery is appropriate. The value of the scrap is then recognized at the time of sale. The factory overhead control account is credited because scrap is inevitable to the company’s production operations and not attributable to a specific job. This accounting method has the effect of spreading the revenue from scrap sales over all jobs or products.
- Answer (D) is incorrect because normal scrap is not the basis for recording a variance.
[69] Gleim #: 5.2.60 -- Source: CMA 1293 3-4

- Answer (A) is **correct**. Joint cost is $93,000 and Morefeed has a split-off value of $3,000 (1,000 pounds × $3 split-off value per pound). Assuming the latter amount is treated as a reduction in joint cost, the allocable joint cost is $90,000. The total physical quantity (volume) of the two joint products is 15,000 pounds (10,000 Alfa + 5,000 Betters). Hence, $60,000 of the net joint costs \( [(10,000 \div 15,000) \times 90,000] \) should be allocated to Alfa.

- Answer (B) is incorrect because The figure of $3,000 is the value of the by-product.

- Answer (C) is incorrect because The figure of $31,000 is based on the net realizable value method and fails to adjust the joint processing cost for the value of the by-product.

- Answer (D) is incorrect because The figure of $30,000 is based on the net realizable value method.

[70] Gleim #: 4.2.55 -- Source: CMA 0408 2-132

- Answer (A) is incorrect because The figure 16,300 results from improperly including spoiled goods in the quantity transferred to finished goods.

- Answer (B) is incorrect because The amount of $152,000 results from failing to include normal spoilage.

- Answer (C) is incorrect because The amount of $155,800 results from improperly including abnormal spoilage.

- Answer (D) is **correct**. Only salable goods (16,000) are transferred to finished goods inventory. Under process costing, the full cost of normal spoilage is borne by good units. Thus, the total dollar amount transferred to finished goods was $154,800 \([(16,000 + 300) \times 9.50]\).

[71] Gleim #: 3.2.41 -- Source: CMA 692 3-1

- Answer (A) is incorrect because The amount of $749,180 is a nonsense answer.

- Answer (B) is **correct**. The fixed and variable portions of mixed costs may be estimated by identifying the highest and the lowest costs within the relevant range. The difference in cost divided by the difference in activity is the variable rate. Once the variable rate is found, the fixed portion is determinable. April and March provide the highest and lowest amounts. The difference in production was 90,000 units (540,000 April – 450,000 March), and the difference in the cost of supplies was $130,500 ($853,560 – $723,060). Hence, the unit variable cost was $1.45 ($130,500 ÷ 90,000 units). The total variable costs for March must have been $652,500 (450,000 units × $1.45 VC per unit), and the fixed cost must therefore have been $70,560 ($723,060 – $652,500). The probable costs for July equal $681,500 (470,000 units × $1.45 VC per unit), plus $70,560 of fixed costs, a total of $752,060.

- Answer (C) is incorrect because The variable portion of the total costs is $681,500.

- Answer (D) is incorrect because The total variable costs for March equal $652,500.
[72] Gleim #: 5.4.113 -- Source: CMA 697 3-7

- Answer (A) is incorrect because the amount of $72,000 is the allocation to Department B using a single rate.
- Answer (B) is incorrect because the amount of $82,000 assumes fixed costs are allocated at a per-page rate based on actual usage ($100,000 ÷ 3,500,000 pages = $0.0286 per page).
- Answer (C) is incorrect because the amount of $42,000 equals the variable costs allocated to Department A.
- Answer (D) is correct. Based on budgeted usage, Department A should be allocated 33 1/3% [1,200,000 pages ÷ (1,200,000 pages + 2,400,000 pages)] of fixed costs, or $33,333 ($100,000 × 33 1/3%). The variable costs are allocated at $.03 per unit for 1,400,000 pages, or $42,000. The sum of the fixed and variable elements is $75,333.

[73] Gleim #: 5.4.122 -- Source: CIA 596 III-83

- Answer (A) is incorrect because the amount of $657,000 results from allocating Building Operations costs first. Also, the Information Services costs are allocated using total computer hours.

- Answer (B) is correct. The step method of service department cost allocation is a sequential (but not a reciprocal) process. These costs are allocated to other service departments as well as to users. The process usually begins with the service department that renders the greatest percentage of its services to other service departments. If the $1,200,000 of Information Services costs is allocated first, the allocation base is 2,000 computer hours (200 + 1,200 + 600). Thus, $120,000 [$1,200,000 × (200 ÷ 2,000)] will be allocated to Building Operations and $360,000 [$1,200,000 × (600 ÷ 2,000)] to Finishing. The total of the Building Operations costs to be allocated to production equals $670,000 ($550,000 + $120,000). The allocation base will be 40,000 square feet because no costs are allocated back to Information Services. Accordingly, the total of service costs allocated to Finishing equals $762,000 ($360,000 + [($670,000 × (24,000 ÷ 40,000)])].

- Answer (C) is incorrect because the amount of $730,000 allocates the costs of both service departments according to the direct method rather than the step method.

- Answer (D) is incorrect because the amount of $681,600 results from allocating Building Operations costs to Information Services.
[74] Gleim #: 6.3.27 -- Source: Publisher

- Answer (A) is incorrect because Under the principles of TOC, maximizing the efficiency of processes that have excess capacity merely creates backup in the system.

- Answer (B) is incorrect because Holding down direct materials costs, while an important part of improving contribution margin, is not part of a TOC analysis.

- Answer (C) is correct. A basic principle of TOC analysis is that short-term profit maximization requires maximizing the contribution margin through the constraint, called the throughput margin or throughput contribution.

- Answer (D) is incorrect because While eliminating backup is a goal of a TOC analysis, it is not done by simply “smoothing” production flow, since this could mean slowing down the entire process to match the bottleneck.

[75] Gleim #: 5.3.97 -- Source: Publisher

- Answer (A) is incorrect because Minimum volume relates to the lowest production level that would be required to operate a particular function and would result in the largest amount of applied overhead.

- Answer (B) is correct. The larger the denominator in the overhead application rate, the smaller the rate and the lower the cost assigned to the product. Theoretical capacity, which is the absolute capacity during continuous operations, ignoring holidays, maintenance time, etc., provides the largest denominator in the ratio.

- Answer (C) is incorrect because Normal volume is less than theoretical capacity.

- Answer (D) is incorrect because Practical capacity is theoretical capacity adjusted downward for holidays, maintenance time, etc.

[76] Gleim #: 5.1.12 -- Source: CMA 1290 3-24

- Answer (A) is correct. Under the absorption method, unit cost is $30 ($12 direct materials + $9 direct labor + $4 variable overhead + $5 fixed overhead). Given beginning inventory of 35,000 units, the ending inventory equals 40,000 units (35,000 BI + 130,000 produced – 125,000 sold). Hence, ending inventory was $1,200,000 (40,000 units × $30).

- Answer (B) is incorrect because Ending inventory was $1,200,000.

- Answer (C) is incorrect because Ending inventory was $1,200,000.

- Answer (D) is incorrect because Ending inventory was $1,200,000.
Answer (A) is correct. The single-rate method combines fixed and variable costs. However, dual rates are preferable because they allow variable costs to be allocated on a different basis from fixed costs.

- Answer (B) is incorrect because the reciprocal method can be used on a single- or dual-rate basis.
- Answer (C) is incorrect because the step method can be used on a single- or dual-rate basis.
- Answer (D) is incorrect because the direct method can be used on a single- or dual-rate basis.

Answer (A) is incorrect because standard costs may be used in any product costing system. 

- Answer (B) is incorrect because standard costs may be used in any product costing system. 
- Answer (C) is incorrect because standard costs may be used in any product costing system. 
- Answer (D) is correct. A standard-cost system records the product at standard (predetermined) costs and compares expected with actual cost. This comparison allows deviations (variances) from expected results to be identified and investigated. A standard-cost system can be used in job-order, process-costing, and activity-based systems to isolate variances.

Answer (A) is incorrect because actual overhead is not known at the beginning of the period; the overhead rate is predetermined.

- Answer (B) is incorrect because the actual activity level is not known until year-end. Also, activity is a denominator value.
- Answer (C) is correct. The overhead application rate is established at the beginning of each year to determine how much overhead to accumulate for each job throughout the period. The estimated annual overhead costs are divided by the annual activity level or capacity in terms of units to arrive at the desired rate.
- Answer (D) is incorrect because the estimated activity level is the rate’s denominator.
[80] Gleim #: 3.4.111 -- Source: CMA 1294 3-2

- Answer (A) is incorrect because The gross profit margin ratio equals gross profit divided by sales.
- Answer (B) is incorrect because Contribution margin ratio is the ratio of contribution margin (sales – variable costs) to sales.
- Answer (C) is correct. Gross profit is the difference between sales price and the full absorption cost of goods sold.
- Answer (D) is incorrect because Contribution (margin) is the difference between unit selling price and unit variable costs. Fixed costs are not considered.

[81] Gleim #: 3.3.74 -- Source: CMA Sample Q3-6

- Answer (A) is incorrect because Normal spoilage arises more frequently from factors that are inherent in the manufacturing process.
- Answer (B) is incorrect because Abnormal spoilage costs are treated as a loss, and normal spoilage costs are inventoried.
- Answer (C) is correct. Spoiled goods are defective items that cannot be feasibly reworked. Traditional cost accounting systems distinguish between normal and abnormal spoilage because, in some operations, a degree of spoilage is viewed as inevitable. However, organizations that have adopted rigorous approaches to quality regard normal spoilage as minimal or even nonexistent. Thus, all spoilage may be identified as abnormal. Normal spoilage occurs under normal, efficient operating conditions. It is spoilage that is uncontrollable in the short run and therefore should be expressed as a function of good output (treated as a product cost). Accordingly, normal spoilage is assigned to all good units in process costing systems, that is, all units that have passed the inspection point at which the spoilage was detected. If normal spoilage is attributable to a specific job, only the disposal value of the normally spoiled goods is removed from work-in-process, thereby assigning the cost of normal spoilage to the good units remaining in the specific job. Abnormal spoilage is not expected to occur under normal, efficient operating conditions. The cost of abnormal spoilage should be separately identified and reported. Abnormal spoilage is typically treated as a period cost (a loss) because it is unusual.
- Answer (D) is incorrect because The tighter the standards, the more likely that any spoilage will be deemed to be abnormal.

[82] Gleim #: 3.4.107 -- Source: CMA 1290 3-12

- Answer (A) is incorrect because Direct (variable) costing treats only variable costs as product costs.
- Answer (B) is incorrect because Marginal costing considers only the incremental costs of producing an additional unit of product. In most cases marginal costs are variable costs.
- Answer (C) is incorrect because Direct (variable) costing treats only variable costs as product costs.
- Answer (D) is correct. Full absorption costing treats fixed factory overhead costs as product costs. Thus, inventory and cost of goods sold include (absorb) fixed factory overhead.
[83] Gleim #: 3.3.70 -- Source: CMA 1292 3-4

- Answer (A) is incorrect because Sales salaries for the production period do not affect the decision.
- Answer (B) is incorrect because Joint costs have no effect on the decision as to when to sell a product.
- Answer (C) is incorrect because Purchase costs are joint costs.
- Answer (D) is correct. Joint products are created from processing a common input. Joint costs are incurred prior to the split-off point and cannot be identified with a particular joint product. As a result, joint costs are irrelevant to the timing of sale. However, separable costs incurred after the split-off point are relevant because, if incremental revenues exceed the separable costs, products should be processed further, not sold at the split-off point.

[84] Gleim #: 5.3.98 -- Source: Publisher

- Answer (A) is incorrect because Overhead must be budgeted before a rate can be calculated.
- Answer (B) is incorrect because An overhead rate applies overhead to the product.
- Answer (C) is incorrect because Overhead application rates are used to smooth seasonal variability of overhead costs.
- Answer (D) is correct. Annual overhead application rates smooth seasonal variability of overhead costs and activity levels. If overhead were applied to the product as incurred, the overhead rate per unit in most cases would vary considerably from week to week or month to month. The purpose of an annual overhead application rate is to simulate constant overhead throughout the year.

[85] Gleim #: 5.4.128 -- Source: Publisher

- Answer (A) is correct. Ability to bear, measured in terms of the cost object’s profitability, is not an acceptable method because it has a dysfunctional effect on management behavior. It penalizes high performance instead of rewarding profitability.
- Answer (B) is incorrect because It is superior to the “ability to bear” criterion for allocating service and administrative costs. See SMA 4B, Allocation of Service and Administrative Costs.
- Answer (C) is incorrect because It is superior to the “ability to bear” criterion for allocating service and administrative costs. See SMA 4B, Allocation of Service and Administrative Costs.
- Answer (D) is incorrect because It is superior to the “ability to bear” criterion for allocating service and administrative costs. See SMA 4B, Allocation of Service and Administrative Costs.
• Answer (A) is incorrect because the amount of $2.65 results from failing to use the net realizable value method.

• Answer (B) is incorrect because the amount of $3.15 results from dividing the total joint costs by total output; in other words, a physical-volume method was used rather than the net realizable value method.

• Answer (C) is incorrect because the amount of $2.10 results from allocating the $315,000 equally among all three products.

• Answer (D) is correct. First, the final sales prices are estimated:

<table>
<thead>
<tr>
<th>Product</th>
<th>Units</th>
<th>Sales Price</th>
<th>Total Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>20,000</td>
<td>$5/unit</td>
<td>$100,000</td>
</tr>
<tr>
<td>B</td>
<td>30,000</td>
<td>$6/unit</td>
<td>$180,000</td>
</tr>
<tr>
<td>C</td>
<td>50,000</td>
<td>$7/unit</td>
<td>$350,000</td>
</tr>
</tbody>
</table>

From these amounts, separable costs are deducted:

<table>
<thead>
<tr>
<th>Product</th>
<th>Separable Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$100,000 – (20,000 × $0.70) = $  86,000</td>
</tr>
<tr>
<td>B</td>
<td>$180,000 – (30,000 × $3.00) = $  90,000</td>
</tr>
<tr>
<td>C</td>
<td>$350,000 – (50,000 × $1.72) = $264,000</td>
</tr>
</tbody>
</table>

This yields a total final sales value for the entire production run of $440,000. Multiply the total joint costs to be allocated by the proportion of the final expected sales of each product:

<table>
<thead>
<tr>
<th>Product</th>
<th>Amount Allocated</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$315,000 × ($  86,000 ÷ $440,000) = $  61,568</td>
</tr>
<tr>
<td>B</td>
<td>$315,000 × ($  90,000 ÷ $440,000) = $  64,432</td>
</tr>
<tr>
<td>C</td>
<td>$315,000 × ($264,000 ÷ $440,000) = $189,000</td>
</tr>
</tbody>
</table>

Joint costs -- check total $315,000

The per-unit amount allocated to Product C is therefore $3.78 ($189,000 ÷ 50,000).

• Answer (A) is correct. A direct cost is one that can be specifically associated with a single cost objective in an economically feasible way. Thus, a production supervisor’s salary can be directly associated with the department(s) he/she supervises.

• Answer (B) is incorrect because warehouse rent is not directly traceable to the Purchasing Department. Other departments have influence over the level of inventories stored.

• Answer (C) is incorrect because a cost accountant’s salary cannot be directly associated with a single product. Cost accountants work with many different products during a pay period.

• Answer (D) is incorrect because directors’ fees cannot be directly associated with the Marketing Department. Directors provide benefits to all departments within a corporation.
Answer (A) is incorrect because The best practice analysis is a method of accomplishing a business function or process that is considered to be superior to all other known methods.

Answer (B) is correct. Best practice analysis is a method of accomplishing a business function or process that is considered to be superior to all other known methods. The balanced scorecard facilitates best practice analysis. A lesson learned from one area of a business can be passed on to another area of the business or between businesses. The whole concept of benchmarking is aimed at identifying best practices.

Answer (C) is incorrect because A lesson learned in one area of a business can be passed on to another area of the business or between businesses.

Answer (D) is incorrect because The balanced scorecard facilitates best practice analysis.

Answer (A) is incorrect because Internal failure costs arise after poor quality has been found; statistical quality control is designed to detect quality problems.

Answer (B) is incorrect because External failure costs are incurred after the product has been shipped, including the costs associated with warranties, product liability, and customer ill will.

Answer (C) is incorrect because Statistical quality control is not a training cost.

Answer (D) is correct. The following are the four categories of quality costs: prevention, appraisal, internal failure, and external failure (lost opportunity). Appraisal costs include quality control programs, inspection, and testing. However, some authorities regard statistical quality and process control as preventive activities because they not only detect faulty work but also allow for adjustment of processes to avoid future defects.

Answer (A) is correct. Committed costs are those which are required as a result of past decisions.

Answer (B) is incorrect because Costs incurred in a current period to achieve objectives other than the filling of orders by customers are known as discretionary costs.

Answer (C) is incorrect because Amortization of costs capitalized in previous periods is depreciation.

Answer (D) is incorrect because Costs which are likely to respond to the amount of attention devoted to them by a specified manager are controllable costs.
[91] Gleim #: 6.3.42 -- Source: CMA 0205 3-6

- Answer (A) is incorrect because Labor, overhead, and selling and administrative costs are not considered in the calculation of throughput contribution.

- Answer (B) is correct. Throughput costing, sometimes called supervariable costing, recognizes only direct materials costs as being truly variable and thus relevant to the calculation of throughput margin (throughput contribution). All other manufacturing costs are ignored because they are considered fixed in the short turn. For Antlers’ single product, the throughput margin is therefore $90 ($150 selling price – $45 direct materials in Cutting – $15 direct materials in Finishing).

- Answer (C) is incorrect because Labor, overhead, and selling and administrative costs are not considered in the calculation of throughput contribution.

- Answer (D) is incorrect because Labor, overhead, and selling and administrative costs are not considered in the calculation of throughput contribution.

[92] Gleim #: 4.2.49 -- Source: CMA 0408 2-126

- Answer (A) is incorrect because The amount of $3.99 is the per-unit cost on the FIFO basis.

- Answer (B) is incorrect because The amount of $3.88 results from including 20% of the beginning work-in-process ($860) to the total cost to be distributed.

- Answer (C) is correct. In determining Mack’s weighted-average cost per unit, the first step is to calculate the equivalent units of production (EUP). The same EUP amount can be used for both materials and conversion:

<table>
<thead>
<tr>
<th>Description</th>
<th>EUP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transferred out (27,000 units × 100%)</td>
<td>27,000</td>
</tr>
<tr>
<td>Ending work-in-process (3,000 units × 50%)</td>
<td>1,500</td>
</tr>
<tr>
<td>Total</td>
<td>28,500</td>
</tr>
</tbody>
</table>

Total costs to be distributed are calculated as follows:

- Embedded in beginning work-in-process $ 4,300
- Current month -- direct materials 39,700
- Current month -- conversion costs 70,000
- Total $114,000

The total cost per unit is thus $4.00 ($114,000 ÷ 28,500).

- Answer (D) is incorrect because The amount of $3.51 results from including 80% of the 5,000 units in beginning work-in-process (4,000) to the EUP for October.
[93] Gleim #: 3.3.77 -- Source: CMA 1290 3-1

- Answer (A) is incorrect because Theoretical capacity assumes all personnel and equipment will operate at peak efficiency and total plant capacity will be used.
- Answer (B) is incorrect because Practical capacity ignores demand.
- Answer (C) is incorrect because The production volume to meet a given production level may be more or less than practical capacity. Horngren, Foster, and Datar call this volume the master-budget volume.
- Answer (D) is correct. Practical capacity is the maximum level at which output is produced efficiently. It includes consideration of idle time caused by human and equipment inefficiencies but not by inadequate sales demand. Practical capacity exceeds the other commonly used denominator levels included in the calculation of the fixed factory overhead rate. Because practical capacity will almost always exceed the actual use of capacity, it will result in an unfavorable production volume variance. Moreover, this variance (the difference between budgeted fixed overhead and the fixed overhead applied based on standard input allowed for the actual output) will be greatest given a practical capacity measure. The unfavorable production volume variance is charged to income summary, so the effect of using a larger denominator volume is the more rapid write-off of fixed overhead (practical capacity may be used for federal income tax purposes).

[94] Gleim #: 4.4.90 -- Source: Publisher

- Answer (A) is correct. Whole-life costs include after-purchase costs (operating, support, repair, and disposal) incurred by customers as well as life-cycle costs (R&D, design, manufacturing, marketing, distribution, and research). Hence, the budgeted unit whole-life cost is $36 \([($2,000,000 + $3,000,000 + $1,200,000 + $1,000,000) ÷ 200,000 \text{ units}]\), and the budgeted unit selling price is $45 \((36 \times 125\%)\).
- Answer (B) is incorrect because The budgeted unit manufacturing cost is $15.
- Answer (C) is incorrect because The budgeted unit whole-life cost is $36.
- Answer (D) is incorrect because The budgeted unit life-cycle cost is $31.

[95] Gleim #: 3.1.2 -- Source: CMA 697 3-1

- Answer (A) is incorrect because A period cost is expensed when incurred. Direct labor cost is inventoriable.
- Answer (B) is incorrect because Direct labor is also a product cost.
- Answer (C) is correct. Direct labor is both a product cost and a prime cost. Product costs are incurred to produce units of output and are deferred to future periods to the extent that output is not sold. Prime costs are defined as direct materials and direct labor.
- Answer (D) is incorrect because Direct labor is also a prime cost.
[96] Gleim #: 5.1.2 -- Source: CMA 1273 4-2

- Answer (A) is incorrect because Decreased output will increase the unit cost of items sold. Fixed overhead per unit will increase.
- Answer (B) is incorrect because Profit is a function of both sales and production, so it will not always move in the same direction as sales.
- Answer (C) is incorrect because Profit is a function of both sales and production, so it will not always move in the same direction as sales.
- Answer (D) is correct. In an absorption costing system, fixed overhead costs are included in inventory. When sales exceed production, more overhead is expensed under absorption costing due to fixed overhead carried over from the prior inventory. If sales increase over production, more than one period’s overhead is recognized as expense. Accordingly, if the increase in overhead expensed is greater than the contribution margin of the increased units sold, profit may be lower with an increased level of sales.

[97] Gleim #: 5.1.24 -- Source: CMA 0205 2-19

- Answer (A) is incorrect because The perverse incentive to “produce for inventory” only works under absorption costing.
- Answer (B) is incorrect because The production manager has no control over advertising and marketing costs.
- Answer (C) is incorrect because Activity-based costing and activity-based management require time, effort, and resources in the short run and only show benefits over the long run.
- Answer (D) is correct. Because the production manager wishes to maximize her bonus for the coming year, the action she must take will necessarily have most of its effect in the short run. The action she should take to achieve this goal is to defer costs under her control until the following period.

[98] Gleim #: 6.5.51 -- Source: Publisher

- Answer (A) is correct. To remain in the market, a product must provide value to the customer and a profit to the seller. The producer’s profit (profit margin) is the difference between its costs and the price it charges for the product.
- Answer (B) is incorrect because Value-added transfer is not a meaningful term in this context.
- Answer (C) is incorrect because Contribution margin is the excess of the sales price over variable costs.
- Answer (D) is incorrect because Consumer surplus is the excess of the value a consumer places on a good over the price (s)he pays for it.
Answer (A) is incorrect because the amount of $21,500 is absorption-basis operating income.

Answer (B) is incorrect because the amount of $28,000 results from including 100 units in ending inventory rather than 50 and from failing to write off the $1,000 overhead volume variance.

Answer (C) is correct. Dremmon’s variable-basis operating income can be calculated as follows:

<table>
<thead>
<tr>
<th>Sales</th>
<th>$150,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning inventory</td>
<td>100 units @ $90 = $ 9,000</td>
</tr>
<tr>
<td>Variable production costs</td>
<td>700 units @ $90 = $63,000</td>
</tr>
<tr>
<td>Volume variance writeoff</td>
<td>50 units @ $20 = $1,000</td>
</tr>
<tr>
<td>Goods available for sale</td>
<td>$73,000</td>
</tr>
<tr>
<td>Less: ending inventory</td>
<td>50 units @ $90 = $4,500</td>
</tr>
<tr>
<td>Variable cost of goods sold</td>
<td>(68,500)</td>
</tr>
<tr>
<td>Variable S&amp;A expenses</td>
<td>None</td>
</tr>
<tr>
<td>Contribution margin</td>
<td>$ 81,500</td>
</tr>
<tr>
<td>Fixed production costs</td>
<td>700 units @ $20 = $14,000</td>
</tr>
<tr>
<td>Fixed S&amp;A expenses</td>
<td>Fixed</td>
</tr>
<tr>
<td>Operating income</td>
<td>$ 22,500</td>
</tr>
</tbody>
</table>

Answer (D) is incorrect because the amount of $31,000 results from using 750 units for variable production costs, failing to write off the overhead volume variance, and valuing inventory at $20 rather than $90.
Answer (A) is incorrect because the amount of $5,564 is not based on the net realizable value method.

Answer (B) is incorrect because the amount of $4,600 is only the allocated joint cost of Giant; it fails to add in the additional $1,000 of separable costs.

Answer (C) is correct. First, the final sales prices are estimated:

Giant: 600 gallons @ $17/gallon = $10,200
Mini: 200 gallons @ $4/gallon = $800

From these amounts, separable costs are subtracted:

Giant: $10,200 – $1,000 = $9,200
Mini: No separable costs

This yields a total net realizable value (NRV) for the entire production run of $10,000 ($9,200 Giant + $800 Mini). The next step is to allocate the total joint costs of $5,000 ($2,000 input cost + $3,000 processing cost) based on the proportion of the total NRV represented by each product:

Giant: $5,000 × ($9,200 ÷ $10,000) = $4,600
Mini: $5,000 × ($800 ÷ $10,000) = $400

The total cost of producing Giant using the estimated NRV method is therefore $5,600 ($4,600 allocated joint cost + $1,000 separable cost).

Answer (D) is incorrect because the amount of $5,520 results from allocating the $1,000 of additional cost between Giant and Mini; Mini should not absorb any of the additional processing costs.

Answer (A) is incorrect because the amount of $937,500 is the direct labor cost.

Answer (B) is incorrect because the amount of $750,000 is factory overhead (30% × $2,500,000).

Answer (C) is correct. Factory overhead is 30% of total manufacturing costs, or $750,000. Direct labor is $937,500. Thus, raw materials must account for the remaining $812,500 ($2,500,000 - $750,000 - $937,500).

Answer (D) is incorrect because the amount of $1,150,000 is calculated using a direct labor cost of $600,000, which is incorrectly calculated by multiplying, instead of dividing, factory overhead by 80%.
[102] Gleim #: 4.1.2 -- Source: Publisher

- Answer (A) is incorrect because the amount of $17.75 includes selling and administrative costs.
- Answer (B) is incorrect because the amount of $14.95 includes administrative costs.
- Answer (C) is incorrect because the amount of $9.25 fails to include overhead.
- Answer (D) is correct. Cost of goods sold is based on the manufacturing costs incurred in production. It does not include selling or general and administrative expenses. Manufacturing costs consist of direct materials, $27,400; direct labor, $9,600; and overhead, $20,000 (400 direct labor hours × $50 per hour). The total of these three cost elements is $57,000. Dividing the $57,000 of total manufacturing costs by the 4,000 units produced results in a per-unit cost of $14.25.

[103] Gleim #: 4.3.74 -- Source: CIA 1195 III-94

- Answer (A) is incorrect because the amount of $6.00 assumes one setup per batch and 80 total machine hours.
- Answer (B) is correct. Materials handling cost per part is $.12 ($720,000 ÷ 6,000,000), cost per setup is $420 ($315,000 ÷ 750), machining cost per hour is $18 ($540,000 ÷ 30,000), and quality cost per batch is $450 ($225,000 ÷ 500). Hence, total manufacturing overhead applied is $22,920 [5 parts per unit × 20,000 units × $.12] + (4 batches × 2 setups per batch × $420) + (4 batches × 80 machine hours per batch × $18) + (4 batches × $450)]. The total unit cost is $6.296 [$5.15 prime cost + ($22,920 ÷ 20,000 units) overhead].
- Answer (C) is incorrect because the amount of $6.21 assumes one setup per batch.
- Answer (D) is incorrect because the amount of $6.08 assumes that only 80 machine hours were used.

[104] Gleim #: 4.2.45 -- Source: CMA 692 3-2

- Answer (A) is incorrect because the equivalent units for conversion costs equals 40,800.
- Answer (B) is incorrect because the number of units started and completed during the period was 30,000.
- Answer (C) is correct. This problem seemingly asks a technical question, but in reality was designed to test the candidate’s alertness. The equivalent units transferred from the molding department are simply the total units transferred from the molding department (42,000 units).
- Answer (D) is incorrect because the number of units transferred out, not to, the assembly department was 38,000.
[105] Gleim #: 3.1.5 -- Source: CMA 696 3-18

- Answer (A) is correct. Conversion costs are necessary to convert raw materials into finished products. They include all manufacturing costs, for example, direct labor and factory overhead, other than direct materials.

- Answer (B) is incorrect because Indirect labor is a factory overhead cost and therefore is a conversion cost.

- Answer (C) is incorrect because Indirect materials are factory overhead costs and therefore are conversion costs.

- Answer (D) is incorrect because Depreciation is a factory overhead cost and therefore is a conversion cost.

[106] Gleim #: 5.1.16 -- Source: CMA 1290 3-26

- Answer (A) is incorrect because The variable costing contribution margin was $5,625,000.

- Answer (B) is incorrect because The variable costing contribution margin was $5,625,000.

- Answer (C) is incorrect because The variable costing contribution margin was $5,625,000.

- Answer (D) is correct. At $70 per unit, actual sales revenue was $8,750,000 for 125,000 units. Actual variable costs of manufacturing were $25 per unit ($12 + $9 + $4). The unit costs incurred for the actual production level of 130,000 units were the same as the unit costs for a planned production level of 140,000 units. These unit costs were the same for units manufactured in both the current and previous year. For example, total planned direct materials cost for 140,000 units was $1,680,000, or $12 per unit. The incurred unit cost was also $12 ($1,560,000 ÷ 130,000 units). Thus, total variable manufacturing cost was $3,125,000 (125,000 units × $25). Consequently, manufacturing contribution margin was $5,625,000 ($8,750,000 – $3,125,000).

[107] Gleim #: 3.3.69 -- Source: Publisher

- Answer (A) is incorrect because Opportunity cost is the maximum benefit forgone by using a scarce resource for a given purpose. It is the benefit, for example, the contribution to income, provided by the best alternative use of that resource.

- Answer (B) is incorrect because A cost driver “is a measure of activity, such as direct labor hours, machine hours, beds occupied, computer time used, flight hours, miles driven, or contracts, that is a causal factor in the incidence of cost to an entity” (SMA 2A).

- Answer (C) is correct. Avoidable costs are those that may be eliminated by not engaging in an activity or by performing it more efficiently.

- Answer (D) is incorrect because Indirect costs cannot be specifically associated with a given cost object in an economically feasible way. They are also defined as costs that are not directly identified with one final cost object but that are identified with two or more final cost objects or with at least one intermediate cost object.
Answer (A) is correct. MRP is a push system, that is, the demand for raw materials is driven by the forecasted demand for the final product, which can be programmed into the computer. This is in contrast with just-in-time manufacturing, which is a pull system, meaning items are pulled through production by current demand, not pushed through by anticipated demand.

- Answer (B) is incorrect because Both systems may be automated.
- Answer (C) is incorrect because Just-in-time manufacturing is a pull system.
- Answer (D) is incorrect because Neither system need be manual.

Answer (A) is incorrect because Advertising cost is considered fixed.

- Answer (B) is incorrect because Sales salaries are considered fixed in terms of dollar sales.
- Answer (C) is correct. Both advertising and sales salaries should be classified as fixed costs. The advertising was constant for 3 of the 4 months and would be considered fixed in terms of dollar sales. Sales salaries also did not vary with dollar sales.
- Answer (D) is incorrect because Advertising and sales salaries are considered fixed costs in terms of dollar sales.

Answer (A) is correct. Throughput costing, also called supervariable costing, recognizes only direct materials costs as being truly variable and thus relevant to the calculation of throughput margin.

- Answer (B) is incorrect because Under throughput costing, direct labor is considered fixed because of labor contracts and employment levels.
- Answer (C) is incorrect because Under throughput costing, only direct materials costs are considered variable in the short run.
- Answer (D) is incorrect because Under throughput costing, overhead is considered fixed in the short run.
Answer (A) is incorrect because the amount of $469,000 uses actual overhead and adjusts the figures for the change in finished goods inventory.

Answer (B) is correct. This solution requires a series of computations. Total manufacturing cost is the sum of direct materials cost, direct labor cost, and manufacturing overhead.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning materials</td>
<td>$67,000</td>
</tr>
<tr>
<td>Add: purchases</td>
<td>163,000</td>
</tr>
<tr>
<td>Add: transportation in</td>
<td>4,000</td>
</tr>
<tr>
<td>Less: purchase returns</td>
<td>(2,000)</td>
</tr>
<tr>
<td>Materials available</td>
<td>$232,000</td>
</tr>
<tr>
<td>Less: ending materials</td>
<td>(62,000)</td>
</tr>
<tr>
<td>Materials used in production</td>
<td>$170,000</td>
</tr>
<tr>
<td>Direct materials</td>
<td>$170,000</td>
</tr>
<tr>
<td>Direct labor</td>
<td>200,000</td>
</tr>
<tr>
<td>Manufacturing overhead (DL × 70%)</td>
<td>140,000</td>
</tr>
<tr>
<td>Total manufacturing costs</td>
<td>$510,000</td>
</tr>
<tr>
<td>Total manufacturing costs</td>
<td>$510,000</td>
</tr>
<tr>
<td>Add: beginning work-in-process</td>
<td>145,000</td>
</tr>
<tr>
<td>Less: ending work-in-process</td>
<td>(171,000)</td>
</tr>
<tr>
<td>Costs transferred to finished goods</td>
<td>$484,000</td>
</tr>
</tbody>
</table>

Answer (C) is incorrect because the amount of $495,000 uses materials purchased rather than materials used and also fails to adjust properly for transportation in.

Answer (D) is incorrect because the amount of $477,000 includes the change in finished goods inventory in the calculation.

Answer (A) is incorrect because a zero variance in the sales mix is not the only factor bearing on net income.

Answer (B) is incorrect because the behavior of overhead is not the only factor bearing on net income.

Answer (C) is incorrect because accurate budgeting has no bearing on the net income figure produced by various costing systems.

Answer (D) is correct. When there is no beginning finished goods inventory, the only difference in net income arising from the use of variant costing methods is the treatment of costs that show up on the balance sheet because they are buried in the various ending inventories. In Young’s case, therefore, an identical net income figure across the three different costing system options can only be guaranteed when there are no ending inventories.
Answer (A) is correct. The weighted-average method averages the work done in the prior period with the work done in the current period. The two layers of units to analyze are those completed during the period and those still in EWIP. The units completed totaled 184,000. The equivalent units of materials in EWIP equaled 43,200 (48,000 physical units × 90%). Hence, the total equivalent units of materials equaled 227,200 (184,000 + 43,200). The materials cost in BWIP is combined in the weighted-average calculation with the materials cost incurred during the current period. The equivalent-unit materials cost is therefore $2.30 \{($54,560 \text{ BWIP} + $468,000 \text{ incurred in May}) ÷ 227,200 \text{ EU}\}.

Answer (B) is incorrect because The cost based on the FIFO method is $2.25.

Answer (C) is incorrect because The amount of $2.06 is based on weighted-average equivalent units and FIFO costs.

Answer (D) is incorrect because Total materials costs divided by FIFO equivalent units of materials equals $2.51.

Answer (A) is correct. The cost of the unsalable units in Operation 1 consists solely of the wasted direct materials because idle capacity is available to replace the defective units. As a consequence, Operation 1 can still transfer the maximum 150,000 units that Operation 2 can process, and no throughput contribution is lost. The cost of the unsalable units in Operation 1 is thus $24,000 (500 units × $48 \text{ DM})$. In Operation 2, however, the lost throughput contribution is an opportunity cost because no idle capacity exists to replace the defective units. The cost of the unsalable units in Operation 2 is $60,000 \{(500 \text{ units} × $48 \text{ DM}) + [500 \text{ units} × ($120 \text{ unit price} – $48 \text{ DM cost})]\}. Hence, the total relevant cost of the unsalable units is $84,000 ($24,000 + $60,000).

Answer (B) is incorrect because The lost throughput contribution and wasted direct materials cost of 500 units equals $60,000.

Answer (C) is incorrect because The direct materials cost of 500 units equals $24,000.

Answer (D) is incorrect because The lost throughput contribution and wasted direct materials cost of 1,000 units equals $120,000.

Answer (A) is correct. Purchases equals usage adjusted for the inventory change. Hence, purchases equals $130,150 ($128,900 used – $27,500 \text{ BI} + $28,750 \text{ EI})

Answer (B) is incorrect because The amount of $157,650 assumes zero beginning inventory.

Answer (C) is incorrect because The amount of $127,650 results from reversing the treatment of beginning and ending inventories.

Answer (D) is incorrect because The amount of $101,400 assumes zero ending inventory.
Answer (A) is incorrect because the amount of $93,500 results from using a unit cost based on the FIFO method.

Answer (B) is correct. For materials, the equivalent-unit calculation under the weighted-average method is:

<table>
<thead>
<tr>
<th></th>
<th>Units</th>
<th>Percentage</th>
<th>Calculation</th>
<th>Equivalent Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning WIP</td>
<td>10,000</td>
<td>100%</td>
<td>10,000 units</td>
<td>10,000</td>
</tr>
<tr>
<td>Started and completed</td>
<td>75,000</td>
<td>100%</td>
<td>75,000 units</td>
<td>75,000</td>
</tr>
<tr>
<td>Ending WIP</td>
<td>5,000</td>
<td>100%</td>
<td>5,000 units</td>
<td>5,000</td>
</tr>
<tr>
<td><strong>Weighted-average EUP for materials</strong></td>
<td></td>
<td></td>
<td></td>
<td>90,000</td>
</tr>
</tbody>
</table>

The materials costs consisted of $30,000 in beginning inventory and $88,000 incurred during the month, for a total of $118,000. The equivalent unit cost of materials is therefore $1.31 ($118,000 / 90,000 EU). Total materials cost transferred is $111,350 (85,000 units transferred × $1.31).

Answer (C) is incorrect because the amount of $88,000 is the materials costs incurred during the month.

Answer (D) is incorrect because the amount of $112,500 is the materials cost transferred out under FIFO.

Answer (A) is incorrect because the amount of $63,750 is based on the weighted-average method.

Answer (B) is incorrect because the amount of $74,500 is based on the weighted-average unit cost per equivalent unit.

Answer (C) is incorrect because the amount of $66,000 equals total conversion costs incurred.

Answer (D) is correct. For conversion costs, the equivalent-unit calculation under the FIFO method is:

<table>
<thead>
<tr>
<th></th>
<th>Units</th>
<th>Percentage</th>
<th>Calculation</th>
<th>Equivalent Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning WIP</td>
<td>10,000</td>
<td>30%</td>
<td>3,000 units</td>
<td>3,000</td>
</tr>
<tr>
<td>Started and completed</td>
<td>75,000</td>
<td>100%</td>
<td>75,000 units</td>
<td>75,000</td>
</tr>
<tr>
<td>Ending WIP</td>
<td>5,000</td>
<td>60%</td>
<td>3,000 units</td>
<td>3,000</td>
</tr>
<tr>
<td><strong>FIFO EUP for conversion</strong></td>
<td></td>
<td></td>
<td></td>
<td>81,000</td>
</tr>
</tbody>
</table>

The conversion cost includes $16,000 in beginning inventory, all of which would have been transferred out. The $50,000 incurred during the month is divided by the 81,000 equivalent units to arrive at a unit cost for the current period of $0.62. Given that 78,000 equivalent units (85,000 physical units transferred out – 7,000 EU in BWIP completed in the prior period) of current-period production were completed and transferred, the total conversion cost transferred out was $64,360 [$16,000 BWIP + (78,000 FIFO EU × $0.62)].
Answer (A) is incorrect because Maximum capacity varies depending on the current productive facilities.

Answer (B) is incorrect because General and administrative costs are not assumed to be variable.

Answer (C) is correct. Total costs, being a mixture of fixed and variable costs, are not assumed to be linear.

Answer (D) is incorrect because The relevant time period varies for each organization.

Answer (A) is correct. Life cycle costs include upstream (R&D and design and testing) and downstream (marketing and distribution and customer service) costs over the product’s 5-year life cycle. At a unit price of $750, upstream costs equal $3,000,000 ($1,000,000 + $2,000,000). Fixed costs of production and the fixed downstream costs equal $15,750,000 [($1,500,000 + $1,500,000 + $180,000 – $30,000) × 5 years], and variable costs of production and variable downstream costs equal $9,600,000 [8,000 units × ($100 + $100 + $40) × 5 years]. Accordingly, the life cycle costs at a price of $750 equal $28,350,000 ($3,000,000 + $15,750,000 + $9,600,000). Sales revenue at this price is $30,000,000 (8,000 units × $750 × 5 years). Hence, profit at a price of $750 is $1,650,000 ($30,000,000 – $28,350,000).

Answer (B) is incorrect because The profit at a unit price of $900 is $900,000.

Answer (C) is incorrect because The profit at a unit price of $1,125 is $90,000.

Answer (D) is incorrect because A profit of $1,650,000 is earned at a price of $750.

Answer (A) is incorrect because Wages paid to labor that can be identified with a specific finished good are direct costs. Therefore, payments to employees who develop computer programs is a direct cost.

Answer (B) is incorrect because Payments to programmers are both direct costs and value-adding costs of computer programs.

Answer (C) is correct. Direct costs may be defined as those that can be specifically associated with a single cost object and can be assigned to it in an economically feasible manner. Wages paid to labor that can be identified with a specific finished good are direct costs. Value-adding costs may be defined as the costs of activities that cannot be eliminated without reducing the quality, responsiveness, or quantity of the output required by a customer or by an organization. Clearly, the amounts paid to programmers add value to computer programs.

Answer (D) is incorrect because The activities performed by programmers add value to computer programs. Therefore, the payments to employees who develop these programs is considered a value-adding cost.
[121] Gleim #: 6.1.6 -- Source: CPA 1192 II-26

- Answer (A) is incorrect because The net relevant costs and the economic lot size are reduced.

- Answer (B) is correct. The economic lot size for a production system is similar to the EOQ. For example, the cost per set-up is equivalent to the cost per order (a numerator value in the EOQ model). Hence, a reduction in the setup costs reduces the economic lot size as well as the relevant costs. The fixed facility and administrative costs, however, are not relevant. The basic EOQ model includes variable costs only.

- Answer (C) is incorrect because The net relevant costs and the economic lot size are reduced.

- Answer (D) is incorrect because The net relevant costs and the economic lot size are reduced.

[122] Gleim #: 6.2.20 -- Source: Publisher

- Answer (A) is incorrect because MRP often results in reduced idle time.

- Answer (B) is correct. Among the benefits of MRP are reduced idle time, lower setup costs, lower inventory carrying costs, and increased flexibility in responding to market changes.

- Answer (C) is incorrect because MRP often results in increased flexibility in responding to market changes.

- Answer (D) is incorrect because MRP often results in lower inventory carrying costs.

[123] Gleim #: 3.2.46 -- Source: CMA 1282 4-101

- Answer (A) is correct. Variable costs vary directly with the level of production. As production increases or decreases, material cost increases or decreases, usually in a direct relationship.

- Answer (B) is incorrect because Property taxes are independent of production levels. They are called “fixed” costs and are elements of overhead.

- Answer (C) is incorrect because Interest charges are independent of production levels. They are called “fixed” costs and are elements of overhead.

- Answer (D) is incorrect because The president’s salary usually does not vary with production levels.
[124] Gleim #: 6.3.30 -- Source: Publisher

- Answer (A) is incorrect because Tocon can produce only 75 units of A-2 if it produces 45 units of the more profitable A-1.
- Answer (B) is incorrect because Tocon can sell only 45 units of A-1.
- Answer (C) is incorrect because Tocon should produce as much of A-1 as it can sell.
- Answer (D) is correct. A-1’s throughput contribution margin per unit of the scarce resource (the internal binding constraint) is $150 ($150 UCM ÷ 1 machining hour). A-2’s throughput contribution margin per unit of the scarce resource is $100 ($300 UCM ÷ 3 machine hours). Consequently, Tocon should produce as much A-1 as it can sell (45 units). If Tocon adds 90 machine hours to increase the capacity of Operation 1 to 270 hours (180 + 90), it cannot produce additional units of A-1 because the external binding constraint has not been relaxed. However, it can produce additional units of A-2. Given that the UCM per machine hour of A-2 is $100 and that the cost is $80 per hour, adding capacity to Operation 1 is profitable. Thus, Tocon should use 45 machine hours to produce 45 units of A-1. The remaining 225 machine hours (270 – 45) should be used to produce 75 units (225 ÷ 3 hours) of A-2. The latter amount is within the external binding constraint.

[125] Gleim #: 5.1.47 -- Source: CMA 0408 2-115

- Answer (A) is incorrect because The figure of 750 is the difference, not the sum, of units sold and ending inventory.
- Answer (B) is correct. The difference between absorption-basis and variable-basis operating income ($9,500 – $9,125 = $375) is equal to the change in inventory for the period (in units) multiplied by fixed manufacturing cost per unit. Stated another way, the difference in operating incomes divided by fixed per-unit manufacturing cost equals the change in ending inventory ($375 ÷ $1.50 = 250 units). Since 1,000 units were sold and ending inventory increased by 250 units, 1,250 units were produced (1,000 + 250).
- Answer (C) is incorrect because The figure of 925 results from using all fixed costs instead of only the fixed manufacturing costs and then subtracting the units sold rather than adding them.
- Answer (D) is incorrect because The figure of 1,075 results from using all fixed costs instead of only the fixed manufacturing costs.
Answer (A) is incorrect because The amount of $27,000,000 is the sales revenue for the life cycle at a unit price of $1,125.

Answer (B) is correct. Life cycle costs include upstream (R&D and design and testing) and downstream (marketing and distribution and customer service) costs over the product’s 5-year life cycle. At a unit price of $750, upstream costs equal $3,000,000 ($1,000,000 + $2,000,000). Fixed costs of production and the fixed downstream costs equal $15,750,000 [($1,500,000 + $1,500,000 + $180,000 – $30,000) × 5 years], and variable costs of production and variable downstream costs equal $9,600,000 [8,000 units × ($100 + $100 + $40) × 5 years]. Accordingly, the life cycle costs at a price of $750 equal $28,350,000 ($3,000,000 + $15,750,000 + $9,600,000).

Answer (C) is incorrect because The amount of $7,620,000 is the life cycle cost for 1 year at a unit price of $900.

Answer (D) is incorrect because The amount of $8,070,000 is the life cycle cost for 1 year at a unit price of $750.

Answer (A) is incorrect because Providing a more economical way of attaching overhead to a job or product is one of the benefits of normal costing.

Answer (B) is correct. Normal costing can provide more timely information about job and product costs, and it can helpfully smooth product costs throughout a period, but it cannot in and of itself improve the accuracy of costing.

Answer (C) is incorrect because More timely costing of jobs and products is one of the benefits of normal costing.

Answer (D) is incorrect because A smoothing of product costs throughout the period is one of the benefits of normal costing.

Answer (A) is incorrect because The amount of $5.65 is based on EUP calculated under the weighted-average method.

Answer (B) is correct. Under the FIFO method, EUP for conversion costs equal 98,400 [(16,000 units in BWIP × 80%) + (76,000 units started and completed × 100%) + (24,000 units in EWIP × 40%)]. Conversion costs incurred during the current period equal $574,040 ($182,880 DL + $391,160 FOH). Hence, the equivalent unit cost for conversion costs is $5.83 ($574,040 ÷ 98,400).

Answer (C) is incorrect because The amount of $6.00 is the cost per equivalent unit calculated under the weighted-average method.

Answer (D) is incorrect because The amount of $6.20 results from combining conversion costs for May with those in beginning work-in-process and dividing by 98,400 EUP.
Answer (A) is incorrect because Fixed manufacturing overhead costs are neither direct nor period costs.

Answer (B) is incorrect because Fixed manufacturing overhead costs are not direct costs.

Answer (C) is correct. Using absorption costing, fixed manufacturing overhead is included in inventoriable (product) costs. Fixed manufacturing overhead costs are indirect costs because they cannot be directly traced to specific units produced.

Answer (D) is incorrect because Fixed manufacturing overhead costs are not period costs.

Answer (A) is incorrect because Any allocation that differentiates among the users will cause the users to examine the cost of the service and might thereby discourage use.

Answer (B) is correct. The most effective way to encourage more use of a service is to keep the user from having to bear the cost of the service.

Answer (C) is incorrect because Any allocation that differentiates among the users will cause the users to examine the cost of the service and might thereby discourage use.

Answer (D) is incorrect because Any allocation that differentiates among the users will cause the users to examine the cost of the service and might thereby discourage use.

Answer (A) is incorrect because Beginning inventory costs must be separately computed so they can be backed out.

Answer (B) is incorrect because Elimination of inventories is a feature of backflush, not process, costing.

Answer (C) is incorrect because FIFO process costing is no simpler than weighted-average process costing.

Answer (D) is correct. First-in, first-out (FIFO) process costing involves backing out beginning inventory costs when computing work performed. This has the effect of highlighting the most recent costs.
[132] Gleim #: 6.3.29 -- Source: Publisher

- Answer (A) is correct. In theory of constraints (TOC) analysis, the constraint (bottleneck) operation is the slowest part of the process. It can usually be identified as the one where work-in-process backs up the most. Of this manufacturer’s two operations, the one that requires the most total time is assembly.

- Answer (B) is incorrect because An operation as a whole is a constraint, not a particular product in an operation.

- Answer (C) is incorrect because The operation that requires the most total time is determinable from the information given.

- Answer (D) is incorrect because An operation, not a product, is a constraint.

[133] Gleim #: 3.4.128 -- Source: CIA 591 IV-6

- Answer (A) is incorrect because Direct costing includes only variable manufacturing costs in unit cost. It may be used whether products are homogeneous or heterogeneous and with either process or job-order costing.

- Answer (B) is incorrect because Job-order costing is employed when manufacturing involves different (heterogeneous) products.

- Answer (C) is correct. Like products that are mass produced should be accounted for using process costing techniques to assign costs to products. Costs are accumulated by departments or cost centers rather than by jobs, work-in-process is stated in terms of equivalent units, and unit costs are established on a departmental basis. Process costing is an averaging process that calculates the average cost of all units.

- Answer (D) is incorrect because Absorption costing includes all manufacturing costs as part of the cost of a finished product. It may be used whether products are homogeneous or heterogeneous and with either process or job-order costing.

[134] Gleim #: 6.2.21 -- Source: Publisher

- Answer (A) is incorrect because Materials requirements planning is a system that enables a company to efficiently fulfill the goals of the master production schedule.

- Answer (B) is correct. The yearly/quarterly/monthly numbers and styles of finished goods called for in the demand forecasts included in the operational plans must be turned into specific dates for completion and availability for shipment to the customer. This is the task of the master production schedule (MPS).

- Answer (C) is incorrect because A bill of materials is a record of which (and how many) subassemblies go into the finished product. The system then generates a complete list of every part and component needed.

- Answer (D) is incorrect because Manufacturing resource planning is a closed-loop manufacturing system that integrates all facets of a manufacturing business, including production, sales, inventories, schedules, and cash flows.
Answer (A) is incorrect because the amount of $3,450 \[300 \text{ units} \times (\$4.00 + \$7.50)\] uses the wrong amount for abnormal spoilage.

Answer (B) is incorrect because the amount of $1,440 \(360 \text{ units} \times \$4.00\) ignores the manufacturing overhead.

Answer (C) is incorrect because a loss should be charged for abnormal spoilage. Total spoilage exceeded the 4% normal rate.

Answer (D) is correct. Normal spoilage equals 1,140 units \((28,500 \text{ good units} \times 4\%)\), so abnormal spoilage equals 360 units \((1,500 \text{ total spoiled units} – 1,140 \text{ units of normal spoilage})\). Given that .25 DLH is needed to rework a spoiled unit, the loss from abnormal spoilage is $4,140 \(360 \text{ units} \times [\$16 \times .25 \text{ direct labor} + \$30 \times .25 \text{ manufacturing overhead}]\).

Answer (A) is incorrect because this combination of costs results from improperly classifying the uninsured loss as a product cost.

Answer (B) is correct. Product costs, also called inventoriable costs, are capitalized as part of finished goods inventory. They eventually become a component of cost of goods sold. Period costs are expensed as incurred, i.e., they are not capitalized in finished goods inventory and are thus excluded from cost of goods sold. Plunkett’s product and period costs can be calculated as follows:

<table>
<thead>
<tr>
<th></th>
<th>Product Costs</th>
<th>Period Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td>$ 56,000</td>
<td></td>
</tr>
<tr>
<td>Direct labor</td>
<td>179,100</td>
<td></td>
</tr>
<tr>
<td>Variable overhead</td>
<td>154,000</td>
<td></td>
</tr>
<tr>
<td>Fixed overhead</td>
<td>267,000</td>
<td></td>
</tr>
<tr>
<td>Variable selling costs</td>
<td></td>
<td>$108,400</td>
</tr>
<tr>
<td>Fixed selling costs</td>
<td>121,000</td>
<td></td>
</tr>
<tr>
<td>Administrative costs</td>
<td>235,900</td>
<td></td>
</tr>
<tr>
<td>Uninsured loss</td>
<td></td>
<td>27,700</td>
</tr>
<tr>
<td>Totals</td>
<td>$656,100</td>
<td>$493,000</td>
</tr>
</tbody>
</table>

Answer (C) is incorrect because the amounts of $235,100 and $914,000 result from treating overhead as a period, rather than a product, cost.

Answer (D) is incorrect because the amount of $651,600 is the product, not period, costs.
Answer (A) is incorrect because considering the best performance of a competitor with a similar operation is an example of benchmarking.

Answer (B) is correct. Benchmarking involves setting standards high. Arbitrarily using the unit’s prior period performance runs counter to the goal of benchmarking.

Answer (C) is incorrect because making a comparison with a similar unit within the same company is an example of benchmarking.

Answer (D) is incorrect because using the unit’s best historical performance is an example of benchmarking.

Answer (A) is incorrect because A wallpaper manufacturer would use a process costing system.

Answer (B) is incorrect because A paint manufacturer would use a process costing system.

Answer (C) is correct. A job costing system is used when products differ from one customer to the next, that is, when products are heterogeneous. A process costing system is used when similar products are mass produced on a continuous basis. A print shop, for example, would use a job costing system because each job will be unique. Each customer provides the specifications for the product desired. A beverage manufacturer, however, would use a process costing system because homogenous units are produced continuously.

Answer (D) is incorrect because A public accounting firm would use a job costing system.

Answer (A) is incorrect because The entry to close the overhead accounts credits CGS when overhead has been overapplied.

Answer (B) is incorrect because Debiting CGS and crediting overhead applied does not close the overhead accounts.

Answer (C) is incorrect because A debit to cost of goods sold and a credit to finished goods expenses inventoried costs related to items sold.

Answer (D) is correct. Although not theoretically sound, total under- or overapplied overhead is often debited (credited) to CGS. The correct entry to close the overhead accounts and to charge underapplied overhead to CGS is to debit the factory overhead applied account for the amount of overhead applied for the period and to credit factory overhead control for the amount of overhead actually incurred for the period. The amount actually incurred exceeds the amount of overhead applied because overhead is underapplied. The difference is the amount charged to CGS.
[140] Gleim #: 5.1.18 -- Source: CMA 1290 3-30

- Answer (A) is incorrect because The difference between absorption costing and variable costing income was $25,000.

- Answer (B) is correct. The difference is caused by the capitalization of some of the fixed manufacturing overhead. When inventories increase during the period, the absorption method capitalizes that overhead and transfers it to future periods. The variable costing method expenses it in the current period. Inventories increased by 5,000 units during the period, and each of those units would have included $5 of fixed manufacturing overhead under absorption costing. Accordingly, $25,000 of fixed manufacturing overhead would have been capitalized. Recognizing $25,000 of fixed costs in the balance sheet instead of the income statement results in a $25,000 difference in income between the two costing methods.

- Answer (C) is incorrect because The difference between absorption costing and variable costing income was $25,000.

- Answer (D) is incorrect because The difference between absorption costing and variable costing income was $25,000.

[141] Gleim #: 5.3.102 -- Source: CMA 0408 2-145

- Answer (A) is incorrect because The use of direct labor hours is an inappropriate driver for overhead when a process has been highly automated.

- Answer (B) is correct. Henry’s overhead rate will almost certainly increase because of all the new equipment that must be depreciated. Also, this heavy investment in new machinery will make it more difficult to quickly cut costs during economic downturns.

- Answer (C) is incorrect because The heavy investment in new machinery will make it more difficult to quickly cut costs during economic downturns.

- Answer (D) is incorrect because Process reengineering, a high degree of automation, and a reduction in the workforce do not complicate or preclude the calculation of variances.

[142] Gleim #: 3.3.90 -- Source: CIA 1193 IV-6

- Answer (A) is incorrect because The debit to factory overhead control must contain direct material charges also.

- Answer (B) is incorrect because The amount of $19,300 excludes the predetermined manufacturing overhead.

- Answer (C) is correct. The rework charge for direct materials, indirect materials (supplies), direct labor, and overhead applied on the basis of direct labor cost is $40,300 [$5,000 + $300 + $14,000 + (1.5 x $14,000)]. If an allowance for rework is included in a company’s manufacturing overhead budget, rework of defective units is spread over all jobs or batches as part of the predetermined overhead application rate. Hence, the debit is to overhead control.

- Answer (D) is incorrect because Factory overhead should be charged for direct materials, supplies, direct labor, and applied overhead incurred for rework.
[143] Gleim #: 6.1.4 -- Source: CPA 595 TMG-47

- Answer (A) is incorrect because Switching to a JIT system should be considered when carrying costs increase and ordering costs decrease.
- Answer (B) is incorrect because Switching to a JIT system should be considered when carrying costs increase and ordering costs decrease.
- Answer (C) is correct. A JIT system is intended to minimize inventory. Thus, if inventory carrying costs are increasing, a JIT system becomes more cost effective. Moreover, purchases are more frequent in a JIT system. Accordingly, a decreasing cost per purchase order is conducive to switching to a JIT system.
- Answer (D) is incorrect because Switching to a JIT system should be considered when carrying costs increase and ordering costs decrease.

[144] Gleim #: 4.2.53 -- Source: CMA 0408 2-130

- Answer (A) is incorrect because Under process costing, as with job-order costing, the cost of a normal level of spoilage is left in cost of goods sold; abnormal spoilage is recognized separately as a loss.
- Answer (B) is incorrect because Under process costing, as with job-order costing, the cost of a normal level of spoilage is left in cost of goods sold; abnormal spoilage is recognized separately as a loss.
- Answer (C) is correct. Under process costing, as with job-order costing, the cost of a normal level of spoilage is left in cost of goods sold. Thus, the cost of the period’s normal spoilage must be allocated among all the units worked on during the period, both finished and those remaining in work-in-process. Abnormal spoilage is recognized separately as a loss.
- Answer (D) is incorrect because The cost of the period’s normal spoilage must be allocated among all the units worked on during the period, both finished and those remaining in work-in-process.

[145] Gleim #: 5.1.1 -- Source: CMA 1273 4-1

- Answer (A) is incorrect because Neither variable nor absorption costing includes administrative costs in inventory.
- Answer (B) is incorrect because The cost of a unit of product changing owing to a change in the number of units manufactured is a characteristic of absorption costing systems.
- Answer (C) is correct. In a variable costing system, only the variable costs are recorded as product costs. All fixed costs are expensed in the period incurred. Because changes in the relationship between production levels and sales levels do not cause changes in the amount of fixed manufacturing cost expensed, profits more directly follow the trends in sales.
- Answer (D) is incorrect because Idle facility variation is a characteristic of absorption costing systems.
Answer (A) is incorrect because Additional processing costs will have no more effect on the allocation of joint costs based on physical quantities than any other base.

Answer (B) is incorrect because The purpose of allocating joint costs, under any method, is to separate such costs on a unit basis.

Answer (C) is correct. Joint costs are most often assigned on the basis of relative sales values or net realizable values. Basing allocations on physical quantities, such as pounds, gallons, etc., is usually not desirable because the costs assigned may have no relationship to value. When large items have low selling prices and small items have high selling prices, the large items might always sell at a loss when physical quantities are used to allocate joint costs.

Answer (D) is incorrect because Physical quantities are usually easy to measure.

Answer (A) is incorrect because Actual fixed costs should not vary greatly from budgeted fixed costs for the relevant range.

Answer (B) is correct. The relevant range is the range of activity over which unit variable costs and total fixed costs are constant. The incremental cost of one additional unit of production will be equal to the variable cost.

Answer (C) is incorrect because The relevant range can change whenever production activity changes; the relevant range is merely an assumption used for budgeting and control purposes.

Answer (D) is incorrect because Variable costs will change in total, but unit variable costs will be constant.

Answer (A) is correct. The direct method allocates service department costs directly to the producing departments without recognition of services provided among the service departments. Hence, no service cost is allocated to the Tool Department because it is a service department.

Answer (B) is incorrect because The direct method does not recognize any allocation between or among service departments; only production departments receive cost allocations.

Answer (C) is incorrect because The direct method does not recognize any allocation between or among service departments; only production departments receive cost allocations.

Answer (D) is incorrect because The direct method does not recognize any allocation between or among service departments; only production departments receive cost allocations.
Answer (A) is incorrect because Normal capacity may be lower than the equipment is capable of with proper maintenance and attention to efficiency.

Answer (B) is incorrect because Using maximum capacity assumes no downtime, an unrealistic assumption in any case.

Answer (C) is incorrect because Master-budget (expected) capacity cannot be determined until the application base is selected.

Answer (D) is correct. Practical capacity is based on realistic, attainable levels of production and input efficiency and is the most appropriate denominator level to use in selecting an overhead application rate.

Answer (A) is incorrect because The variable cost per unit and the total fixed costs will remain constant if the activity level increases within the relevant range.

Answer (B) is incorrect because The variable cost per unit and the total fixed costs will remain constant if the activity level increases within the relevant range.

Answer (C) is incorrect because The variable cost per unit and the total fixed costs will remain constant if the activity level increases within the relevant range.

Answer (D) is correct. Total variable cost changes when changes in the activity level occur within the relevant range. The cost per unit for a variable cost is constant for all activity levels within the relevant range. Thus, if the activity volume increases within the relevant range, total variable costs will increase. A fixed cost does not change when volume changes occur in the activity level within the relevant range. If the activity volume increases within the relevant range, total fixed costs will remain unchanged.
Answer (A) is incorrect because the amount of $14,200 results from using the variable direct costing method and treating fixed selling and administrative costs as variable.

Answer (B) is correct. Weisman’s absorption-basis operating income can be calculated as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Units</th>
<th>Price</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>900</td>
<td>$100</td>
<td>$90,000</td>
</tr>
<tr>
<td>Beginning inventory</td>
<td>0</td>
<td></td>
<td>$0</td>
</tr>
<tr>
<td>Variable production costs</td>
<td>1,000</td>
<td>$60</td>
<td>60,000</td>
</tr>
<tr>
<td>Fixed production costs</td>
<td>1,000</td>
<td>$5</td>
<td>5,000</td>
</tr>
<tr>
<td>Goods available for sale</td>
<td></td>
<td></td>
<td>$65,000</td>
</tr>
<tr>
<td>Less: ending inventory</td>
<td>100</td>
<td>$65</td>
<td>(6,500)</td>
</tr>
<tr>
<td>Absorption cost of goods sold</td>
<td></td>
<td></td>
<td>(58,500)</td>
</tr>
<tr>
<td>Gross margin</td>
<td></td>
<td></td>
<td>$31,500</td>
</tr>
<tr>
<td>Variable S&amp;A expenses</td>
<td>900</td>
<td>$12</td>
<td>(10,800)</td>
</tr>
<tr>
<td>Fixed S&amp;A expenses</td>
<td>900</td>
<td>$6</td>
<td>(5,400)</td>
</tr>
<tr>
<td>Operating income</td>
<td></td>
<td></td>
<td>$15,300</td>
</tr>
</tbody>
</table>

Answer (C) is incorrect because the amount of $15,840 results from capitalizing 10% of fixed selling and administrative costs as inventory.

Answer (D) is incorrect because the amount of $13,600 results from using variable direct costing and using 1,000 units rather than 900 for variable selling and administrative costs.

Answer (A) is incorrect because the costs of production departments are not allocated.

Answer (B) is incorrect because the costs of production departments are not allocated.

Answer (C) is correct. The reciprocal method is the most complex and the most theoretically sound of the three service department allocation methods. The reciprocal method recognizes services rendered by all service departments to each other as well as to the production departments.

Answer (D) is incorrect because under the reciprocal method, the costs of support departments are allocated to both production departments and other support departments.
**[153] Gleim #: 4.2.12 -- Source: Publisher**

- Answer (A) is incorrect because this number of units is based on the equivalent units for conversion costs calculated under the FIFO method.

- Answer (B) is correct. The equivalent units for transferred-in costs are calculated in the same way as those for materials added at the beginning of the process. The equivalent-unit calculation under the weighted-average method is:

<table>
<thead>
<tr>
<th>Description</th>
<th>Units</th>
<th>Percentage</th>
<th>Equivalent Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning WIP</td>
<td>10,000 units</td>
<td>100%</td>
<td>10,000</td>
</tr>
<tr>
<td>Started and completed</td>
<td>75,000 units</td>
<td>100%</td>
<td>75,000</td>
</tr>
<tr>
<td>Ending WIP</td>
<td>5,000 units</td>
<td>100%</td>
<td>5,000</td>
</tr>
</tbody>
</table>

  Weighted-average EUP for transferred-in costs = 90,000

- Answer (C) is incorrect because this number of units is based on the FIFO method.

- Answer (D) is incorrect because this number of units is the amount started and completed during the month; it ignores the impact of inventories.

**[154] Gleim #: 3.1.16 -- Source: Publisher**

- Answer (A) is incorrect because the amount of $170,000 subtracts the increase in direct materials inventory.

- Answer (B) is correct. Direct materials costs are the costs of new materials included in finished goods that can be feasibly traced to those goods. The beginning direct materials inventory, plus the direct materials purchases, minus ending direct materials inventory equals the direct materials cost. Because the direct materials inventory increased during the month, the increase can be added to the direct materials used to determine the amount of purchases. Thus, the direct materials purchases for the month were $230,000 ($200,000 + $30,000).

- Answer (C) is incorrect because the amount of $30,000 represents the increase in June’s inventory and does not include the $200,000 used in production.

- Answer (D) is incorrect because the amount of $200,000 excludes the increase in direct materials inventory.
[155] Gleim #: 3.3.87 -- Source: CIA 596 III-95

- Answer (A) is incorrect because The amount of $267,800 assumes the error rate will be reduced to 0%.
- Answer (B) is correct. The assumption is that a third of the costs can be eliminated if the error rate is cut by a third. Moreover, the study covered only a 6-month period, but annual savings are requested. Thus, the savings for 6 months equals 33,000 invoices × $110 per invoice × $61,300 ([(.03 – .02)] + ($75,000 ÷ 3) lost contribution margins), and the projected annual savings is $122,600 (2 x $61,300).
- Answer (C) is incorrect because The savings for 6 months is $61,300.
- Answer (D) is incorrect because The amount of $222,600 assumes the full amount of lost contribution margins can be saved.

[156] Gleim #: 6.4.46 -- Source: Publisher

- Answer (A) is incorrect because Identifying options is a step preliminary to predicting total industry capacity and firms’ market shares.
- Answer (B) is incorrect because Forecasting long-term demand, input costs, and technology developments is a step preliminary to predicting total industry capacity and firms’ market shares.
- Answer (C) is correct. Whether to expand capacity is a major strategic decision because of the capital required, the difficulty of forming accurate expectations, and the long time frame of the lead times and the commitment. The key forecasting problems are long-term demand and behavior of competitors. The key strategic issue is avoidance of industry overcapacity. Undercapacity in a profitable industry tends to be a short-term issue. Profits ordinarily lure additional investors. Overcapacity tends to be a long-term problem because firms are more likely to compete intensely rather than reverse their expansion.
- Answer (D) is incorrect because Analyzing the behavior of competitors is a step preliminary to predicting total industry capacity and firms’ market shares.
Answer (A) is incorrect because Greater setup costs are usually charged to low-volume products under ABC.

Answer (B) is correct. ABC differs from traditional product costing because it uses multiple allocation bases and therefore allocates overhead more accurately. The result is that ABC often charges low-volume products with more overhead than a traditional system. For example, the cost of machine setup may be the same for production runs of widely varying sizes. This relationship is reflected in an ABC system that allocates setup costs on the basis of the number of setups. However, a traditional system using an allocation base such as machine hours may underallocate setup costs to low-volume products. Many companies adopting ABC have found that they have been losing money on low-volume products because costs were actually higher than originally thought.

Answer (C) is incorrect because Low-volume products are usually charged with greater unit costs under ABC.

Answer (D) is incorrect because Setup costs will not be equalized unless setup time is equal for all products.

Answer (A) is correct. Total joint production costs incurred were $9,000,000 ($4,000,000 + $2,000,000 + $3,000,000). The total physical output was 660,000 barrels (300,000 barrels of Grade One + 240,000 barrels of Grade Two + 120,000 barrels of Grade Three). Thus, on a physical output basis, Grade Two should be allocated $3,273,000 \([(240,000 ÷ 660,000) \times 9,000,000]\).

Answer (B) is incorrect because The amount of $1,636,000 is the amount assigned to Grade Three.

Answer (C) is incorrect because The amount of $3,375,000 is based on the physical quantity of units sold, not units produced.

Answer (D) is incorrect because The amount of $3,512,000 is the amount assigned to Grade Two if the relative sales value method is used.
[159] Gleim #: 4.2.44 -- Source: Publisher

- Answer (A) is incorrect because if the cost of goods started last period and completed this period and the cost of goods started and completed this period are kept separate, separate layers will continue to multiply as the units of product are passed through additional WIP accounts. Thus, these costs are combined before transfer to the next department.

- Answer (B) is incorrect because if the cost of goods started last period and completed this period and the cost of goods started and completed this period are kept separate, separate layers will continue to multiply as the units of product are passed through additional WIP accounts. Thus, these costs are combined before transfer to the next department.

- Answer (C) is incorrect because under FIFO, the goods that were started last period and completed this period are deemed to be completed first and transferred first.

- Answer (D) is correct. Under FIFO, goods started last period and completed this period are differentiated from goods started and completed this period. The goods started last period but completed this period include the costs from last period as well as this period’s costs to complete, whereas goods started and completed this period only include current costs. In the weighted-average method, the costs of the prior and current periods are averaged. When the goods are transferred to the next department or to finished goods under FIFO, however, they are considered transferred out at one average cost so that a multitude of layers of inventory is not created. This procedure is consistent with the basic concept of process costing.

[160] Gleim #: 4.3.63 -- Source: Publisher

- Answer (A) is incorrect because product-level costs relate to particular products (or services).

- Answer (B) is incorrect because batch-level costs relate to particular products (or services).

- Answer (C) is incorrect because unit-level costs relate to particular products (or services).

- Answer (D) is correct. A difficulty in applying ABC is that, although the first three levels of activities pertain to specific products or services, facility-level activities do not. Thus, facility-level costs are not accurately assignable to products. The theoretically sound solution may be to treat these costs as period costs. Nevertheless, organizations that apply ABC ordinarily assign them to products to obtain a full absorption cost suitable for external financial reporting in accordance with GAAP. However, for internal purposes, facility-level costs should be treated as period costs to avoid distorting decisions about cost efficiency, pricing, and profitability.
Answer (A) is incorrect because the amount of $503,000 incorporates the change in finished goods inventories.

Answer (B) is incorrect because the amount of $502,000 is based on actual overhead.

Answer (C) is incorrect because the amount of $363,000 excludes overhead but includes the change in finished goods inventory.

Answer (D) is correct. Total manufacturing cost is the sum of direct materials cost, direct labor cost, and manufacturing overhead.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning materials</td>
<td>$67,000</td>
</tr>
<tr>
<td>Add: purchases</td>
<td>163,000</td>
</tr>
<tr>
<td>Add: transportation in</td>
<td>4,000</td>
</tr>
<tr>
<td>Less: purchase returns</td>
<td>(2,000)</td>
</tr>
<tr>
<td>Materials available</td>
<td>$232,000</td>
</tr>
<tr>
<td>Less: ending materials</td>
<td>(62,000)</td>
</tr>
<tr>
<td>Materials used in production</td>
<td>$170,000</td>
</tr>
<tr>
<td>Direct materials</td>
<td>$170,000</td>
</tr>
<tr>
<td>Direct labor</td>
<td>200,000</td>
</tr>
<tr>
<td>Manufacturing overhead (DL × 70%)</td>
<td>140,000</td>
</tr>
<tr>
<td>Total manufacturing costs</td>
<td>$510,000</td>
</tr>
</tbody>
</table>

Answer (A) is correct. Wagner’s application rate for overhead is $2.50 per machine hour ($250,000 budgeted total ÷ 100,000 estimated machine hours), and each unit of output is estimated to require 2 machine hours (100,000 estimated machine hours ÷ 50,000 units budgeted output). Under a standard cost system, the amount of overhead applied during the year was therefore $240,000 (48,000 units actual output × $2.50 per machine hour application rate × 2 machine hours standard per unit).

Answer (B) is incorrect because the amount of $252,000 was the actual overhead incurred.

Answer (C) is incorrect because the amount of $242,500 results from improperly multiplying by 48,500 units of product (half the number of machine hours).

Answer (D) is incorrect because the amount of $250,000 results from improperly multiplying by the 50,000 budgeted units of product instead of by the 48,000 actual units.
[163] Gleim #: 4.1.1 -- Source: CMA 696 3-29

- Answer (A) is incorrect because the amount of $6.30 includes selling costs.
- Answer (B) is incorrect because the amount of $6.50 includes selling and administrative expenses.
- Answer (C) is correct. Cost of goods sold is based on the manufacturing costs incurred in production but does not include selling or general and administrative expenses. Manufacturing costs equal $38,500 [$13,700 DM + $4,800 DL + (800 hours × $25) OH]. Thus, per-unit cost is $5.50 ($38,500 ÷ 7,000 units).
- Answer (D) is incorrect because the amount of $5.70 includes administrative expenses.

[164] Gleim #: 4.2.39 -- Source: CMA 695 3-6

- Answer (A) is correct. The weighted-average method averages the work done in the prior period with the work done in the current period. There are two layers of units to analyze: those completed during the period, and those still in ending inventory. The units completed totaled 92,000. The 24,000 ending units are 90% complete as to materials, so EUP equal 21,600. Hence, total EUP for materials are 113,600 (92,000 + 21,600). The total materials costs incurred during the period and accumulated in beginning work-in-process is $522,560 ($468,000 + $54,560). Thus, weighted-average unit cost is $4.60 ($522,560 ÷ 113,600 EUP).
- Answer (B) is incorrect because the amount of $4.12 equals materials costs for May divided by weighted-average EUP.
- Answer (C) is incorrect because the amount of $4.50 is the equivalent unit cost based on the FIFO method.
- Answer (D) is incorrect because the amount of $5.02 is based on a FIFO calculation of equivalent units and a weighted-average calculation of costs.

[165] Gleim #: 5.4.137 -- Source: CMA 0408 2-160

- Answer (A) is incorrect because Personnel would be allocated to Information Systems.
- Answer (B) is incorrect because Personnel would be allocated to both Assembly and Machining.
- Answer (C) is incorrect because Personnel would be allocated to Assembly.
- Answer (D) is correct. The step or step-down method allocates some of the costs of services rendered by service departments to each other. The step method derives its name from the procedure involved: The service departments are allocated in order, from the one that provides the most service to other service departments down to the one that provides the least. Since Personnel provides more services than Information Systems, Personnel will be allocated to Information Systems, but not the other way around.
Answer (A) is incorrect because Prime costs are direct costs, and variable administrative costs are period, not manufacturing, costs. The question inquires about indirect manufacturing costs.

Answer (B) is incorrect because Different allocation methods are usually applied to variable costs and fixed costs.

Answer (C) is incorrect because Establishing a separate pool for each assembly line worker to account for wages is not necessary under most cost allocation schemes.

Answer (D) is correct. Cost pools are accounts in which a variety of similar costs are accumulated prior to allocation to cost objectives. The overhead account is a cost pool into which various types of overhead are accumulated prior to their allocation. Indirect manufacturing costs are an element of overhead allocated to a cost pool. Ordinarily, different allocation methods are applied to variable and fixed costs, thus requiring them to be separated. Establishing separate pools allows the determination of dual overhead rates. As a result, the assessment of capacity costs, the charging of appropriate rates to user departments, and the isolation of variances are facilitated.

Answer (A) is incorrect because The amounts of $50, $25, $65, and $55 result from subtracting full manufacturing costs, rather than supervariable costs, from selling price.

Answer (B) is incorrect because The amounts of $150, $115, $260, and $265 result from subtracting conversion costs, rather than supervariable costs, from selling price.

Answer (C) is incorrect because The amounts of $80, $60, $110, and $120 result from subtracting prime costs, rather than supervariable costs, from selling price.

Answer (D) is correct. A theory of constraints (TOC) analysis proceeds from the assumption that only direct materials costs are truly variable in the short run. This is called throughput, or supervariable, costing. The relevant margin amount is throughput margin, which equals price minus direct materials. Thus, margin figures of interest to Bombastic Bathrooms are $150 for brass ($250 – $100), $130 for chrome ($220 – $90), $180 for nickel ($375 – $195), and $190 for aluminum ($400 – $210).
Answer (A) is incorrect because If a service is necessary, having to bear a realistic cost will not be a barrier.

- Answer (B) is correct. When a user is forced to bear a realistic cost for a service, the user is less likely to use an excessive amount of that service.

- Answer (C) is incorrect because Having to bear maintenance costs would be an incentive to replace outdated and inefficient systems.

- Answer (D) is incorrect because When a user is forced to bear a cost for a service, the user has an incentive to control costs.

---

Answer (A) is incorrect because The amount of $(120,000) considers only the production costs of the good units sold. Moreover, it includes fixed overhead, a cost that is not affected by the choice of materials.

- Answer (B) is incorrect because The amount of $120,000 considers only the variable costs of the good units produced.

- Answer (C) is correct. If a different direct material is used, incremental revenue will be $1,500,000 \( (300,000 \text{ units} \times 12\% \text{ defect rate} - 2\% \times 50) \). Incremental cost will be $750,000 \( (300,000 \text{ units} \times 2.50) \). Thus, the net benefit will be $750,000 \( ($1,500,000 - $750,000).\)

- Answer (D) is incorrect because The amount of $1,425,000 includes only the incremental direct materials cost of the increase in the number of good units produced.

---

Answer (A) is correct. The categories of quality costs include conformance costs (prevention and appraisal) and nonconformance costs (internal failure and external failure). Appraisal costs embrace such activities as statistical quality control programs, inspection, and testing. Thus, the cost of detecting nonconforming products is an appraisal cost.

- Answer (B) is incorrect because Internal failure costs are incurred when detection of defective products occurs before shipment, including scrap, rework, tooling changes, and downtime.

- Answer (C) is incorrect because External failure costs are incurred after shipment, including the costs associated with warranties, product liability, and loss of customer goodwill.

- Answer (D) is incorrect because Prevention attempts to avoid defective output, e.g., by employee training, review of equipment design, preventive maintenance, and evaluation of suppliers.
Answer (A) is correct. Machining uses 75% \((21,000 \div 28,000)\) of the total quality control hours and 60% \((18,000 \div 30,000)\) of the total maintenance hours budgeted for the production departments. Under the direct method, it will therefore be allocated $262,500 \((350,000 \times 75\%)\) of quality control costs and $120,000 \((200,000 \times 60\%)\) of maintenance costs. In addition, Machining is expected to incur another $400,000 of overhead costs. Thus, the total estimated Machining overhead is $782,500 \((262,500 + 120,000 + 400,000)\), and the overhead cost per machine hour is $15.65 \((782,500 \div 50,000\) hours).

Answer (B) is incorrect because The overhead cost per machine hour is $15.65.

Answer (C) is incorrect because The overhead cost per machine hour is $15.65.

Answer (D) is incorrect because The overhead cost per machine hour is $15.65.

Answer (A) is incorrect because Budgetary accountants are involved in the setting of standard costs.

Answer (B) is correct. A standard cost is an estimate of what a cost should be under normal operating conditions based on studies by accountants and engineers. In addition, line management is usually involved in the setting of standard costs as are quality control personnel. Top management would not be involved because cost estimation is a lower level operating activity. Participation by affected employees in all control systems permits all concerned to understand both performance levels desired and the measurement criteria being applied.

Answer (C) is incorrect because Quality control personnel are involved in the setting of standard costs.

Answer (D) is incorrect because Industrial engineers are involved in the setting of standard costs.
Answer (A) is incorrect because the amount of $6,800 results from multiplying the difference in beginning and ending inventory by all fixed costs rather than by only fixed manufacturing cost; also, if there is a balance in either beginning or ending inventory, operating income will be lower under absorption costing than under variable costing.

Answer (B) is incorrect because the amount of $6,800 results from multiplying the difference in beginning and ending inventory by all fixed costs rather than by only fixed manufacturing cost.

Answer (C) is incorrect because if there is a balance in either beginning or ending inventory, operating income will be lower under absorption costing than under variable costing.

Answer (D) is correct. The difference in operating income between the absorption-costing basis and the variable-costing basis can be calculated as the difference between the ending inventory in units and the beginning inventory in units (6,000 – 5,200 = 800), multiplied by the budgeted fixed manufacturing cost per unit ($3), for a total difference of $2,400. Since absorption costing treats fixed overhead as a period cost and variable costing embeds it in ending inventory, operating income under absorption costing will be lower.

Answer (A) is incorrect because the number of 214,400 units assumes that BWIP was 40% complete.

Answer (B) is incorrect because the number of 195,200 units omits the 12,800 equivalent units of work on BWIP during the current period.

Answer (C) is incorrect because the number of 227,200 units is based on the weighted-average method.

Answer (D) is correct. Under the FIFO method, equivalent units are determined based on work performed during the current period. They include work performed to complete BWIP, work on units started and completed during the period, and work done on EWIP. Thus, total FIFO equivalent units of materials are:

\[
\begin{align*}
\text{BWIP} & : 32,000 \text{ units} \times 40\% = 12,800 \\
\text{Started and completed} & : (184,000 - 32,000 \text{ in BWIP}) = 152,000 \text{ units} \times 100\% = 152,000 \\
\text{EWIP} & : 48,000 \text{ units} \times 90\% = 43,200 \\
\text{Total equivalent units} & = 208,000
\end{align*}
\]
[175] Gleim #: 6.4.45 -- Source: Publisher

- Answer (A) is correct. According to SMA 4Y, *Measuring the Cost of Capacity*, maximizing the value created within an organization starts with understanding the nature and capabilities of all of the company’s resources. Capacity is defined from several different perspectives. Managing capacity cost starts when a product or process is first envisioned. It continues through the subsequent disposal of resources downstream. Effective capacity cost management requires supporting effective matching of a firm’s resources with current and future market opportunities.

- Answer (B) is incorrect because Effective capacity management minimizes required future investments.

- Answer (C) is incorrect because Effective capacity management maximizes value delivered to customers.

- Answer (D) is incorrect because Effective capacity management minimizes waste in the short, intermediate, and long run.

[176] Gleim #: 5.1.44 -- Source: CMA 0408 2-112

- Answer (A) is incorrect because The amount of $15,300 is absorption-basis operating income.

- Answer (B) is incorrect because The amount of $14,200 results from improperly treating fixed S&A expenses as variable.

- Answer (C) is correct. Weisman’s variable-basis operating income can be calculated as follows:

<table>
<thead>
<tr>
<th>Sales</th>
<th>900 units @ $100 =</th>
<th>$90,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning inventory</td>
<td>0 units @ $60 =</td>
<td>0</td>
</tr>
<tr>
<td>Variable production costs</td>
<td>1,000 units @ $60 =</td>
<td>60,000</td>
</tr>
<tr>
<td>Goods available for sale</td>
<td></td>
<td>60,000</td>
</tr>
<tr>
<td>Less: ending inventory</td>
<td>100 units @ $60 =</td>
<td>(6,000)</td>
</tr>
<tr>
<td>Variable cost of goods sold</td>
<td></td>
<td>(54,000)</td>
</tr>
<tr>
<td>Variable S&amp;A expenses</td>
<td>900 units @ $12 =</td>
<td>(10,800)</td>
</tr>
<tr>
<td>Contribution margin</td>
<td></td>
<td>$25,200</td>
</tr>
<tr>
<td>Fixed production costs</td>
<td>1,000 units @ $5 =</td>
<td>(5,000)</td>
</tr>
<tr>
<td>Fixed S&amp;A expenses</td>
<td>900 units @ $6 =</td>
<td>(5,400)</td>
</tr>
<tr>
<td>Operating income</td>
<td></td>
<td>$14,800</td>
</tr>
</tbody>
</table>

- Answer (D) is incorrect because The amount of $13,600 results from improperly basing variable selling costs on 1,000 units instead of the 900 units actually sold.
[177] Gleim #: 6.1.8 -- Source: Publisher

- Answer (A) is correct. Just-in-time (JIT) manufacturing is a pull system; items are pulled through production by current demand, not pushed through by anticipated demand as in traditional manufacturing setups.

- Answer (B) is incorrect because Under the JIT philosophy, high inventory levels often mask production problems.

- Answer (C) is incorrect because Under JIT, central warehouses are often eliminated.

- Answer (D) is incorrect because Attempting to reduce inventory to a consistently low level is a core objective of JIT.

[178] Gleim #: 5.3.89 -- Source: CMA 0205 2-21

- Answer (A) is correct. Given the amounts involved, $133,000 is material; thus, over- or underapplied overhead should be allocated to all work-in-process, finished goods, and cost of goods sold. The proportion of the total of these three accounts represented by cost of goods sold is 73.68% \([1,120,000 ÷ (128,000 + 272,000 + 1,120,000)]\). The amount of underapplied overhead assigned to cost of goods sold is thus $98,000 \((133,000 × 73.68\%)\), making the total reported amount of cost of goods sold $1,218,000 \($1,120,000 + 98,000\)\).

- Answer (B) is incorrect because The amount of $1,253,000 results from improperly allocating the entire amount of underapplied overhead to cost of goods sold.

- Answer (C) is incorrect because The amount of $1,213,100 improperly includes raw materials in the allocation base for underapplied overhead.

- Answer (D) is incorrect because The amount of $987,000 results from improperly subtracting the entire amount of underapplied overhead from the balance of cost of goods sold instead of allocating it across three inventory accounts.
Answer (A) is correct. The high-low method can be used to determine the fixed and variable cost components of a mixed cost. The variable cost is found by dividing the change in total cost (TC) by the change in activity, e.g., DLH. The fixed cost is found by substituting the variable cost into either of the activity/cost functions. Alternatively, the fixed cost is the cost given a zero level of activity.

\[
\begin{align*}
\text{Change in TC} & = 25 \\
\text{Change in DLH} & = 3,000 = \$0.00833
\end{align*}
\]

\[
\begin{align*}
\text{FC} & = \text{TC} - \text{VC} \\
\text{FC} & = \$585 - (31,000 \times \$0.00833) = \$327 \\
\text{FC} & = \$610 - (34,000 \times \$0.00833) = \$327
\end{align*}
\]

- Answer (B) is incorrect because Variable cost for February and March equals $541.
- Answer (C) is incorrect because Variable cost for February equals $258.
- Answer (D) is incorrect because Variable cost for January or March equals $283.

Answer (A) is incorrect because Direct materials purchased plus direct labor equals $489,000.

- Answer (B) is incorrect because Direct materials used equals $201,000.
- Answer (C) is correct. Prime cost is defined as those costs directly traceable to specific units of production, specifically direct labor and direct materials. According to the following statement of cost of goods manufactured, total prime cost was $501,000.

\[
\begin{align*}
\text{Beginning direct materials inventory} & = \$134,000 \\
\text{Add: purchases} & = 189,000 \\
\text{Less: purchase returns} & = (1,000) \\
\text{Add: transportation-in} & = 3,000 \\
\text{Total direct materials available} & = \$325,000 \\
\text{Less: ending direct materials inventory} & = (124,000) \\
\text{Direct materials used} & = \$201,000 \\
\text{Direct labor} & = 300,000 \\
\text{Total prime costs} & = \$501,000
\end{align*}
\]

- Answer (D) is incorrect because Direct materials used without adjustments for purchase returns and transportation-in equals $199,000.
Answer (A) is incorrect because the amount of $18,400 includes only $8,400 for overhead (based on 100% of direct labor and 20% of direct materials).

Answer (B) is incorrect because the amount of $18,000 includes only $8,000 for overhead (based on 100% of direct labor).

Answer (C) is incorrect because the total cost is $34,780.

Answer (D) is correct. The total cost is $34,780, calculated as follows:

| Direct labor | $8,000 |
| Direct materials | 2,000 |
| Manufacturing overhead: |
| $8,000 of direct labor × 100% | = | $8,000 |
| $2,000 of direct materials × 20% | = | 400 |
| 140 machine hours × $117 | = | 16,380 |
| Total charged to production | = | $34,780 |

Answer (A) is incorrect because allocations are not needed for variable costing, which concerns direct, not indirect, costs.

Answer (B) is incorrect because cost allocation is not necessary for cash budgeting and controlling expenditures.

Answer (C) is incorrect because a revenue center is evaluated on the basis of revenue generated, without regard to costs.

Answer (D) is correct. Cost allocation is the process of assigning and reassigning costs to cost objects. It is used for those costs that cannot be directly associated with a specific cost object. Cost allocation is often used for purposes of measuring income and assets for external reporting purposes. Cost allocation is less meaningful for internal purposes because responsibility accounting systems emphasize controllability, a process often ignored in cost allocation.
Answer (A) is correct. When determining unit costs under weighted-average, the numerator consists both of costs that were added in prior periods and those added during the current period. Likewise, the denominator consists both of units completed during the period and the equivalent units of production (EUP) of those remaining in ending work-in-process. Since materials are added at the beginning of the process, both production populations are 100% complete with respect to materials costs:

EUP calculations for material costs:

<table>
<thead>
<tr>
<th>Population</th>
<th>Quantity</th>
<th>Percentage</th>
<th>Equivalent Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production completed</td>
<td>60,000</td>
<td>100%</td>
<td>60,000</td>
</tr>
<tr>
<td>Work-in-process</td>
<td>20,000</td>
<td>100%</td>
<td>20,000</td>
</tr>
</tbody>
</table>

EUP for conversion costs is calculated as follows:

<table>
<thead>
<tr>
<th>Population</th>
<th>Quantity</th>
<th>Percentage</th>
<th>Equivalent Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production completed</td>
<td>60,000</td>
<td>100%</td>
<td>60,000</td>
</tr>
<tr>
<td>Work-in-process</td>
<td>20,000</td>
<td>25%</td>
<td>5,000</td>
</tr>
</tbody>
</table>

For October, therefore, Oster’s unit cost calculations are as follows:

Unit cost calculations for materials:

\[
\frac{$40,000 + $700,000}{60,000 + 20,000} = $9.25 \text{ per EU}
\]

Unit cost calculations for conversion:

\[
\frac{$32,500 + $617,500}{60,000 + 5,000} = $10.00 \text{ per EU}
\]

The value of production completed in October is therefore \((60,000 \text{ units} \times $9.25) + (60,000 \text{ units} \times $10.00) = $1,155,000\), and the value of ending work-in-process is \((20,000 \text{ units} \times $9.25) + (5,000 \text{ units} \times $10.00) = $235,000\).

- Answer (B) is incorrect because this combination does not include beginning work-in-process costs for calculation of EUP.
- Answer (C) is incorrect because this combination uses the percentage of ending work-in-process completed for the cost per equivalent unit calculation of material costs. Materials were added at the beginning of the process, so they were 100% complete as to materials.
- Answer (D) is incorrect because this combination is based on using total work-in-process units rather than the 5,000 equivalent units.
[184] Gleim #: 3.4.120 -- Source: CMA 1295 3-28

- Answer (A) is incorrect because Gross operating profit is the net result after deducting all manufacturing costs from sales, including both fixed and variable costs.
- Answer (B) is correct. The contribution margin is calculated by subtracting all variable costs from sales revenue. It represents the portion of sales that is available for covering fixed costs and profit.
- Answer (C) is incorrect because The breakeven point is the level of sales that equals the sum of fixed and variable costs.
- Answer (D) is incorrect because Net profit is the remainder after deducting from revenue all costs, both fixed and variable.

[185] Gleim #: 4.2.58 -- Source: CMA 0408 2-135

- Answer (A) is incorrect because The figure 70,000 results from accounting for only the units started during the month.
- Answer (B) is correct. San Jose had 30,000 units in beginning work-in-process inventory and started 70,000 during the month, for a total of 100,000 units to be accounted for. Since all materials are introduced at the start of manufacturing, all 100,000 units are 100% complete with respect to materials costs. Equivalent units of production for conversion costs can be determined as follows:

<table>
<thead>
<tr>
<th></th>
<th>Units</th>
<th>Percentage</th>
<th>Equivalent Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning WIP</td>
<td>30,000</td>
<td>100%</td>
<td>30,000</td>
</tr>
<tr>
<td>Started and completed</td>
<td>46,000</td>
<td>100%</td>
<td>46,000</td>
</tr>
<tr>
<td>Ending WIP</td>
<td>24,000</td>
<td>25%</td>
<td>6,000</td>
</tr>
<tr>
<td>Totals</td>
<td>100,000</td>
<td></td>
<td>82,000</td>
</tr>
</tbody>
</table>

- Answer (C) is incorrect because The figure 82,000 results from improperly applying the 25% completion percentage to materials as well as conversion.
- Answer (D) is incorrect because The figure 70,000 for conversion results from accounting for only the units started during the month and failing to weight the units in ending work-in-process inventory.
Answer (A) is correct. The calculation of the cost of goods sold requires the preparation of a partial income statement:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning finished goods inventory</td>
<td>$125,000</td>
</tr>
<tr>
<td>Add: cost of goods manufactured</td>
<td>665,000</td>
</tr>
<tr>
<td>Goods available for sale</td>
<td>$790,000</td>
</tr>
<tr>
<td>Less: ending finished goods inventory</td>
<td>(117,000)</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>$673,000</td>
</tr>
</tbody>
</table>

Answer (B) is incorrect because Prime cost, plus overhead applied, plus (instead of minus) the change in the work-in-process equals $697,000.

Answer (C) is incorrect because Prime cost plus overhead applied equals $681,000.

Answer (D) is incorrect because Adding ending inventory and subtracting beginning inventory in the CGS calculation results in $657,000.

Answer (A) is incorrect because Period costs are those costs that are expensed as incurred rather than capitalized as part of the cost of inventory.

Answer (B) is incorrect because Direct materials are those tangible inputs to the manufacturing process that can practically be traced to the product.

Answer (C) is incorrect because Direct labor is the cost of human labor that can practically be traced to the product.

Answer (D) is correct. Those tangible inputs to the manufacturing process that cannot practically be traced to the product, such as wood screws and glue used in the production of school desks and chairs, are referred to as indirect costs. Indirect costs are one of the three components of manufacturing overhead, the other two being indirect labor and factory operating costs.
Gleim #: 6.1.2 -- Source: CPA 593 T-44

- Answer (A) is correct. Nonvalue-adding activities are those that do not add to customer value or satisfy an organizational need. Inventory activities are inherently nonvalue-adding. Thus, a system, such as JIT, that promotes lean production and reduces inventory and its attendant procedures (storage, handling, etc.) also reduces nonvalue-adding activities.

- Answer (B) is incorrect because The number of deliveries is increased. Fewer goods are delivered at a time.

- Answer (C) is incorrect because The dependability, not number, of suppliers is increased.

- Answer (D) is incorrect because Standard delivery quality, not quantity, is increased.

Gleim #: 3.3.67 -- Source: CMA 678 4-11

- Answer (A) is incorrect because Costs required as a result of past decisions are committed costs.

- Answer (B) is incorrect because Costs which are likely to respond to the amount of attention devoted to them by a specified manager are controllable costs.

- Answer (C) is incorrect because Costs unaffected by managerial decisions are costs such as committed costs and depreciation that were determined by decisions of previous periods.

- Answer (D) is correct. Discretionary costs are those that are incurred in the current period at the “discretion” of management, and are not required to fill orders by customers.

Gleim #: 5.2.74 -- Source: CMA 0408 2-124

- Answer (A) is correct. If Xylo is processed further, the incremental sales revenue will be $6,000 [2,000 pounds × ($15 – $12)]. After subtracting the incremental costs, operating income will increase by $2,000 ($6,000 – $4,000).

- Answer (B) is incorrect because The amount of $26,000 is the sales revenue of Zinten, less the additional costs.

- Answer (C) is incorrect because The amount of $14,000 results from adding the additional costs of $4,000 rather than subtracting them and failing to answer the question about incremental income.

- Answer (D) is incorrect because The amount of $5,760 results from allocating the $4,000 rather than assigning it all to Zinten.
Answer (A) is incorrect because The amount of $260 results from including G&A expenses in factory overhead.

Answer (B) is incorrect because The amount of $120 results from improperly including direct labor costs in the allocation.

Answer (C) is incorrect because The amount of $28 results from improperly dividing the true overhead cost by the $5 per hour direct labor cost.

Answer (D) is correct. Direct labor hours budgeted for next year are 10,000 ($50,000 total ÷ $5 per hour). Factory overhead is applied at the rate of $7 per direct labor hour ($70,000 ÷ 10,000 hours). A job incurring 20 hours of direct labor will thus be charged with $140 of overhead ($7 per direct labor hour × 20 hours).

Answer (A) is incorrect because The number of units of production may have no logical relationship to overhead when several different products are made.

Answer (B) is correct. Allocating overhead on the basis of the number of units produced is usually not appropriate. Costs should be allocated on the basis of some plausible relationship between the cost object and the incurrence of the cost, preferably cause and effect. Overhead costs may be incurred regardless of the level of production. When multiple products are involved, the number of units of production may bear no relationship to the incurrence of the allocated cost. If overhead is correlated with machine hours but different products require different quantities of that input, the result may be an illogical allocation. However, if a firm manufactures only one product, this allocation method may be acceptable because all costs are to be charged to the single product.

Answer (C) is incorrect because A low level of direct labor costs means that fixed overhead is substantial, and an appropriate cost driver should be used to make the allocation.

Answer (D) is incorrect because The allocation should be made on the basis of the appropriate cost drivers without regard to the relationship between direct materials and labor costs.

Answer (A) is incorrect because Under a kanban system, a worker is authorized to take action upon being presented with a kanban; involving the production supervisor only slows down the process.

Answer (B) is incorrect because A purchase from a supplier is indicated by a vendor kanban.

Answer (C) is incorrect because Release of an item to a subsequent stage in production is initiated with a withdrawal kanban.

Answer (D) is correct. In a kanban inventory control system, a production kanban is an indication to a worker to begin producing the item referred to on the kanban.
[194] Gleim #: 5.2.57 -- Source: CIA 1194 III-47

- Answer (A) is incorrect because the amount of $390,000 is based on the physical units method of allocating the joint costs.
- Answer (B) is incorrect because the amount of $571,463 uses the sales value at split-off based on actual sales.
- Answer (C) is incorrect because the amount of $375,000 is the total cost of R.
- Answer (D) is correct. Total sales value at split-off is $800,000 \[2,500 \times 100 + 5,000 \times 80 + 7,500 \times 20\]. Product S accounts for 50% \(5,000 \times 80 = 400,000\) of the sales value and therefore $360,000 \($720,000 \times 50\%\) of the joint costs. The total cost of Product S is $510,000 \($360,000 allocated costs + $150,000 differential costs\).

[195] Gleim #: 6.5.56 -- Source: Publisher

- Answer (A) is incorrect because Product development time is a crucial factor in the competitive equation.
- Answer (B) is correct. The three common time measures for process analysis are product development time, breakeven time, and customer-response time. Process value time is not a meaningful term in this context.
- Answer (C) is incorrect because Breakeven time is a financial measure of product development, and thus is an appropriate time measure for process analysis.
- Answer (D) is incorrect because Customer-response time is one of the common time measures for process analysis.

[196] Gleim #: 5.4.114 -- Source: CMA 691 3-16

- Answer (A) is correct. Under the direct method, service department costs are allocated directly to the production departments, with no allocation to other service departments. The total budgeted hours of service by the Quality Control Department to the two production departments is 28,000 \(21,000 + 7,000\). Given that the Assembly Department is expected to use 25\% \(7,000 \div 28,000\) of the total hours budgeted for the production departments, it will absorb 25\% of total quality control costs \($350,000 \times 25\% = 87,500\). The total budgeted hours of service by the Maintenance Department to the production departments is 30,000 \(18,000 + 12,000\). The Assembly Department is expected to use 40\% \(12,000 \div 30,000\) of the total maintenance hours budgeted for the production departments. Thus, the Assembly Department will be allocated 40\% of the $200,000 of maintenance costs, or $80,000. The total service department costs allocated to the Assembly Department is $167,500 \($87,500 + $80,000\).
- Answer (B) is incorrect because the total of the service department costs allocated to the Assembly Department is $167,500.
- Answer (C) is incorrect because the total of the service department costs allocated to the Assembly Department is $167,500.
- Answer (D) is incorrect because the total of the service department costs allocated to the Assembly Department is $167,500.
Answer (A) is incorrect because the amount of $2,000 assumes that all the overhead is allocated to the wall mirrors.

Answer (B) is incorrect because the amount of $5,000 assumes overhead of $250,000.

Answer (C) is incorrect because the amount of $500 is the allocation based on the number of material moves.

Answer (D) is correct. If direct labor hours are used as the allocation base, the $50,000 of costs is allocated over 400 hours of direct labor. Multiplying the 25 units of each product times 200 hours results in 5,000 labor hours for each product, or a total of 10,000 hours. Dividing $50,000 by 10,000 hours results in a cost of $5 per direct labor hour. Multiplying 200 hours times $5 results in an allocation of $1,000 of overhead per unit of product.

Answer (A) is correct. Theory of constraints (TOC) has a short-term focus based on costs of materials and product mix; activity-based costing has a long-term focus which considers all product costs and is concerned with strategic pricing and profit planning.

Answer (B) is incorrect because Theory of constraints has a short-term focus.

Answer (C) is incorrect because Theory of constraints has a short-term focus.

Answer (D) is incorrect because Operation costing is a hybrid of job-order and process costing that is employed when a manufacturer’s products uses some similar processes and some custom processes. It cannot be classified as having a short- or long-term focus.

Answer (A) is incorrect because the labor rate of a competitor is a financial benchmark.

Answer (B) is incorrect because the cost per pound of a product at the company’s most efficient plant is a financial benchmark.

Answer (C) is correct. Benchmarking “involves continuously evaluating the principles of best-in-class organizations and adapting company processes to incorporate the best of these practices.” It “analyzes and measures the key outputs of a business process or function against the best and also identifies the underlying key actions and root causes that contribute to the performance difference” (SMA 4V). The percentage of orders delivered on time at the company’s most efficient plant is an example of an internal nonfinancial benchmark.

Answer (D) is incorrect because the cost of a training program is a financial benchmark.
[200] Gleim #: 6.5.53 -- Source: Publisher

- Answer (A) is incorrect because Product chain is not a meaningful term in this context.
- Answer (B) is incorrect because The value chain is a model for depicting the way in which every function in a company adds value to the final product.
- Answer (C) is correct. The supply chain usually encompasses more than one firm. Firms seeking to improve performance and reduce costs must analyze all phases of the supply chain as well as the value chain.
- Answer (D) is incorrect because Value process is not a meaningful term in this context.

[201] Gleim #: 3.4.123 -- Source: CMA 695 3-10

- Answer (A) is incorrect because MBO is a behavioral, communication-oriented, responsibility approach to employee self-direction. Although MBO can be used with standard costs, the two are not necessarily related.
- Answer (B) is incorrect because Rates of return relate to revenues as well as costs, but a standard costing system concerns costs only.
- Answer (C) is correct. A standard cost is an estimate of what a cost should be under normal operating conditions based on accounting and engineering studies. Comparing actual and standard costs permits an evaluation of the effectiveness of managerial performance. Because of the impact of fixed costs in most businesses, a standard costing system is usually not effective unless the company also has a flexible budgeting system. Flexible budgeting uses standard costs to prepare budgets for multiple activity levels.
- Answer (D) is incorrect because Participative management stresses multidirectional communication. It has no relationship to standard costs.

[202] Gleim #: 3.1.28 -- Source: CMA 678 4-6

- Answer (A) is incorrect because All costs associated with manufacturing other than direct labor costs and raw materials costs are overhead costs. Conversion costs consist of both direct labor and overhead.
- Answer (B) is incorrect because Raw materials costs and direct labor costs are prime costs.
- Answer (C) is correct. Conversion costs are the direct labor, indirect materials, and factory overhead incurred to convert raw materials and transferred-in goods in a cost center to finished goods.
- Answer (D) is incorrect because Manufacturing costs incurred to produce units of output are inventoriable (product) costs.
● Answer (A) is incorrect because The total quality control costs to be allocated equal $421,053.

● Answer (B) is correct. The reciprocal method involves mutual allocations of service costs among service departments. For this purpose, a system of simultaneous equations is necessary. The total costs for the Quality Control Department consist of $350,000 plus 25% (10,000 hours ÷ 40,000 hours) of maintenance costs. The total costs for the Maintenance Department equal $200,000 plus 20% (7,000 hours ÷ 35,000 hours) of quality control costs. These relationships can be expressed by the following equations:

\[
Q = 350,000 + .25M \\
M = 200,000 + .2Q
\]

To solve for Q, the second equation can be substituted into the first as follows:

\[
Q = 350,000 + .25(200,000 + .2Q) \\
= 350,000 + .50 + .05Q \\
.95Q = 400,000 \\
Q = 421,053
\]

● Answer (C) is incorrect because The total quality control costs to be allocated equal $421,053.

● Answer (D) is incorrect because The total quality control costs to be allocated equal $421,053.

[204] Gleim #: 3.1.11 -- Source: CMA 694 3-1

● Answer (A) is correct. A cost accounting system has numerous objectives, including product costing, assessing departmental efficiency, inventory valuation, income determination, and planning, evaluating, and controlling operations. Determining sales commissions is not an objective of a cost accounting system because such commissions are based on sales, not costs.

● Answer (B) is incorrect because Product costing is an objective of a cost accounting system.

● Answer (C) is incorrect because Department efficiency is an objective of a cost accounting system.

● Answer (D) is incorrect because Inventory valuation is an objective of a cost accounting system.
Answer (A) is incorrect because the amount of $140,000 is 40% of other traceable costs.

Answer (B) is incorrect because the amount of $176,000 assumes an allocation base of 50,000 square feet, the base that would be used under the step method if the costs of Building Operations are allocated first.

Answer (C) is incorrect because the amount of $160,000 assumes an allocation base of 55,000 square feet.

Answer (D) is correct. The direct method does not allocate service costs to other service departments. Hence, the allocation base is the square footage in the two production departments. Fabricating’s share is 40% (16,000 ÷ 40,000) of the total cost incurred by Building Operations, or $220,000 ($550,000 × 40%).

Answer (A) is incorrect because the overhead cost applied per direct labor hour will be $12.

Answer (B) is correct. With no allocation of service department costs, the only overhead applicable to the Assembly Department is the $300,000 budgeted for that department. Hence, the overhead cost applied per direct labor hour will be $12 ($300,000 budgeted overhead ÷ 25,000 hours).

Answer (C) is incorrect because the overhead cost applied per direct labor hour will be $12.

Answer (D) is incorrect because the overhead cost applied per direct labor hour will be $12.
Answer (A) is incorrect because Under the step-down method, some of the service department costs are allocated to the other service departments.

Answer (B) is incorrect because The amount of $20,000 of Facilities allocated to Machining results from failing to allocate Systems to Facilities first.

Answer (C) is correct. The first step in applying the step-down method is to determine the percentage of the total driver for the first service department that is to be assigned to the other departments:

<table>
<thead>
<tr>
<th>Allocate Systems:</th>
<th>Computer</th>
<th>% of</th>
<th>Amount to be Allocated</th>
<th>Departmental Allocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Facilities</td>
<td>900</td>
<td>10.0%</td>
<td>$200,000</td>
<td>$20,000</td>
</tr>
<tr>
<td>To Machining</td>
<td>3,600</td>
<td>40.0%</td>
<td>200,000</td>
<td>80,000</td>
</tr>
<tr>
<td>To Assembly</td>
<td>1,800</td>
<td>20.0%</td>
<td>200,000</td>
<td>40,000</td>
</tr>
<tr>
<td>To Finishing</td>
<td>2,700</td>
<td>30.0%</td>
<td>200,000</td>
<td>60,000</td>
</tr>
<tr>
<td>Totals</td>
<td>9,000</td>
<td>100.0%</td>
<td>$200,000</td>
<td>$200,000</td>
</tr>
</tbody>
</table>

The second step is to allocate the costs of the first service department ($000 omitted):

<table>
<thead>
<tr>
<th>Service Depts.</th>
<th>Production Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Totals before allocation</td>
<td>$200</td>
</tr>
<tr>
<td>Allocate Sys.</td>
<td>(200)</td>
</tr>
<tr>
<td>Totals after first allocation</td>
<td>$0</td>
</tr>
</tbody>
</table>

The third step is to determine the percentage of the total driver for the second allocated service department that is to be assigned to each of the remaining departments:

<table>
<thead>
<tr>
<th>Allocate Facilities:</th>
<th>Square</th>
<th>% of</th>
<th>Amount to be Allocated</th>
<th>Departmental Allocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Machining</td>
<td>2,000</td>
<td>20.0%</td>
<td>$120,000</td>
<td>24,000</td>
</tr>
<tr>
<td>To Assembly</td>
<td>3,000</td>
<td>30.0%</td>
<td>120,000</td>
<td>36,000</td>
</tr>
<tr>
<td>To Finishing</td>
<td>5,000</td>
<td>50.0%</td>
<td>120,000</td>
<td>60,000</td>
</tr>
<tr>
<td>Totals</td>
<td>10,000</td>
<td>100.0%</td>
<td>$120,000</td>
<td>$120,000</td>
</tr>
</tbody>
</table>

The final step is to allocate the costs of the second service department:
Answer (A) is incorrect because the amount of $2,665 includes rework, an internal failure cost.

Answer (B) is incorrect because the prevention cost is $1,154.

Answer (C) is incorrect because the appraisal cost is $786.

Answer (D) is correct. The costs of prevention and appraisal are conformance costs that serve as financial measures of internal performance. Prevention costs are incurred to prevent defective output. These costs include preventive maintenance, employee training, review of equipment design, and evaluation of suppliers. Appraisal costs are incurred to detect nonconforming output. They embrace such activities as statistical quality control programs, inspection, and testing. The equipment maintenance cost of $1,154 is a prevention cost. The product testing cost of $786 is an appraisal cost. Their sum is $1,940.

Answer (A) is incorrect because the incremental cost is $50,000.

Answer (B) is correct. Operation 2 is the bottleneck because it is functioning at its capacity. The incremental annual throughput contribution (revenues – direct materials costs) from adding workers to Operation 2 is $36,000 [500 units × ($120 unit price – $48 DM per unit)]. Because the cost of the additional workers is $50,000, the change in operating income is $(14,000).

Answer (C) is incorrect because the incremental throughput contribution is $36,000.

Answer (D) is incorrect because the amount of $(20,000) is based on the assumption that an additional $12 per unit of fixed costs will be applied.
Answer (A) is incorrect because While departmental overhead rates lead to more allocation bases than does a single plantwide rate, ABC involves many more allocation bases.

Answer (B) is correct. Under activity-based costing (ABC), the number of allocation bases increases dramatically over those of a traditional (volume-based) costing accumulation system. First, every activity must be allocated to an indirect cost pool using resource drivers (“1st-stage allocations”), and every indirect cost pool must be allocated to final products using activity drivers (“2nd-stage allocations”). This use of a larger number of allocation pools and bases leads to more accurate costing results.

Answer (C) is incorrect because ABC leads to both more allocation bases than departmental overhead rates and to more accurate costing results.

Answer (D) is incorrect because While departmental overhead rates lead to more accurate costing than a single plantwide rate, ABC leads to even more accurate costing.

Answer (A) is incorrect because Activity-based costing tends to increase the number of cost pools and drivers used.

Answer (B) is correct. Design of an activity-based costing system starts with process value analysis, a comprehensive understanding of how an organization generates its output. It involves a determination of which activities that use resources are value-adding or nonvalue-adding and how the latter may be reduced or eliminated. This linkage of product costing and continuous improvement of processes is activity-based management (ABM). It encompasses driver analysis, activity analysis, and performance measurement.

Answer (C) is incorrect because Activity-based costing’s philosophy is to accumulate homogeneous cost pools. Thus, the cost elements in a pool should be consumed by cost objects in proportion to the same driver. Homogenizing cost pools minimizes broad averaging of costs that have different drivers.

Answer (D) is incorrect because Activity-based costing’s philosophy is to accumulate homogeneous cost pools. Thus, the cost elements in a pool should be consumed by cost objects in proportion to the same driver. Homogenizing cost pools minimizes broad averaging of costs that have different drivers.
Answer (A) is **correct**. Starlet’s departmental overhead allocations are determined by the proportion of the total driver expended by each department on this job, as follows:

- **Tooling** \[\text{\$8,625 \times \left(\frac{12}{460}\right)}\] \$225
- **Fabricating** \[\text{\$16,120 \times \left(\frac{3}{620}\right)}\] \$78
- **Total** \[\$303\]

Answer (B) is incorrect because The amount of $671 results from improperly using the combined hours for the two departments to allocate the departmental costs.

Answer (C) is incorrect because The amount of $537 results from improperly using 12 hours to allocate the cost of both departments.

Answer (D) is incorrect because The amount of $225 is the allocation for just the Tooling Department.

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Answer (A) is **correct**. The relevant range defines the limits within which per-unit variable costs remain constant and fixed costs are not changeable. It is synonymous with the short run. The relevant range is established by the efficiency of a company’s current manufacturing plant, its agreements with labor unions and suppliers, etc.

Answer (B) is incorrect because The relevant range refers to the activity levels over which cost relationships hold constant.

Answer (C) is incorrect because Production varies over both the relevant range (the short run) and the long run.

Answer (D) is incorrect because Relevant costs are those pertaining to a particular decision.

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Answer (A) is incorrect because The amount of $10,000 results from failing to include the marketing manager’s incentive and from improperly including the salaried (i.e., fixed) marketing staff time.

Answer (B) is incorrect because The amount of $10,500 results from improperly including the salaried (i.e., fixed) marketing staff time.

Answer (C) is incorrect because The amount of $8,000 results from failing to include the marketing manager’s incentive.

Answer (D) is **correct**. The variable marketing costs for the new product consist of sales commissions and the marketing manager’s incentive ($100,000 \times 8.5\% = \$8,500)$.
[215] Gleim #: 3.3.78 -- Source: Publisher

- Answer (A) is incorrect because Reversing the treatment of beginning and ending finished goods inventories results in $1,350,000.
- Answer (B) is correct. Beginning finished goods inventory ($500,000) + cost of goods manufactured ($860,000) – ending finished goods inventory ($990,000) = cost of goods sold ($370,000). The work-in-process inventories are irrelevant.
- Answer (C) is incorrect because The amount of $490,000 represents the difference between beginning and ending inventories.
- Answer (D) is incorrect because Subtracting the difference between beginning and ending work-in-process inventories from the cost of goods sold results in $360,000.

[216] Gleim #: 3.3.103 -- Source: CIA 591 IV-9

- Answer (A) is incorrect because Perfection standards are based on perfect operating conditions, and negative deviation from such standards is expected.
- Answer (B) is incorrect because Abnormal spoilage may result from any of a variety of conditions or circumstances that are not necessarily related to standards.
- Answer (C) is incorrect because Abnormal spoilage may result from any of a variety of conditions or circumstances that are usually controllable by first-line supervisors.
- Answer (D) is correct. Abnormal spoilage is spoilage that is not expected to occur under normal, efficient operating conditions. The cost of abnormal spoilage should be separately identified and reported to management. Abnormal spoilage is typically treated as a period cost (a loss) because of its unusual nature.

[217] Gleim #: 4.3.78 -- Source: Publisher

- Answer (A) is incorrect because The sum of the cost pool rates equals $145.00 ($120 + $25).
- Answer (B) is incorrect because The rate per day for high-usage occupants is $620.
- Answer (C) is correct. This service organization produces three “products” (the three occupant categories), and the “units produced” equal occupant days. According to the ABC analysis, production involves two activities: (1) provision of residential space and meals and (2) OOA. The drivers of these activities are occupant days and nursing hours, respectively. Thus, the cost pool rate for the first activity (residential space and meals) is $120 per occupant day ($7,200,000 ÷ 60,000 days), and the cost pool rate for the second activity (OOA) is $25 ($7,500,000 ÷ 300,000 hours). The total cost for providing services to occupants in the low-usage category is $6,570,000 [(120 × 36,000 days) + ($25 × 90,000 hours)]. The daily cost rate for these occupants is therefore $182.50 ($6,570,000 ÷ 36,000 occupant days).
- Answer (D) is incorrect because The rate per day for medium-usage occupants equals $245.
Answer (A) is correct. Job-order costs are used in determining the costs of a specific, clearly identifiable job or project. In contrast, process costing averages the costs of all production.

Answer (B) is incorrect because LIFO is equally applicable to either job-order costing or process costing.

Answer (C) is incorrect because Process costing is equally useful for the estimation of overhead.

Answer (D) is incorrect because Control of costs does not vary between job-order and process-costing systems.

Answer (A) is incorrect because Access to technology is a benefit of outsourcing.

Answer (B) is incorrect because Avoidance of risk of obsolescence is a benefit of outsourcing.

Answer (C) is correct. Outsourcing results in a loss of control over the outsourced function.

Answer (D) is incorrect because Reduced cost is a benefit of outsourcing.

Answer (A) is incorrect because Normal spoilage, not abnormal spoilage, costs are charged to inventory.

Answer (B) is incorrect because Material variance accounts are only charged for the variances in material usage or material price, not the spoilage of product.

Answer (C) is correct. Abnormal spoilage is usually charged to a special loss account because it is not expected to occur under normal, efficient operating conditions. Because it is unusual, it should be separately reported as a period cost.

Answer (D) is incorrect because While charging abnormal spoilage to manufacturing overhead is an occasional practice, it is not the ordinary practice.
[221] Gleim #: 4.2.38 -- Source: CMA 695 3-5

- Answer (A) is incorrect because The amount of $155,328 is based on a weighted-average calculation for materials and a FIFO calculation for conversion costs.
- Answer (B) is incorrect because The amount of $156,960 is the weighted-average cost of ending work-in-process.
- Answer (C) is incorrect because The amount of $154,800 is based on a FIFO calculation for materials and a weighted-average calculation for conversion costs.
- Answer (D) is correct. The FIFO costs per equivalent unit for materials and conversion costs are $4.50 and $5.83, respectively. EUP for materials in ending work-in-process equal 21,600 (24,000 × 90%). Thus, total FIFO materials cost is $97,200 (21,600 EUP × $4.50). EUP for conversion costs in ending work-in-process equal 9,600 (24,000 × 40%). Total conversion costs are therefore $55,968 (9,600 EUP × $5.83). Consequently, total work-in-process costs are $153,168 ($97,200 + $55,968).

[222] Gleim #: 5.2.64 -- Source: CMA 1296 3-30

- Answer (A) is incorrect because The amount of $1,200,000 assumes that the by-product is charged with a portion of the net joint cost.
- Answer (B) is correct. The joint cost to be allocated is $2,400,000 [$2,520,000 total joint cost – (60,000 pounds of the by-product) × $2]. Accordingly, the joint cost to be allocated to the Second Main Product on a physical-volume basis is $1,500,000 {[(150,000 pounds ÷ (90,000 pounds + 150,000 pounds)) × $2,400,000]}.
- Answer (C) is incorrect because The amount of $1,575,000 does not deduct by-product NRV from the joint cost.
- Answer (D) is incorrect because The amount of $1,260,000 assumes that the by-product is charged with a portion of the gross joint cost.

[223] Gleim #: 6.1.9 -- Source: CPA 594 TMG-50

- Answer (A) is incorrect because The detail of costs tracked to jobs will also decrease.
- Answer (B) is incorrect because Inspection costs will also decrease.
- Answer (C) is incorrect because Both inspection costs and the detail of costs tracked to jobs will decrease.
- Answer (D) is correct. In a JIT system, materials go directly into production without being inspected. The assumption is that the vendor has already performed all necessary inspections. The minimization of inventory reduces the number of suppliers, storage costs, transaction costs, etc. Backflush costing eliminates the traditional sequential tracking of costs. Instead, entries to inventory may be delayed until as late as the end of the period. For example, all product costs may be charged initially to cost of sales, and costs may be flushed back to the inventory accounts only at the end of the period. Thus, the detail of cost accounting is decreased.
Answer (A) is correct. Under FIFO, EUP are based solely on work performed during the current period. The EUP equals the sum of the work done on the beginning work-in-process inventory, units started and completed in the current period, and the ending work-in-process inventory. Given that beginning work-in-process was 60% complete as to materials, the current period is charged for 6,400 EUP (16,000 units × 40%). Because 92,000 units were completed during the period, 76,000 (92,000 – 16,000 in BWIP) must have been started and completed during the period. They represent 76,000 EUP. Finally, the EUP for ending work-in-process equal 21,600 (24,000 units × 90%). Thus, total EUP for May are 104,000 (6,400 + 76,000 + 21,600).

Answer (B) is incorrect because This number of units assumes beginning work-in-process was 40% complete.

Answer (C) is incorrect because This number of units equals the sum of the physical units in beginning work-in-process and the physical units completed.

Answer (D) is incorrect because This number of units omits the 6,400 EUP added to beginning work-in-process.

Answer (A) is correct. Joint products are two or more separate products generated by a common process from a common input that are not separable prior to the split-off point. Moreover, in contrast to by-products, they have significant sales values in relation to each other either before or after additional processing.

Answer (B) is incorrect because A joint product has relatively significant sales value when compared with the other products. A by-product is identifiable as an individual product only upon reaching the split-off point, and it has relatively minor sales value when compared to the other products.

Answer (C) is incorrect because Products that are separately identifiable before the production process are not classified as joint products. Furthermore, physical volume has nothing to do with determining a joint product. Some joint products with significant physical volume may not have significant sales value.

Answer (D) is incorrect because Products do not have to be salable at the split-off point to be considered joint products; in fact, many joint products have to be processed after the split-off point before they can be sold.
[226] **Gleim #: 5.3.101 -- Source: CMA 0408 2-099**

- Answer (A) is incorrect because the amount of $28 results from improperly using only indirect nonlabor costs in the numerator.
- Answer (B) is incorrect because the amount of $20 results from improperly using only indirect labor costs in the numerator.
- Answer (C) is incorrect because the amount of $40 results from improperly using the total of direct and indirect labor hours as the allocation base.
- Answer (D) is correct. Total indirect costs are $12,000,000 ($5,000,000 + $7,000,000). The appropriate allocation base is direct labor hours, since this more closely matches activity level than does indirect labor or the combination of the two. The budgeted indirect cost rate is thus $48 per direct labor hour ($12,000,000 ÷ 250,000).

[227] **Gleim #: 4.2.30 -- Source: Publisher**

- Answer (A) is correct. The FIFO equivalent units of conversion cost equal 196,800. Conversion cost incurred during May was $574,040 ($182,880 DL + $391,160 FOH). Hence, the equivalent-unit conversion cost under FIFO is $2.92 ($574,040 ÷ 196,800).
- Answer (B) is incorrect because the amount of $3.23 assumes EWIP is 0% complete as to conversion cost.
- Answer (C) is incorrect because the cost per equivalent unit under the weighted-average method is $3.00.
- Answer (D) is incorrect because total conversion cost divided by FIFO equivalent units of conversion cost equals $3.10.

[228] **Gleim #: 6.6.60 -- Source: CMA 1295 3-12**

- Answer (A) is incorrect because Training costs are not a category of quality costs.
- Answer (B) is incorrect because Carrying cost is not one of the elements of quality costs.
- Answer (C) is incorrect because Warranty, product liability, and training are not cost categories identified by SMA 4R.
- Answer (D) is correct. SMA 4R lists four categories of quality costs: prevention, appraisal, internal failure, and external failure (lost opportunity). Costs of prevention include attempts to avoid defective output, including employee training, review of equipment design, preventive maintenance, and evaluation of suppliers. Appraisal costs include quality control programs, inspection, and testing. Internal failure costs are incurred when detection of defective products occurs before shipment, including scrap, rework, tooling changes, and downtime. External failure costs are incurred after the product has been shipped, including the costs associated with warranties, product liability, and customer ill will.
Answer (A) is incorrect because the amount of $4.50 results from dividing by 1,000 gallons of total output.

Answer (B) is incorrect because the amount of $5.00 results from dividing total joint costs by total output; in other words, a physical-volume method was used rather than the sales value method.

Answer (C) is correct. First, the final sales prices are estimated:

- **Big:** 800 gallons \( @ \$9/gallon = \$7,200 \\
- **Mini:** 200 gallons \( @ \$4/gallon = \$800 \\

This yields a total sales value at split-off for the entire production run of $8,000 ($7,200 Big + $800 Mini). The next step is to multiply the joint costs of $5,000 ($2,000 input cost + $3,000 processing cost) based on the proportion of the total final sales value represented by each product:

- **Big:** $5,000 \times \left( \frac{\$7,200}{\$8,000} \right) = \$4,500 \\
- **Mini:** $5,000 \times \left( \frac{\$800}{\$8,000} \right) = \$500 \\

The per-unit cost of producing Big using the sales value at split-off method is therefore $5.63 ($4,500 allocated joint cost ÷ 800 gallons).

Answer (D) is incorrect because the amount of $3.38 results from allocating only the processing costs rather than the total joint costs.

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Answer (A) is incorrect because the direct allocation method ignores any services that are rendered by one service department to another service department.

Answer (B) is correct. The reciprocal method uses simultaneous equations to allocate each service department’s costs. It allocates costs by explicitly including the mutual services rendered among all departments. When service departments render services to each other, the use of the direct method or the step-down method would not be theoretically accurate. Accordingly, in such situations, the reciprocal method would result in the most accurate allocation.

Answer (C) is incorrect because the step-down allocation method allows for limited recognition of services rendered by service departments to other service departments.

Answer (D) is incorrect because the linear allocation method is nonsensical.
Answer (A) is incorrect because Electricity in an electronics plant is usually an overhead (indirect) cost.

Answer (B) is correct. Direct costs are readily identifiable with and attributable to specific units of production. Wood is a raw material (a direct cost) of furniture.

Answer (C) is incorrect because Sales commissions are period costs. They are neither direct nor indirect costs of products.

Answer (D) is incorrect because Machine repairs in an automobile factory are usually an overhead (indirect) cost.

Answer (A) is incorrect because Financial accounting is primarily concerned with quantitative information.

Answer (B) is incorrect because Decision analysis and implementation are characteristics of management accounting.

Answer (C) is incorrect because Management accounting is future oriented.

Answer (D) is correct. Financial accounting is primarily concerned with historical accounting, i.e., traditional financial statements, and with external financial reporting to creditors and shareholders. Management accounting applies primarily to the planning and control of organizational operations, considers nonquantitative information, and is usually less precise.

Answer (A) is incorrect because Adding ending inventory and subtracting beginning inventory in the CGS calculation results in $657,000.

Answer (B) is incorrect because Total manufacturing costs equal $681,000.

Answer (C) is incorrect because The cost of goods sold is $673,000.

Answer (D) is correct. The cost of the goods manufactured is the cost of goods completed during the year. For a retailer, the equivalent is purchases. The CGM for Alex is $665,000 \[501,000 + (300,000 \times 60\%) + 235,000 – 251,000\].
[234] Gleim #: 6.5.48 -- Source: Publisher

- Answer (A) is incorrect because ABC’s philosophy is to accumulate homogeneous cost pools. Thus, the cost elements in a pool should be consumed by cost objects in proportion to the same driver. Homogenizing cost pools minimizes broad averaging of costs that have different drivers.

- Answer (B) is incorrect because ABC’s philosophy is to accumulate homogeneous cost pools. Thus, the cost elements in a pool should be consumed by cost objects in proportion to the same driver. Homogenizing cost pools minimizes broad averaging of costs that have different drivers.

- Answer (C) is correct. Design of an ABC system starts with process value analysis, a comprehensive understanding of how an organization generates its output. It involves a determination of which activities that use resources are value-adding or nonvalue-adding and how the latter may be reduced or eliminated. This linkage of product costing and continuous improvement of processes is activity-based management (ABM). It encompasses driver analysis, activity analysis, and performance measurement.

- Answer (D) is incorrect because ABC tends to increase the number of cost pools and drivers used.

[235] Gleim #: 5.1.7 -- Source: CMA 1292 3-6

- Answer (A) is incorrect because ABC is appropriate for external as well as internal purposes.

- Answer (B) is incorrect because Process costing is acceptable for external reporting purposes.

- Answer (C) is incorrect because Job-order costing is acceptable for external reporting purposes.

- Answer (D) is correct. Activity-based costing, job-order costing, process costing, and standard costing can all be used for both internal and external purposes. Variable costing is not acceptable under GAAP for external reporting purposes.

[236] Gleim #: 6.6.64 -- Source: Publisher

- Answer (A) is incorrect because Costs of inspecting in-process items are appraisal (conformance) costs.

- Answer (B) is correct. Nonconformance costs include internal and external failure costs. External failure costs include environmental costs, e.g., fines for violations of environmental laws and loss of customer goodwill.

- Answer (C) is incorrect because Systems development costs are prevention (conformance) costs.

- Answer (D) is incorrect because Costs of quality circles are prevention (conformance) costs.
Answer (A) is incorrect because While it is true that “all costs are variable in the long term,” this is not a reason to use variable costing.

Answer (B) is incorrect because Variable costing only results in higher operating income if sales exceed production.

Answer (C) is correct. Fixed factory overhead is more closely related to the capacity to produce than to the production of specific units. Variable costing thus more accurately depicts the variations in cost resulting from changes in the level of output.

Answer (D) is incorrect because Variable costing is unacceptable for either income tax or external financial reporting purposes.

Answer (A) is incorrect because Improperly beginning with gross profit instead of sales, then improperly subtracting ending finished goods and adding beginning finished goods results in $49,890.

Answer (B) is incorrect because Improperly subtracting ending finished goods and adding beginning finished goods results in $113,890.

Answer (C) is correct. Madengrad’s cost of goods manufactured can be calculated as follows:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>$160,000</td>
</tr>
<tr>
<td>Less: gross profit</td>
<td>(48,000)</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>$112,000</td>
</tr>
<tr>
<td>Add: ending finished goods</td>
<td>58,300</td>
</tr>
<tr>
<td>Goods available for sale</td>
<td>$170,300</td>
</tr>
<tr>
<td>Less: beginning finished goods</td>
<td>(60,190)</td>
</tr>
<tr>
<td>Cost of goods manufactured</td>
<td>$110,110</td>
</tr>
</tbody>
</table>

Answer (D) is incorrect because Improperly beginning with gross profit instead of sales results in $46,110.
Answer (A) is correct. A mixed cost is a combination of fixed and variable elements. Consequently, the $27 of total overhead cost is mixed because it contains both fixed overhead and variable overhead.

Answer (B) is incorrect because a sunk cost is a past cost or a cost that the entity has irrevocably committed to incur. Because it is unavoidable, it is not relevant to future decisions.

Answer (C) is incorrect because a discretionary cost (a managed or program cost) results from a periodic decision about the total amount to be spent. It is also characterized by uncertainty about the relationship between input and the value of the related output. Examples are advertising and R&D costs.

Answer (D) is incorrect because a carrying cost is the cost of carrying inventory; examples are insurance and rent on warehouse facilities.

Answer (A) is correct. The beginning inventory was 20% complete as to conversion costs. Hence, 12,800 EUP (16,000 units × 80%) were required for completion. EUP for units started and completed equaled 76,000 [(92,000 completed units – 16,000 units in BWIP) × 100%]. The work done on ending work-in-process totaled 9,600 EUP (24,000 units × 40%). Thus, total EUP for May are 98,400 (12,800 + 76,000 + 9,600).

Answer (B) is incorrect because this number of units omits the work done on ending work-in-process.

Answer (C) is incorrect because this number of units assumes the beginning work-in-process was 40% complete as to conversion costs.

Answer (D) is incorrect because this number of units omits the work done on beginning work-in-process.

Answer (A) is incorrect because the figure 4,400 results from multiplying by the 20% completion stage rather than the 40% material usage.

Answer (B) is correct. All 22,000 units in Ework-in-process have had 40% of Material B added, since they have all passed the 20% completion point and none have reached the 80% completion point. Equivalent units of production for Material B are thus 8,800 (22,000 × 40%).

Answer (C) is incorrect because the figure 22,000 results from treating all the units in Ework-in-process as being complete for materials.

Answer (D) is incorrect because the figure 11,000 results from multiplying by the 50% completion stage rather than the 40% material usage.
[242] Gleim #: 5.1.30 -- Source: CMA 1285 4-25

- Answer (A) is incorrect because the amount of $750,000 equals the factory overhead.
- Answer (B) is incorrect because the amount of $600,000 is calculated by multiplying factory overhead of $750,000 by 80%.
- Answer (C) is correct. Total manufacturing cost of $2,500,000 is composed of raw materials, direct labor, and factory overhead. Factory overhead is 30% of total manufacturing costs, or $750,000. If factory overhead is 80% of direct labor cost, direct labor cost is $937,500 ($750,000 ÷ 80%).
- Answer (D) is incorrect because the amount of $909,375 is calculated by applying 30% to costs of goods manufactured, not total manufacturing costs, to determine factory overhead.

[243] Gleim #: 5.3.79 -- Source: CIA 1193 IV-4

- Answer (A) is incorrect because the amount of $25,000 excludes the indirect materials.
- Answer (B) is incorrect because the amount of $50,000 is the direct materials cost.
- Answer (C) is correct. Overhead consists of all costs, other than direct materials and direct labor, that are associated with the manufacturing process. It includes both fixed and variable costs. The overhead control account should have the following costs:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect materials</td>
<td>$ 5,000</td>
</tr>
<tr>
<td>Indirect labor ($45,000 – $40,000)</td>
<td>5,000</td>
</tr>
<tr>
<td>Other overhead</td>
<td>20,000</td>
</tr>
<tr>
<td><strong>Total overhead</strong></td>
<td><strong>$30,000</strong></td>
</tr>
</tbody>
</table>

- Answer (D) is incorrect because the amount of $45,000 is the total labor cost.
Answer (A) is incorrect because the cost of operating one branch is $350,000. Fixed costs are the costs when no warehouses are in operation. Thus, fixed costs equal $200,000 (the Y-intercept).

Answer (B) is incorrect because $Y (TC)$ is equal to $200,000 (FC)$ (the Y-intercept) plus $150,000 \times (VC)$, where VC per warehouse are equal to \(\left(\frac{$1,700,000 \text{ TC} - $200,000 \text{ FC}}{10}\right)\).

Answer (C) is correct. Fixed cost (FC) is $200,000, the amount at which the total cost (TC) line crosses the y-axis (when no warehouses are in operation). The total variable cost (VC) of operating 10 warehouses is $1,500,000 ($1,700,000 \text{ TC} - $200,000 \text{ FC}$), so the variable cost per warehouse is $150,000 ($1,500,000 \div 10$). $Y (TC)$ is therefore equal to $200,000 (FC) plus $150,000X (VC)$.

Answer (D) is incorrect because fixed costs must be deducted from total costs to arrive at total variable costs. The variable cost per warehouse is therefore $150,000 \left(\frac{$1,700,000 \text{ TC} - $200,000 \text{ FC}}{10}\right)$.

Answer (A) is incorrect because an expense whose actual amount will not normally differ from the standard (budget) amount is a controlled expense, not a controllable expense.

Answer (B) is incorrect because whether a cost is controllable or not is not determined by its behavior.

Answer (C) is correct. Controllable expenses are directly regulated by a manager of a responsibility center at a given level of production within a given time span.

Answer (D) is incorrect because an expected future expense that will be different under various alternatives is a differential (incremental) cost.
Answer (A) is incorrect because Focusing on high gross margin products does not maximize profits if those products require an excessive amount of resources.

Answer (B) is correct. When demand far exceeds a company's ability to supply the marketplace, management will want to maximize its profits per unit of scarce resource. If the scarce resource is raw materials, the products that provide the greatest contribution margin per unit of raw materials are the products to emphasize. If machine hours are the constraint, profits are maximized by emphasizing the contribution margin per machine hour.

Answer (C) is incorrect because The company can sell as much of each product as it can produce. Thus, sales are limited by production constraints, e.g., machine hours. The company should therefore seek to maximize its return per unit of the constraint.

Answer (D) is incorrect because The contribution margin ratio is only important as it translates to dollars. A high margin on a low sales volume will not be profitable.

[247] Gleim #: 4.2.20 -- Source: CMA 1286 4-14

Answer (A) is incorrect because The total units to account for is 6,000.

Answer (B) is incorrect because The number of units completed and transferred out from BI plus units started and completed in November plus 20% of work-in-process on November 30 equals 4,400 (1,000 + 3,000 + 400).

Answer (C) is incorrect because The equivalent units for direct materials is not 3,800. Only those units started during November would have received materials in that month. Therefore, equivalent units for direct materials equal 5,000.

Answer (D) is correct. The computation of equivalent units for a period using the FIFO method of process costing includes only the conversion costs and material added to the product in that period and excludes any work done in previous periods. Accordingly, FIFO equivalent units include work and material to complete BWIP, plus work and material to complete units started this period, minus work and material needed to complete EWIP. Given that all materials are added at the beginning of the process, only those units started during November would have received materials in that month. Because 5,000 units were started, the equivalent units for direct materials equal 5,000.
[248] Gleim #: 6.1.7 -- Source: Publisher

- Answer (A) is incorrect because Locked doors on production areas is a control that should not be affected by adoption of a JIT system.

- Answer (B) is correct. Receiving departments are often eliminated with a JIT system so receiving reports are not needed. Also, the quantity received should be exactly equal to immediate production needs.

- Answer (C) is incorrect because Voucher approval prior to paying accounts payable is a control that should not be affected by adoption of a JIT system.

- Answer (D) is incorrect because Two signatures required on large checks is a control that should not be affected by adoption of a JIT system.

[249] Gleim #: 3.1.33 -- Source: CMA 0408 2-080

- Answer (A) is incorrect because The amount of $575,000 results from improperly adjusting total fixed overhead cost, and failing to adjust variable costs, for the new level of production.

- Answer (B) is correct. Kimber’s total manufacturing cost for the 9,000 unit production level can be calculated as follows:

<table>
<thead>
<tr>
<th>Per Unit</th>
<th>Activity Level</th>
<th>Total Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw material</td>
<td>$20</td>
<td>9,000</td>
</tr>
<tr>
<td>Direct labor</td>
<td>25</td>
<td>9,000</td>
</tr>
<tr>
<td>Variable overhead</td>
<td>10</td>
<td>9,000</td>
</tr>
<tr>
<td>Fixed overhead</td>
<td>15</td>
<td>8,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$615,000</strong></td>
<td></td>
</tr>
</tbody>
</table>

- Answer (C) is incorrect because The amount of $560,000 is the total manufacturing cost for the 8,000 unit level of production.

- Answer (D) is incorrect because The amount of $630,000 results from improperly adjusting total fixed overhead cost for the new level of production.
[250] Gleim #: 4.2.59 -- Source: CMA 0408 2-138

- Answer (A) is incorrect because the figure 88,000 is the number of units started during the month.
- Answer (B) is incorrect because the figure 92,300 results from weighting beginning work-in-process for the completion percentage rather than the percentage needed to complete.
- Answer (C) is correct. Jones had 8,000 units in ending work-in-process inventory and transferred out 90,000 during the month, for a total of 98,000 units to be accounted for. Since Jones completed 90,000 units during the month and had 10,000 in beginning work-in-process, 80,000 of those completed were started during the month. Under a FIFO system, only the work necessary to complete units in beginning inventory is counted toward equivalent units of production (EUP). Jones’s EUP can be determined as follows:

|                  | Units | Percentage | EUP  
|------------------|-------|------------|------
| Beginning WIP    | 10,000| 25%        | 2,500|
| Started and completed | 80,000| 100%      | 80,000|
| Ending WIP       | 8,000 | 60%        | 4,800|
| Totals           | 98,000|            | 87,300|

- Answer (D) is incorrect because the figure 87,300 is the EUP using the FIFO method.

[251] Gleim #: 3.1.35 -- Source: CMA 0408 2-083

- Answer (A) is correct. Manufacturing costs consist of direct materials, direct labor, and manufacturing overhead. The cream, plant property taxes, and tires are all integral to the production of the final product and so are properly classified as manufacturing costs. Sales commissions, however, are not incurred until after the product has been manufactured. They are properly classified as a selling expense.
- Answer (B) is incorrect because cream is a direct material for an ice cream maker.
- Answer (C) is incorrect because the taxes on a manufacturing facility are a cost of producing the product.
- Answer (D) is incorrect because tires are part of the final product of an automobile manufacturer, resulting in them being properly classified as direct materials and thus manufacturing costs.
Answer (A) is correct. To implement a just-in-time (JIT) approach to inventory management and to eliminate waste of materials, labor, factory space, and machine usage, the factory is reorganized to permit what is often called lean production. Plant layout in a JIT-lean production environment is not arranged by functional department or process but by manufacturing cells (work cells). Central support departments are reduced or eliminated, space is saved, fewer and smaller factories may be required, and materials and tools are brought close to the point of use.

- Answer (B) is incorrect because Kaizen is a Japanese word meaning continuous pursuit of improvement in every aspect of organizational operations.

- Answer (C) is incorrect because Activity-based management is the linkage of product costing and continuous improvement of processes. It redirects and improves the use of resources to increase the value created for customers and other stakeholders.

- Answer (D) is incorrect because Backflush costing is utilized with just-in-time production as a planning and control system. Backflush costing is less costly to operate than most traditional costing systems.

Answer (A) is correct. The sum of direct materials used, direct labor, and factory overhead applied (60% of direct labor) is $681,000.

- Answer (B) is incorrect because The cost of goods manufactured equals $665,000.

- Answer (C) is incorrect because The direct materials purchased plus direct labor equals $489,000.

- Answer (D) is incorrect because The cost of goods sold equals $673,000.

Answer (A) is incorrect because The most profitable product mix should be determined before capacity at the constraint is increased.

- Answer (B) is correct. The steps in a TOC analysis are (1) identify the constraint, (2) determine the most profitable product mix given the constraint, (3) maximize the flow through the constraint, (4) increase capacity at the constraint, and (5) redesign the manufacturing process for greater flexibility and speed.

- Answer (C) is incorrect because After identifying the constraint, the correct steps are determine the most profitable product mix given the constraint, maximize the flow through the constraint, increase capacity at the constraint, and redesign the manufacturing process.

- Answer (D) is incorrect because Capacity at the constraint should not be increased until flow through the constraint has been maximized.
[255] Gleim #: 3.1.26 -- Source: CMA 685 5-6

- Answer (A) is incorrect because Conversion cost is the cost of labor and overhead incurred to convert raw materials into a finished product.
- Answer (B) is incorrect because A variable cost is one that varies directly with production activity.
- Answer (C) is correct. A cost incurred for the benefit of more than one cost objective is known as a common cost. Allocation of common costs is a persistent problem in responsibility accounting. For example, how should the costs of corporate headquarters be allocated to the segments of a conglomerate? Common cost is also a synonym for joint cost. In this sense, common costs are incurred in the production of two or more inseparable products (e.g., costs of refining petroleum into gasoline, diesel fuel, kerosene, lubricating oils, etc.) up to the point at which the products become separable (the split-off point).
- Answer (D) is incorrect because Prime costs are the costs of materials and labor that are directly traceable to a cost objective.

[256] Gleim #: 3.1.10 -- Source: Publisher

- Answer (A) is incorrect because Fixed overhead is a product cost.
- Answer (B) is incorrect because Variable overhead is a product cost.
- Answer (C) is incorrect because Direct materials are product costs.
- Answer (D) is correct. Materials, labor, and overhead (both fixed and variable) are examples of product costs. Abnormal spoilage is an example of a period cost. Abnormal spoilage is not inherent in a production process and should not be categorized as a product cost. Abnormal spoilage should be charged to a loss account in the period that detection of the spoilage occurs.
[257] Gleim #: 5.1.38 -- Source: CMA 0408 2-105

- Answer (A) is incorrect because Factory insurance (a fixed manufacturing cost) must be treated as a product cost under absorption costing and as a period cost under variable costing.

- Answer (B) is correct. Factory insurance (item 1) is a factory operating cost, one of the three components of manufacturing overhead (the other two being indirect materials and indirect labor). Since it is a manufacturing cost, it must be treated as a product cost under absorption costing, and since it is fixed over the relevant range, it must be treated as a period cost under variable costing. Direct labor (item 2) is treated as a product cost under both systems. Finished goods shipping (item 3) is a variable selling and administrative cost, and, as such, is treated as a period cost under both systems.

- Answer (C) is incorrect because Direct labor is treated as a product cost under both systems, and finished goods shipping is also treated as a period cost under both systems.

- Answer (D) is incorrect because Factory insurance (a fixed manufacturing cost) must be treated as a period cost under variable costing.

[258] Gleim #: 5.1.15 -- Source: CMA 1290 3-29

- Answer (A) is incorrect because The important relationship is between actual production and actual sales, not between actual and planned production.

- Answer (B) is incorrect because Planned sales do not determine actual income.

- Answer (C) is incorrect because An increase in inventory results in a higher income under absorption costing.

- Answer (D) is correct. Absorption costing results in a higher income figure than variable costing whenever production exceeds sales because absorption costing capitalizes some fixed factory overhead as part of inventory. These costs are expensed during the period incurred under variable costing. Consequently, variable costing recognizes greater expenses and lower income when production exceeds sales. The reverse is true when sales exceed production. In that case, the absorption method results in a lower income because some fixed costs of previous periods absorbed by the beginning inventory are expensed in the current period as cost of goods sold. Variable costing income is never burdened with fixed costs of previous periods.
[259] Gleim #: 5.3.80 -- Source: CMA Sample Q3-5

- Answer (A) is correct. Pane applies overhead to products on the basis of direct labor cost. The rate is 1.4 ($448,000 budgeted OH ÷ $320,000 budgeted DL cost). Thus, $483,000 ($345,000 actual DL cost × 1.4) of overhead was applied, of which $24,000 ($483,000 – $459,000 actual OH) was overapplied.

- Answer (B) is incorrect because The overhead was overapplied.

- Answer (C) is incorrect because The amount of $11,000 equals the difference between budgeted and actual overhead.

- Answer (D) is incorrect because The amount of $11,000 equals the difference between budgeted and actual overhead.

[260] Gleim #: 3.2.65 -- Source: CMA 0408 2-095

- Answer (A) is incorrect because The fixed portion of total cost will decrease on a per-unit basis as production volume increases.

- Answer (B) is incorrect because The total electricity cost will increase as production volume increases.

- Answer (C) is correct. Because of the fixed portion, the per-unit cost of a mixed, or semivariable, cost will decrease as production volume increases.

- Answer (D) is incorrect because The variable portion of total cost will remain constant on a per-unit basis as production volume increases.

[261] Gleim #: 4.2.51 -- Source: CMA 0408 2-136

- Answer (A) is incorrect because The amount of $1,513 includes all of the ending work-in-process rather than the percentage completed.

- Answer (B) is correct. Units transferred out of a department are by definition 100% complete for purposes of conversion costs for that department. The equivalent units of production (EUP) for conversion for units transferred out is therefore 100 (100 units × 100%). Under the weighted-average method, the EUP of ending work-in-process must also be included. This number is 4 (10 units × 40%), which, added to the 100 transferred out, makes a total weighted-average EUP of 104. Under the weighted-average method, the numerator of the per-unit cost calculation must contain both costs embedded in beginning work-in-process ($180) and those added during the month ($1,484), for a total of $1,664. The weighted-average per-unit cost is therefore $16.00 ($1,664 ÷ 104). The 100 EUP transferred out times the $16.00 unit cost equals $1,600 total under the weighted-average method.

- Answer (C) is incorrect because The amount of $1,484 is the value of only costs added during the month.

- Answer (D) is incorrect because The amount of $1,644 is the total value of all units for the month, not just transferred out.
Answer (A) is incorrect because The amount of $36,280 assumes transfer of 10,000 units of materials.

Answer (B) is incorrect because Total costs incurred in production equal $40,000.

Answer (C) is incorrect because The amount of $32,000 is based on 10,000 equivalent units of conversion costs.

Answer (D) is correct. The only difference between weighted average and FIFO relates to the beginning inventories. Because there were no beginning inventories in this problem, the two valuation methods produce the same results. The equivalent units of materials equal 10,000 because all materials are added at the beginning of the process, and 10,000 units were started. The equivalent units of conversion costs equal 9,400 [8,000 units completed + (2,000 units in ending inventory × 70%)]. The unit cost of materials is $1.50 ($15,000 ÷ 10,000 EU). The unit cost of conversion is $2.66 ($25,000 ÷ 9,400 EU). Therefore, the cost of goods transferred using the FIFO method for inventory costing is $33,280 [8,000 units × ($1.50 + $2.66)].

Answer (A) is incorrect because All costs associated with manufacturing other than direct labor costs and raw material costs are overhead costs.

Answer (B) is correct. Prime costs are raw material costs and direct labor costs.

Answer (C) is incorrect because Manufacturing costs incurred to produce output are inventoriable costs.

Answer (D) is incorrect because The sum of direct labor and overhead is conversion cost.

Answer (A) is incorrect because The need for communication with the vendor is greater. Orders and deliveries must be made on short notice, sometimes several times a day.

Answer (B) is incorrect because In a JIT system, materials are delivered directly to the production line ready for insertion in the finished product.

Answer (C) is incorrect because More deliveries are needed. Each shipment is smaller.

Answer (D) is correct. The objective of JIT is to reduce carrying costs by eliminating inventories and increasing the deliveries made by suppliers. Ideally, shipments of raw materials are received just in time to be incorporated into the manufacturing process. The focus of quality control under JIT is the prevention of quality problems. Quality control is shifted to the supplier. JIT companies typically do not inspect incoming goods; the assumption is that receipts are of perfect quality. Suppliers are limited to those who guarantee perfect quality and prompt delivery.
Answer (A) is incorrect because the amount of $255,300 transposed the ending and beginning inventory amounts.

Answer (B) is correct. Materials used equals beginning inventory, plus purchases, minus ending inventory. Given that purchases are not known, the calculation is as follows:

\[ 37,000 + P - 39,500 = 257,800 \]
\[ P = 257,800 + 39,500 - 37,000 \]
\[ P = 260,300 \]

Answer (C) is incorrect because the amount of $257,800 is the amount of materials used without regard to changes in inventory levels.

Answer (D) is incorrect because the amount of $297,300 fails to consider the beginning inventory.

Answer (A) is correct. ABC determines the activities that will serve as cost objects and then accumulates a cost pool for each activity using the appropriate activity base (cost driver). It is a system that may be employed with job order or process costing methods. Thus, when there is only one product, the allocation of costs to the product is trivial. All of the cost is assigned to the one product; the particular method used to allocate the costs does not matter.

Answer (B) is incorrect because ABC determines the activities that will serve as cost objects and then accumulates a cost pool for each activity using the appropriate activity base (cost driver).

Answer (C) is incorrect because under ABC, a product is allocated only those costs that pertain to its production; that is, products are not cross-subsidized.

Answer (D) is incorrect because marketing and distribution costs should be allocated to specific products.

Answer (A) is incorrect because determining the costs for the federal government’s cost-plus contracts requires absorption (full-cost) data.

Answer (B) is incorrect because absorption costing (full-costing) is currently required for tax purposes.

Answer (C) is correct. In the short run, management decisions are made in reference to incremental costs without regard to fixed overhead costs because fixed overhead cannot be changed in the short run. Thus, the emphasis in the short run should be on controllable costs. For example, service department costs allocated as a part of overhead may not be controllable in the short run.

Answer (D) is incorrect because determining the income of a product or functional unit requires absorption (full-cost) data.
Answer (A) is incorrect because Inventory is valued according to accumulated costs, not selling price.

Answer (B) is correct. Absorption and variable costing differ in their treatment of fixed overhead: It is capitalized as inventory under absorption costing and not under variable costing. Thus, the difference in operating income between the two can be calculated as the difference between the ending inventory in units and the beginning inventory in units, multiplied by the budgeted fixed manufacturing cost per unit.

Answer (C) is incorrect because The difference between absorption and variable costing is accounted for by fixed, not variable, manufacturing costs.

Answer (D) is incorrect because Inventory is valued according to accumulated costs, not selling price.

Answer (A) is incorrect because The accounting method cannot aid in distinguishing joint products from by-products.

Answer (B) is correct. In a production process where joint products are produced, the primary factor that will distinguish a joint product from a by-product is the relative total sales value of the products.

Answer (C) is incorrect because Ease of selling products cannot be objectively measured and so is unsuitable as a basis for assigning costs.

Answer (D) is incorrect because Volume is not always a reliable indicator of cost.

Answer (A) is incorrect because The amount of $6.95 is based on the direct labor hour manufacturing overhead rate.

Answer (B) is correct. Given that manufacturing overhead is applied on the basis of machine hours, the overhead rate is $60 per hour ($1,800,000 ÷ 30,000) or $.96 per unit [(80 machine hours per batch × $60) ÷ 5,000 units per batch]. Accordingly, the unit full cost is $6.11 ($5.15 unit prime cost + $.96).

Answer (C) is incorrect because The amount of $5.39 assumes that 80 machine hours are required for the total production of 20,000 units.

Answer (D) is incorrect because The amount of $5.44 is based on the machining overhead rate ($18).
[271] Gleim #: 3.2.45 -- Source: CMA 694 3-9

- Answer (A) is incorrect because Variable costs are fixed per unit; they do not fluctuate. Fixed costs per unit change as production changes.
- Answer (B) is incorrect because Unit variable costs are fixed in the short term.
- Answer (C) is incorrect because All costs are variable in the long term.
- Answer (D) is correct. Fixed costs remain unchanged within the relevant range for a given period despite fluctuations in activity, but per unit fixed costs do change as the level of activity changes. Thus, fixed costs are fixed in total but vary per unit as activity changes. Total variable costs vary directly with activity. They are fixed per unit, but vary in total.

[272] Gleim #: 6.3.31 -- Source: CIA 1192 IV-17

- Answer (A) is incorrect because Product A has the greatest contribution margin ratio (53%) but a lower CM per hour than B.
- Answer (B) is incorrect because Product D has the greatest selling price per unit ($25) but a lower CM per hour than B.
- Answer (C) is correct. When resources are limited, maximum profits are achieved by maximizing the dollar contribution margin per limited or constraining factor. In this situation, machine hours are the constraining factor. Product B has a contribution margin per machine hour of $28 \[4 \times ($18 – $11)\], which is greater than that of Product A \[3 \times ($15 – $7) = $24\], Product C \[2 \times ($20 – $10) = $20\], or Product D \[3 \times ($25 – $16) = $27\].
- Answer (D) is incorrect because Product C has a greater dollar unit contribution margin ($10) but a lower CM per hour than B.

[273] Gleim #: 4.2.47 -- Source: CMA 692 3-3

- Answer (A) is incorrect because Equivalent units for conversion costs, not direct materials, is 40,800.
- Answer (B) is correct. Direct materials are added when the units are 60% complete as to conversion costs. The beginning inventory of 8,000 units was only 25% complete at the start of the period, and 42,000 units were transferred in. Given that the ending inventory of 12,000 units was only 40% complete, neither beginning nor ending inventory had received direct materials in the assembly department. Accordingly, the equivalent units in the assembly department for direct materials must have been 38,000 units (8,000 units BI + 42,000 units transferred in – 12,000 units EI).
- Answer (C) is incorrect because The number of 30,000 units ignores the 8,000 units in process at the beginning of the period.
- Answer (D) is incorrect because The 42,000 units were transferred in during the month. Not all received an input of direct materials.
[274] Gleim #: 4.1.8 -- Source: Publisher

- Answer (A) is incorrect because this entry would record the purchase of materials for cash.

- Answer (B) is incorrect because this entry reclassifies credit balances in accounts receivable as liabilities or debit balances in accounts payable as assets.

- Answer (C) is incorrect because the entry to record the return of materials to suppliers debits accounts payable and credits raw materials inventory.

- Answer (D) is correct. The correct entry to record a purchase of materials on account is to increase the appropriate asset and liability accounts. Materials are charged to an inventory; the corresponding liability is accounts payable. The asset account(s) could be stores control and/or supplies or a number of other accounts. Also, subsidiary ledgers may be used to account for various individual items (a perpetual inventory system). The term control implies that a subsidiary ledger is being used.

[275] Gleim #: 5.3.99 -- Source: CMA 692 3-6

- Answer (A) is correct. The activity base for overhead allocation should have a high correlation with the incurrence of overhead. Thus, the activities of various departments are usually more appropriate as activity bases than plant-wide activities, particularly when products and production activities are not homogeneous.

- Answer (B) is incorrect because the degree of variability in costs is not as important as the relationship between activity bases and costs, and the degree to which manufacturing activities are similar for all products.

- Answer (C) is incorrect because the number of departments is not as important as the relationship between the costs and activity base.

- Answer (D) is incorrect because products require similar manufacturing effort, they are relatively homogeneous, and a plant-wide rate might be adequate.

[276] Gleim #: 6.5.52 -- Source: Publisher

- Answer (A) is incorrect because in value-chain analysis, primary activities are those that deal with the product directly.

- Answer (B) is correct. The value chain is a model for depicting the way in which every function in a company adds value to the final product. Primary activities deal with the product directly. Support activities lend aid to the primary activity functions.

- Answer (C) is incorrect because the product is the ultimate reason for having a value chain.

- Answer (D) is incorrect because in value-chain analysis, support activities lend aid to the primary activity functions.
Answer (A) is incorrect because Fixed manufacturing overhead is treated as a period cost under direct costing. Selling costs are period costs under both direct and absorption costing.

Answer (B) is incorrect because Fixed manufacturing overhead is treated as a period cost under direct costing. Selling costs are period costs under both direct and absorption costing.

Answer (C) is incorrect because Fixed manufacturing overhead is treated as a period cost under direct costing. Selling costs are period costs under both direct and absorption costing.

Answer (D) is correct. Product costs are incurred to produce units of output. They are expensed when the product is sold. Such costs include direct materials, direct labor, and factory (not general and administrative) overhead. Period costs are charged to expense as incurred because they are not identifiable with a product. Variable costing considers only variable manufacturing costs to be product costs. Fixed manufacturing costs are considered period costs and are expensed as incurred. Selling costs are period costs under both direct and absorption costing. Thus, the entire $225,000 ($150,000 + $75,000) is classified as period costs.

Answer (A) is correct. Rejected units that are discarded are classified as spoilage. Spoilage is separated into abnormal or normal spoilage. Normal spoilage is an inherent result of the normal production process. Abnormal spoilage is spoilage that is not expected to occur under normal, efficient operating conditions.

Answer (B) is incorrect because Rework costs are incurred to make unacceptable units appropriate for sale or use.

Answer (C) is incorrect because Waste is input material that is either lost in the production process or has no sales value.

Answer (D) is incorrect because Scrap is input material that has a relatively minor sales value at the end of the production process.
Answer (A) is incorrect because The amount of $3,512,000 is the amount assigned to Grade Two.

Answer (B) is incorrect because The amount of $1,636,000 is based on the relative sales values of units sold, not units produced.

Answer (C) is incorrect because The amount of $4,091,000 is based on the physical quantity of barrels produced.

Answer (D) is correct. Total joint production costs incurred were $9,000,000 ($4,000,000 + $2,000,000 + $3,000,000). The sales values of the three products are as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Quantity (Barrels)</th>
<th>Price</th>
<th>Total Sales Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade One</td>
<td>300,000</td>
<td>$30</td>
<td>$9,000,000</td>
</tr>
<tr>
<td>Grade Two</td>
<td>240,000</td>
<td>$40</td>
<td>$9,600,000</td>
</tr>
<tr>
<td>Grade Three</td>
<td>120,000</td>
<td>$50</td>
<td>$6,000,000</td>
</tr>
</tbody>
</table>

Total sales value $24,600,000

Consequently, Grade One should be assigned joint costs of $3,293,000 \( \left( \frac{9,000,000}{24,600,000} \right) \times 9,000,000 \).

Answer (A) is correct. The total production costs incurred are $10,000,000, consisting of crude oil of $5,000,000, direct labor of $2,000,000, and manufacturing overhead of $3,000,000. The total physical output was 660,000 barrels, consisting of 300,000 barrels of Two Oil, 240,000 barrels of Six Oil, and 120,000 barrels of distillates. Thus, the allocation (rounded) is $3,636,000 \( \left( \frac{240,000}{300,000 + 240,000 + 120,000} \right) \times 10,000,000 \).

Answer (B) is incorrect because The amount of $3,750,000 is based on the physical quantity of units sold, not units produced.

Answer (C) is incorrect because Six Oil does not compose 75% of the total output in barrels.

Answer (D) is incorrect because The figure of $1,818,000 is the amount that would be assigned to distillates.
**[281] Gleim #: 3.1.9 -- Source: CMA 1293 3-1**

- **Answer (A) is incorrect** because Although cost drivers may be used to assign costs, they are not necessarily mechanical. For example, a cost driver for pension benefits is employee salaries.

- **Answer (B) is correct.** A cost driver is “a measure of activity, such as direct labor hours, machine hours, beds occupied, computer time used, flight hours, miles driven, or contracts, that is a causal factor in the incurrence of cost to an entity” (IMA). It is a basis used to assign costs to cost objects.

- **Answer (C) is incorrect** because Cost drivers are measures of activities that cause the incurrence of costs.

- **Answer (D) is incorrect** because Cost drivers are not accounting measurements but measures of activities that cause costs.

**[282] Gleim #: 3.1.12 -- Source: Publisher**

- **Answer (A) is correct.** Cost accounting is a combination of (1) management accounting in the sense that its purpose can be to provide internal reports for use in planning and control and in making nonroutine decisions, and (2) financial accounting because its product-costing function satisfies external reporting requirements for reporting to shareholders, government, and various outside parties.

- **Answer (B) is incorrect** because Cost accounting also provides information for internal reporting.

- **Answer (C) is incorrect** because Management accounting entails internal reporting for use in planning and controlling routine operations.

- **Answer (D) is incorrect** because Cost accounting is concerned with more than just reporting to be used in making nonroutine decisions.

**[283] Gleim #: 3.4.116 -- Source: CMA 696 3-15**

- **Answer (A) is incorrect** because The manner in which raw materials costs are accounted for is irrelevant.

- **Answer (B) is incorrect** because All product cost categories are addressed by target costing.

- **Answer (C) is incorrect** because All product cost categories are addressed by target costing.

- **Answer (D) is correct.** Target costing begins with a target price, which is the expected market price given the company’s knowledge of its customers and competitors. Subtracting the unit target profit margin determines the long-term target cost. If this cost is lower than the full cost, the company may need to adopt comprehensive cost-cutting measures. For example, in the furniture industry, certain price points are popular with buyers: a couch might sell better at $400 than at $200 because consumers question the quality of a $200 couch and thus will not buy the lower-priced item. The result is that furniture manufacturers view $400 as the target price of a couch, and the cost must be lower.
[284] Gleim #: 6.5.55 -- Source: Publisher

- Answer (A) is incorrect because Make-to-order is a type of process, exemplified by deli sandwich making.

- Answer (B) is correct. A buffer in the context of process analysis is a quantity of work-in-process inventory that allows some stage(s) of the overall process to continue operating when an earlier stage breaks down.

- Answer (C) is incorrect because Make-to-stock is a type of process, exemplified by automobile assembly.

- Answer (D) is incorrect because A hybrid process is one in which both continuous and batch processes are used.

[285] Gleim #: 5.3.88 -- Source: CMA 1295 3-23

- Answer (A) is incorrect because The overhead was overapplied for the month.

- Answer (B) is incorrect because The overhead was overapplied for the month.

- Answer (C) is incorrect because An overapplication of overhead is represented by a credit in the overhead control account.

- Answer (D) is correct. The overhead control account would have been debited for $132,000 of actual overhead. Credits would have totaled $140,000 representing 70% of direct labor costs of $200,000. Hence, the $140,000 credit exceeds the $132,000 debit. Overhead was overapplied by $8,000.

[286] Gleim #: 3.1.3 -- Source: CMA 693 3-5

- Answer (A) is correct. Under an absorption costing system, inventoriable (product) costs include all costs necessary for good production. These include direct materials and conversion costs (direct labor and overhead). Both fixed and variable overhead is included in inventory under an absorption costing system. Inventoriable costs are treated as assets until the products are sold because they represent future economic benefits. These costs are expensed at the time of sale.

- Answer (B) is incorrect because Materials costs are also included.

- Answer (C) is incorrect because Inventory costs are expensed when the goods are sold, not when they are transferred to finished goods.

- Answer (D) is incorrect because Overhead costs as well as prime costs (direct materials and labor) are included in inventory.
Answer (A) is incorrect because The step-down method gives only partial recognition to services rendered by service departments to other service departments. Once a service department’s costs have been allocated, the costs of subsequent service departments are not reallocated to it.

Answer (B) is incorrect because The physical units method is not a service department cost allocation method. It is a method for allocating joint costs.

Answer (C) is correct. The reciprocal method uses simultaneous equations to allocate costs by explicitly recognizing the mutual services rendered among all departments. Because it acknowledges all sources of cost, it should be used when management is using the results of allocations to make decisions on pricing products.

Answer (D) is incorrect because Estimated NRV method is applicable to joint product costing, not service department allocation.

Answer (A) is correct. Given that BWIP (1,000 units) was already 60% complete, 400 equivalent units were needed for completion. In addition, 3,000 units were started and completed during the period. The 2,000 units in EWIP equal 400 equivalent units since they are 20% complete. Total equivalent units are 3,800 (400 + 3,000 + 400).

Answer (B) is incorrect because The units started and completed during November plus the 20% of work-in-process complete as to conversion costs equals 3,400 units (3,000 + 400).

Answer (C) is incorrect because The number of units started and completed in November, plus the units completed and transferred out from BI, plus the 20% of work-in-process complete as to conversion costs equals 4,400 units (3,000 + 1,000 + 400).

Answer (D) is incorrect because The number of units started and completed in November and the units completed and transferred out from BI equals 4,000 units (3,000 + 1,000).
[289] Gleim #: 5.3.78 -- Source: CMA 696 3-21

• Answer (A) is incorrect because A material amount should be allocated among cost of goods sold, work-in-process, and finished goods.

• Answer (B) is incorrect because A material amount should be allocated among cost of goods sold, work-in-process, and finished goods.

• Answer (C) is correct. Overapplied or underapplied overhead should be disposed of at the end of an accounting period by transferring the balance either to cost of goods sold (if the amount is not material) or to cost of goods sold, finished goods inventory, and work-in-process inventory. Theoretically, the allocation is preferred, but, because the amount is usually immaterial, the entire balance is often transferred directly to cost of goods sold. Thus, the entry depends upon the significance of the amount.

• Answer (D) is incorrect because A material amount should be allocated among cost of goods sold, work-in-process, and finished goods.

[290] Gleim #: 5.2.66 -- Source: CIA 585 IV-11

• Answer (A) is incorrect because The NRV is ordinarily recognized as a contra cost in the period the by-product is produced.

• Answer (B) is incorrect because Recognition of a separate net realizable value upon which to allocate some of the common costs attributes the allocation characteristics of main products to by-products.

• Answer (C) is incorrect because Treating the net realizable value of a by-product as an addition to the revenues of the other products attributes the allocation characteristics of main products to by-products.

• Answer (D) is correct. Because of the relatively small sales value, a cost-effective allocation method is used for by-products. The net realizable value of by-products is usually deducted from the cost of the main products.
Answer (A) is correct. Life-cycle costing estimates a product’s revenues and expenses over its expected life cycle. This approach is especially useful when revenues and related costs do not occur in the same periods. It emphasizes the need to price products to cover all costs, not just those for production. Hence, costs are determined for all value-chain categories: upstream (R&D, design), manufacturing, and downstream (marketing, distribution, and customer service). The result is to highlight upstream and downstream costs in the cost planning process that often receive insufficient attention.

Answer (B) is incorrect because The life-cycle model includes the upstream (R&D and design) and downstream (marketing, distribution, and customer service) elements of the value chain as well as manufacturing costs.

Answer (C) is incorrect because Life-cycle costing emphasizes the significance of locked-in costs, target costing, and value engineering for pricing and cost control. Thus, cost savings at all stages of the life cycle are important.

Answer (D) is incorrect because The life-cycle model includes the upstream (R&D and design) and downstream (marketing, distribution, and customer service) elements of the value chain as well as manufacturing costs.

Answer (A) is incorrect because Gross margin, not contribution margin, will appear in the reports prepared under the rules for external financial reporting.

Answer (B) is correct. Under variable costing, only costs that vary with the level of production are treated as product costs. Thus, internal income figures will vary closely with sales. Under absorption costing, all production costs (both variable and fixed) are treated as product costs. Thus, external income figures are influenced by both units sold and productive output.

Answer (C) is incorrect because Depending on the firm’s cost structure, higher unit costs can occur under either system.

Answer (D) is incorrect because Fixed S&A expenses are treated as period costs under both systems.
Answer (A) is incorrect because the amount of $1,060,000 equals inventoriable costs under absorption costing.

Answer (B) is incorrect because the amount of $800,000 equals only the prime costs.

Answer (C) is **correct**. The only costs capitalized are the variable costs of manufacturing. Prime costs (direct materials and direct labor) are variable.

<table>
<thead>
<tr>
<th>Costs</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime costs (direct materials and direct labor)</td>
<td>$800,000</td>
</tr>
<tr>
<td>Variable manufacturing overhead</td>
<td>100,000</td>
</tr>
<tr>
<td><strong>Total inventoriable costs</strong></td>
<td><strong>$900,000</strong></td>
</tr>
</tbody>
</table>

Answer (D) is incorrect because the amount of $980,000 includes the variable selling and other expenses.

Answer (A) is incorrect because the amount of $20,000 equals normal spoilage for the month.

Answer (B) is **correct**. Normal spoilage is an inventoriable cost of production that is charged to cost of goods sold when the units are sold. Abnormal spoilage is a period cost recognized when incurred. The $50,000 of abnormal spoilage is therefore expensed during May. In addition, 50% of the normal spoilage is debited to cost of goods sold because 50% (25,000 ÷ 50,000) of the units completed were sold during the period. No spoilage is allocated to work-in-process because inspection occurs after completion. Thus, the normal spoilage expensed during the month is $10,000 ($20,000 × 50%). Total spoilage charged against revenue is $60,000 ($50,000 + $10,000).

Answer (C) is incorrect because the amount of $50,000 is abnormal spoilage.

Answer (D) is incorrect because the amount of $70,000 is the sum of normal spoilage and abnormal spoilage.

Answer (A) is incorrect because machine hours are irrelevant to the cafeteria.

Answer (B) is incorrect because materials handling is not related to machine hours.

Answer (C) is **correct**. Machine hours are a direct measure of the level of use of a robotic painting operation.

Answer (D) is incorrect because the number of times the machinery has to be set up bears no relationship to the number of hours of use.
Answer (A) is incorrect because the amount of $10,000,000 is not supported by the information given.

Answer (B) is incorrect because the amount of $12,200,000 improperly excludes the $100,000 of warranty costs for Year 11.

Answer (C) is correct. Life-cycle costing takes into account costs incurred at all stages of the value-chain, not just manufacturing. The life-cycle cost for this product is thus $12,300,000 ($5,000,000 + $7,000,000 + $200,000 + $100,000).

Answer (D) is incorrect because the amount of $12,000,000 improperly excludes future warranty costs.

Answer (A) is incorrect because the amount of $450,000 is the inventoriable cost under variable costing.

Answer (B) is incorrect because the amount of $400,000 does not include $80,000 of fixed manufacturing overhead and $50,000 of variable manufacturing overhead.

Answer (C) is correct. The absorption method is required for financial statements prepared according to GAAP. It charges all costs of production to inventories. The variable cost of materials of $300,000, direct labor of $100,000, variable manufacturing overhead of $50,000, and the fixed manufacturing overhead of $80,000 are included. They total $530,000.

Answer (D) is incorrect because the amount of $590,000 includes the fixed and variable selling and administrative costs.

Answer (A) is correct. Target costing begins with a target price, which is the expected market price given the company’s knowledge of its customers and competitors. Subtracting the unit target profit margin determines the long-term target cost. If this cost is lower than the full cost, the company may need to adopt comprehensive cost-cutting measures. For example, in the furniture industry, certain price points are popular with buyers: A couch might sell better at $400 than at $200 because consumers question the quality of a $200 couch and thus will not buy the lower-priced item. The result is that furniture manufacturers view $400 as the target price of a couch, and the cost must be lower.

Answer (B) is incorrect because all product cost categories are addressed by target costing.

Answer (C) is incorrect because the manner in which raw materials costs are accounted for is irrelevant.

Answer (D) is incorrect because all product cost categories are addressed by target costing.
[299] Gleim #: 5.1.25 -- Source: CMA 1283 4-1

- Answer (A) is incorrect because The amount of $44 properly includes direct labor and both components of manufacturing overhead but improperly includes a portion of selling expenses.

- Answer (B) is correct. Conversion costs consist of labor plus fixed and variable manufacturing overhead. The total is $41 ($20 + $15 + $6).

- Answer (C) is incorrect because The amount of $48 properly includes direct labor and both components of manufacturing overhead but improperly includes selling expenses.

- Answer (D) is incorrect because The amount of $35 properly includes direct labor but improperly includes only the variable portion of manufacturing overhead.

[300] Gleim #: 5.2.70 -- Source: CMA 0408 2-120

- Answer (A) is incorrect because The physical quantities, or physical unit, method is one method of allocating joint costs to joint products.

- Answer (B) is incorrect because The gross market value, or sales-value at split-off, method is one method of allocating joint costs to joint products.

- Answer (C) is incorrect because The net realizable value method is one method of allocating joint costs to joint products.

- Answer (D) is correct. No “separable production cost method” is recognized for allocating joint costs. The nature of the problem is such that all costs are joint and cannot be separated.

[301] Gleim #: 6.1.13 -- Source: Publisher

- Answer (A) is incorrect because With the elimination of central receiving areas and central warehouses that typically accompanies the institution of a JIT system, hard copy receiving reports are unnecessary.

- Answer (B) is incorrect because Under JIT, a central receiving area and central warehouse are not needed because deliveries are made by suppliers directly to the area of production.

- Answer (C) is correct. Under a JIT system, the quality of parts provided by suppliers is verified by use of statistical controls rather than inspection of incoming goods. Storage, counting, and inspection are eliminated in an effort to perform only value-adding work.

- Answer (D) is incorrect because Frequent receipt of deliveries from suppliers often means less need for a sophisticated inventory control system and for control personnel.
[302] Gleim #: 5.3.82 -- Source: Publisher

- Answer (A) is correct. The predetermined overhead application rate is found by dividing the total budgeted overhead by the budgeted direct labor cost. Hence, the predetermined overhead application rate is 1.78 \( \frac{961,200}{(15 \times 36,000 \text{ hours})} \).

- Answer (B) is incorrect because The figure of 2.09 results from dividing total actual overhead by the budgeted direct labor cost.

- Answer (C) is incorrect because The figure of 1.83 results from dividing total budgeted overhead by the actual direct labor cost.

- Answer (D) is incorrect because The figure of 2.15 results from dividing total actual overhead by the actual direct labor cost.

[303] Gleim #: 4.3.86 -- Source: CMA 0408 2-156

- Answer (A) is incorrect because The per-unit engineering cost for Product A is $4.00.

- Answer (B) is correct. The first step in performing an activity-based costing assignment is to divide the dollar amount of the indirect cost activity in question by the number of units of the appropriate allocation base. Total engineering costs for both products amounted to $300,000. Between them, Products A and B had 30 (12 + 18) production orders. Thus, the allocation rate is $10,000 per order \( \frac{300,000}{30 \text{ orders}} \). The amount allocated to Product B is $180,000 (18 orders \times $10,000). Dividing this amount by the number of units of Product B (12,000) results in a per-unit engineering cost of $15.00.

- Answer (C) is incorrect because The amount of $10.00 is the inspection cost, not the engineering cost, per unit.

- Answer (D) is incorrect because The amount of $29.25 results from allocating the total $975,000 using two bases and then dividing by the units of Product B \( \frac{975,000 \times (12 \div 20) \times (18 \div 30)}{12,000} = 29.25 \), which is incorrect.

[304] Gleim #: 3.1.4 -- Source: CMA 694 3-3

- Answer (A) is incorrect because All factory overhead is included in conversion costs, not just indirect labor.

- Answer (B) is correct. Conversion costs consist of direct labor and factory overhead. These are the costs of converting raw materials into a finished product.

- Answer (C) is incorrect because Direct materials are not an element of conversion costs; they are a prime cost.

- Answer (D) is incorrect because Direct labor is also an element of conversion costs.
[305] Gleim #: 3.2.49 -- Source: Publisher

- Answer (A) is incorrect because The amount of $27,000 is determined by adding annual fixed maintenance costs of $6,000 to variable maintenance costs for the month of $21,000. Fixed maintenance costs for the month should be added instead.
- Answer (B) is incorrect because The amount of $21,000 only includes the variable maintenance costs.
- Answer (C) is incorrect because The amount of $20,500 maintenance cost is arrived at by subtracting the $500 fixed costs per month from the $21,000 variable costs.
- Answer (D) is correct. The maintenance cost is a mixed cost containing both fixed and variable elements. To calculate the monthly total fixed costs, divide the annual amount by 12.

  Monthly fixed maintenance costs: \[
  \frac{6,000}{12} = 500
  \]
  Variable maintenance costs: \[
  30,000 \times 0.70/\text{hour} = 21,000
  \]
  Total maintenance costs: \[
  21,500
  \]

[306] Gleim #: 3.3.72 -- Source: Publisher

- Answer (A) is incorrect because Actual spoilage is the spoilage that occurred.
- Answer (B) is incorrect because Residual spoilage is a nonsense term.
- Answer (C) is incorrect because Normal spoilage is expected to occur.
- Answer (D) is correct. Abnormal spoilage is spoilage that is not expected to occur under normal, efficient operation conditions.
Answer (A) is correct. The NRV at split-off for each of the joint products must be determined. Given that Alfa has a $4 selling price and an additional $2 of processing costs, the value at the split-off is $2 per pound. The total value at split-off for 10,000 pounds is $20,000. Betters has a $10 selling price and an additional $2 of processing costs. Thus, the value at split-off is $8 per pound. The total value of 5,000 pounds of Betters is therefore $40,000. The 1,000 pounds of Morefeed has a split-off value of $3 per pound, or $3,000. Assuming that Morefeed (a by-product) is inventoried (recognized in the accounts when produced) and treated as a reduction of joint costs, the allocable joint cost is $90,000 ($93,000 – $3,000). (NOTE: Several other methods of accounting for by-products are possible.) The total net realizable value of the main products is $60,000 ($20,000 Alfa + $40,000 Betters). The allocation to Alfa is $30,000 \([($20,000 ÷ $60,000) × $90,000]\).

- Answer (B) is incorrect because The amount of $31,000 fails to adjust the joint processing cost for the value of the by-product.
- Answer (C) is incorrect because The amount of $60,000 is the amount allocated to Betters.
- Answer (D) is incorrect because The amount of $3,000 is the value of the by-product.

Answer (A) is incorrect because The amount of $1,860 is the amount of conversion costs.

- Answer (B) is incorrect because The amount of $3,300 assumes that materials are added proportionately throughout the process.
- Answer (C) is correct. The unit cost of materials under FIFO is $1.10. Because the 5,000 units in ending work-in-process inventory are 100% complete as to materials, its materials cost consists of $5,500 (5,000 EU × $1.10) of current-period costs. Materials costs incurred in the prior period and attached to the beginning work-in-process inventory are deemed to have been transferred out.
- Answer (D) is incorrect because The amount of $6,450 is based on the unit cost under the weighted-average method.

Answer (A) is correct. There is no systematic relationship between standard dollars shipped and the percentage of scrap.

- Answer (B) is incorrect because A semi-fixed cost as a percentage would move up and down with standard dollars shipped, with a base level higher than zero percent.
- Answer (C) is incorrect because A fixed cost would be a lower percentage when standard dollars shipped were high than when they were low.
- Answer (D) is incorrect because A variable cost would remain a constant percentage of standard dollars shipped.
Answer (A) is incorrect because The term variable method is nonsensical.

Answer (B) is incorrect because The reciprocal method recognizes reciprocal interdepartmental service.

Answer (C) is correct. The three major methods of allocating service department costs, in order of increasing sophistication, are the direct method, the step-down method, and the reciprocal (or simultaneous-equations) method. The direct method is the simplest. It involves allocating all service department costs to production departments without recognizing any service provided by one service department to another. The step-down method is a sequential process that allocates service costs among service as well as production departments. However, once a department’s costs have been allocated, no additional allocations are made back to that department. The reciprocal method uses simultaneous equations to recognize mutual services. The latter method is the most complex.

Answer (D) is incorrect because The direct method does not make allocations to other service departments.

Answer (A) is correct. The factory overhead control account should have a debit of $175,000 for the actual costs incurred and a credit for the $180,000 (60% of direct labor) applied to production. Thus, the net effect is a $5,000 credit balance resulting from the overapplication of overhead.

Answer (B) is incorrect because Overapplied overhead results in a credit to overhead control.

Answer (C) is incorrect because Overhead is overapplied.

Answer (D) is incorrect because Overhead is overapplied.

Answer (A) is correct. Absorption (full) costing considers all manufacturing costs to be inventoriable as product costs. These costs include variable and fixed manufacturing costs, whether direct or indirect. The alternative to absorption is known as variable (direct) costing.

Answer (B) is incorrect because Variable (direct) costing does not inventory fixed overhead.

Answer (C) is incorrect because Conversion costs include direct labor and overhead but not direct materials.

Answer (D) is incorrect because Variable (direct) costing does not inventory fixed overhead.
Answer (A) is incorrect because The amount of $36,280 assumes transfer of 10,000 units of materials.

Answer (B) is correct. The equivalent units of materials equal 10,000 because all materials are added at the beginning of the process, and 10,000 units were started. The equivalent units of conversion costs equal 9,400 [8,000 units completed + (2,000 units in ending inventory × 70%)]. The unit cost of materials is $1.50 ($15,000 ÷ 10,000 EU). The unit cost of conversion is $2.66 ($25,000 ÷ 9,400 EU). Thus, the cost of goods transferred was $33,280 [8,000 units × ($1.50 + $2.66)].

Answer (C) is incorrect because Total costs incurred in production equal $40,000.

Answer (D) is incorrect because The amount of $32,000 is based on 10,000 equivalent units of conversion costs.

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Answer (A) is correct. Joint costs are useful for inventory costing when two or more identifiable products emerge from a common production process. The joint costs of production must be allocated on some basis, such as relative sales value.

Answer (B) is incorrect because Management of one department may have no control over joint costs.

Answer (C) is incorrect because Items such as additional processing costs, competitive conditions in sales markets, and the relative contribution margins of all products derived from the common process must be considered in setting selling prices.

Answer (D) is incorrect because Items such as additional processing costs, competitive conditions in sales markets, and the relative contribution margins of all products derived from the common process must be considered in determining whether to continue producing an item.

---

Answer (A) is incorrect because Allocating spoilage costs between finished goods and work-in-process is an appropriate method of accounting for normal spoilage traceable to a job or process, provided the units in process have passed the inspection point.

Answer (B) is incorrect because Assigning spoilage costs to finished goods is an appropriate method of accounting for normal spoilage traceable to a job or process.

Answer (C) is correct. Abnormal spoilage should be written-off to a special account that is separately reported in the income statement. Costs associated with abnormal spoilage are not inventoried and are therefore treated as a loss in the period of detection.

Answer (D) is incorrect because Charging spoilage costs to manufacturing overhead is an appropriate method of accounting for normal spoilage, assuming the allowance for normal spoilage is incorporated into the predetermined overhead rate.
[316] Gleim #: 5.4.112 -- Source: CMA 697 3-6

- Answer (A) is incorrect because the amount of $72,000 is the variable cost allocation.
- Answer (B) is incorrect because the amount of $122,000 assumes that fixed costs are allocated equally between A and B.
- Answer (C) is incorrect because the amount of $132,000 assumes fixed costs are allocated at a per-page rate based on available capacity ($100,000 ÷ 4,000,000 pages = $.025 per page), not on budgeted usage ($100,000 ÷ 3,600,000 pages = $.0278 per page).
- Answer (D) is correct. Department B is budgeted to use 66 2/3% of total production (2,400,000 ÷ 3,600,000), so it should be allocated fixed costs of $66,667 ($100,000 × 66 2/3%). The variable cost allocation is $72,000 (2,400,000 pages × $.03 per page), and the total allocated is therefore $138,667 ($66,667 + $72,000).

[317] Gleim #: 5.1.17 -- Source: CMA 1290 3-27

- Answer (A) is incorrect because the total variable cost expensed on the variable costing basis was $4,375,000.
- Answer (B) is incorrect because the total variable cost expensed on the variable costing basis was $4,375,000.
- Answer (C) is correct. The unit variable manufacturing cost was $25 ($12 direct materials + $9 direct labor + $4 variable overhead). Other variable costs included selling expenses ($8 per unit) and administrative expenses ($2 per unit). The unit selling and administrative costs actually incurred for sales of 125,000 units sold were the same as the planned unit costs. For example, the actual unit variable selling expense was $8 ($1,000,000 ÷ 125,000 units sold), which equaled the planned unit cost. Thus, total unit variable cost was $35 ($25 + $8 + $2). The total expensed was $4,375,000 (125,000 units sold × $35).
- Answer (D) is incorrect because the total variable cost expensed on the variable costing basis was $4,375,000.

[318] Gleim #: 5.1.32 -- Source: CMA 0408 2-037

- Answer (A) is incorrect because the figure 556 results from using all costs, not just the fixed manufacturing costs.
- Answer (B) is correct. The president intends to engineer her bonus by "producing for inventory," that is, taking advantage of the fact that, under absorption costing, fixed costs can be piled up in ending inventory (this is why performance should be measured internally using variable costing). Each additional unit produced but left unsold adds to operating income its incremental amount of fixed production cost. Fixed production costs in Troughton's relevant range are $20 per unit ($100,000 ÷ 5,000 units). Thus, to generate $30,000 additional operating income, 1,500 units ($30,000 ÷ $20) must be produced and moved to ending inventory.
- Answer (C) is incorrect because the figure 600 results from including fixed S&A expenses in the per-unit cost calculation.
- Answer (D) is incorrect because the figure 7,500 results from dividing fixed selling and administrative costs, rather than incremental operating income, by the $20 per unit fixed production costs.
Answer (A) is incorrect because Tire costs are readily and directly identifiable with each automobile and, thus, are direct materials costs.

Answer (B) is incorrect because Delivery costs are readily and directly identifiable with the tires delivered. Thus, they are direct materials costs.

Answer (C) is incorrect because The cost of the laborers who place tires on each automobile is readily and directly identifiable with each automobile. Hence, it is a direct labor cost.

Answer (D) is correct. The cost of small tools used in mounting tires cannot be identified solely with the manufacture of a specific automobile. This cost should be treated as factory overhead because it is identifiable with the production process.

Answer (A) is incorrect because The amount of $5,500 is the amount of materials cost in the ending work-in-process inventory.

Answer (B) is incorrect because The amount of $2,250 is based on the weighted-average method.

Answer (C) is incorrect because The amount of $3,100 is based on the equivalent units for materials.

Answer (D) is correct. The FIFO unit conversion cost for the current period is $.62. Moreover, ending work-in-process consists of 3,000 equivalent units of conversion cost (5,000 physical units × 60%). Accordingly, the conversion cost in the ending work-in-process inventory consists of $1,860 (3,000 EU × $.62) of current-period cost. The conversion cost incurred in the prior period and attached to the beginning work-in-process inventory is deemed to have been transferred out.

Answer (A) is correct. The weighted-average method does not distinguish between the work done in the prior period and the work done in the current period. Accordingly, the 92,000 completed units represent 92,000 weighted-average EUP. The 24,000 units in ending work-in-process are 40% complete as to conversion costs, so they equal 9,600 EUP. Hence, total EUP for conversion costs are 101,600 (92,000 + 9,600). The sum of the conversion costs accumulated in beginning work-in-process and incurred during the period is $609,600 ($20,320 + $15,240 + $182,880 + $391,160). Thus, weighted-average unit cost is $6.00 ($609,600 ÷ 101,600 EUP).

Answer (B) is incorrect because The amount of $5.83 is the equivalent unit conversion cost based on FIFO.

Answer (C) is incorrect because The amount of $5.65 omits the conversion costs in beginning work-in-process.

Answer (D) is incorrect because The amount of $6.20 is based on a FIFO calculation of equivalent units and a weighted-average calculation of costs.
Answer (A) is incorrect because Scrap consists of raw materials left over from the production cycle but still usable for purposes other than those for which they were originally intended. Scrap may be sold to outside customers, usually for a nominal amount, or may be used for a different production process.

Answer (B) is incorrect because Waste is the amount of raw materials left over from a production process or production cycle for which there is no further use. Waste is usually not salable at any price and must be discarded.

Answer (C) is incorrect because Abnormal spoilage is spoilage that is not expected to occur under normal, efficient operating conditions. The cost of abnormal spoilage should be separately identified and reported to management. Abnormal spoilage is typically treated as a period cost (a loss) because of its unusual nature.

Answer (D) is incorrect because Abnormal spoilage is spoilage that is not expected to occur under normal, efficient operating conditions. The cost of abnormal spoilage should be separately identified and reported to management. Abnormal spoilage is typically treated as a period cost (a loss) because of its unusual nature.

Answer (D) is correct. By-products are products of relatively small total value that are produced simultaneously from a common manufacturing process with products of greater value and quantity (joint products).

Answer (A) is correct. The equivalent units for direct materials equals 195,000 units (20,000 BWIP + 150,000 units started and completed + 25,000 EWIP). This calculation recognizes that direct materials had not been added to beginning inventory (60% complete) and spoiled units (70% complete), but that ending inventory (80% complete) includes direct materials.

Answer (B) is incorrect because The number of 200,000 units includes 100% of the defective units.

Answer (C) is incorrect because The number of 175,000 units does not include 20,000 units from BWIP.

Answer (D) is incorrect because The number of 181,500 units includes 150,000 units plus 40% of BWIP, 80% of EWIP, and 70% of the defective units.
Answer (A) is incorrect because Failing to subtract manufacturing overhead results in $625,000.

Answer (B) is incorrect because Failing to subtract ending work-in-process inventory results in $20,000.

Answer (C) is correct. The standard calculation for cost of goods manufactured can be applied “back into” Gruber Fittings’ beginning work-in-process inventory amount:

| Direct materials | $450,000 |
| Direct labor     | $280,000 |
| Manufacturing overhead | $375,000 |
| Total manufacturing costs | $1,105,000 |
| Add: beginning work-in-process | $250,000 |
| Less: ending work-in-process | $(230,000) |
| Cost of goods manufactured | $1,125,000 |

Answer (D) is incorrect because Improperly adding direct materials, direct labor, overhead, and ending work-in-process, then subtracting cost of goods manufactured results in $210,000.

Answer (A) is incorrect because The unit cost per machine hour or the unit cost directly attributable to Z is $1.20.

Answer (B) is incorrect because The unit cost assigned to X on a direct-tracing basis is $4.80.

Answer (C) is incorrect because The unit cost assigned to Z on the machine-hour basis is $3.60.

Answer (D) is correct. ABC is one means of improving a cost system to avoid what has been called peanut-butter costing. Inaccurately averaging or spreading costs like peanut butter over products or service units that use different amounts of resources results in product-cost cross-subsidization. This term describes the condition in which the miscosting of one product causes the miscosting of other products. In a traditional system, direct labor and direct materials are traced to products or service units, a single pool of costs (overhead) is accumulated for a given organizational unit, and these costs are then assigned using an allocative rather than a tracing procedure. The effect is an averaging of costs that may result in significant inaccuracy when products or service units do not use similar amounts of resources. The total change order cost is $6,000 ($6,000 ÷ [(2 × 1,000) + (3 × 1,000)] hours), and the unit costs assigned on a machine-hour basis to X and Z are $2.40 ($1.20 × 2 hours) and $3.60 ($1.20 × 3 hours), respectively. However, if the change order costs are traced directly to X and Z, the unit costs assigned will be $4.80 [(8 orders × $600) ÷ 1,000 units] and $1.20 [(2 orders × $600) ÷ 1,000 units], respectively. Hence, the unit amount by which machine-hour-based assignment overcosts Z and undercosts X (the cross-subsidy) is $2.40 ($3.60 – $1.20 or $4.80 – $2.40).
[326] Gleim #: 3.1.27 -- Source: CMA 685 5-1

- Answer (A) is incorrect because Some overhead costs are variable but cannot be directly traced to a particular product.
- Answer (B) is incorrect because It includes costs that cannot be directly traced.
- Answer (C) is correct. Prime costs are direct materials and direct labor. They are directly identifiable elements of production costs and are directly traceable to the product.
- Answer (D) is incorrect because It includes costs that cannot be directly traced.

[327] Gleim #: 4.2.17 -- Source: CIA 1185 IV-6

- Answer (A) is incorrect because The cost of good units produced does not include abnormal spoilage costs.
- Answer (B) is correct. Abnormal spoilage is spoilage that is not expected to occur under normal, efficient operating conditions. Because of its unusual nature, abnormal spoilage is typically treated as a loss in the period in which it is incurred.
- Answer (C) is incorrect because Abnormal spoilage costs must be taken out of the manufacturing account.
- Answer (D) is incorrect because Abnormal spoilage costs are not considered a component of the cost of good units produced.

[328] Gleim #: 4.2.10 -- Source: Publisher

- Answer (A) is incorrect because The amount of $69,259 results from using the equivalent units calculated under FIFO (81,000) in determining the unit conversion cost under the weighted-average method.
- Answer (B) is correct. For conversion costs, the equivalent-unit calculation under the weighted-average method is as follows:

<table>
<thead>
<tr>
<th></th>
<th>EUP</th>
<th>%</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning WIP</td>
<td>10,000</td>
<td>100%</td>
<td>10,000</td>
</tr>
<tr>
<td>Started and completed</td>
<td>75,000</td>
<td>100%</td>
<td>75,000</td>
</tr>
<tr>
<td>Ending WIP</td>
<td>5,000</td>
<td>60%</td>
<td>3,000</td>
</tr>
<tr>
<td>Weighted-average EUP for conversion</td>
<td>88,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The conversion costs consisted of $16,000 in beginning inventory and $50,000 incurred during the month, for a total of $66,000. Unit conversion cost is therefore $.75 ($66,000 ÷ $88,000 EU). Thus, the total conversion cost transferred was $63,750 [(10,000 units in BWIP + 80,000 units started – 5,000 units in EWIP) × $.75].

- Answer (C) is incorrect because The amount of $66,000 equals the total conversion costs to be accounted for.
- Answer (D) is incorrect because The amount of $64,148 is the conversion cost transferred out under a FIFO assumption.
Answer (A) is incorrect because a sunk cost is the result of a past irrevocable action; it is not important to future decisions.

Answer (B) is incorrect because a target cost is the maximum allowable cost of a product and is calculated before the product is designed or produced.

Answer (C) is incorrect because an indirect cost does not have a clear relationship to output.

Answer (D) is correct. A cost that bears an observable and known relationship to a quantifiable activity base is known as an engineered cost. Engineered costs have a clear relationship to output. Direct materials would be an example of an engineered cost.
Answer (A) is incorrect because the total delivery cost for muffins exceeds that of cheesecake by $75.

Answer (B) is correct. White’s first step is to calculate the gross margin on the two products:

<table>
<thead>
<tr>
<th></th>
<th>Muffins</th>
<th>Cheesecake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>$53,000</td>
<td>$46,000</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>(26,000)</td>
<td>(21,000)</td>
</tr>
<tr>
<td>Gross margin</td>
<td>$27,000</td>
<td>$25,000</td>
</tr>
</tbody>
</table>

The next step is to calculate total delivery cost for each product:

<table>
<thead>
<tr>
<th></th>
<th>Muffins</th>
<th>Cheesecake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of deliveries</td>
<td>150</td>
<td>85</td>
</tr>
<tr>
<td>Times: minutes per delivery</td>
<td>× 10</td>
<td>× 15</td>
</tr>
<tr>
<td>Total delivery minutes</td>
<td>1,500</td>
<td>1,275</td>
</tr>
<tr>
<td>Times: minutes per hour</td>
<td>× 60</td>
<td>× 60</td>
</tr>
<tr>
<td>Total delivery hours</td>
<td>25.00</td>
<td>21.25</td>
</tr>
<tr>
<td>Times: delivery cost per hour</td>
<td>× $20</td>
<td>× $20</td>
</tr>
<tr>
<td>Total delivery cost</td>
<td>$500</td>
<td>$425</td>
</tr>
</tbody>
</table>

The operating profits on these two products, and the difference between them, can now be determined:

Muffins: $27,000 – $500 = $26,500
Cheesecake: $25,000 – $425 = $24,575
Excess: $1,925

Answer (C) is incorrect because Muffins exceed cheesecake by $2,000 only at the gross margin, not the total profitability level.

Answer (D) is incorrect because Muffins ($26,500 ÷ $53,000 = 50.0%) have a lower profitability percentage than cheesecake ($24,575 ÷ $46,000 = 53.4%).
[331] Gleim #: 5.3.81 -- Source: Publisher

- Answer (A) is incorrect because Normal costing uses budgeted rates only for overhead costs.

- Answer (B) is incorrect because Actual costing uses only actual direct and overhead costs.

- Answer (C) is correct. Extended normal costing assigns both direct costs (such as labor and materials) and overhead to cost objects by using budgeted rates. The direct cost assigned equals the budgeted rate times the actual amount of the direct-cost input. The overhead assigned equals the budgeted rate times the actual amount of whichever driver or other base is used for cost assignment purposes. The use of budgeted rates for overhead as well as direct costs may be helpful to avoid fluctuations during the year. It is also helpful when some direct costs, such as direct labor, may not be known until year-end.

- Answer (D) is incorrect because Standard costing applies budgeted rates to the standard (not actual) inputs allowed.

[332] Gleim #: 3.3.73 -- Source: Publisher

- Answer (A) is incorrect because Scrap consists of raw materials left over from the production cycle but still usable for purposes other than those for which it was originally intended. Scrap may be sold to outside customers, usually for a nominal amount, or may be used for a different production process.

- Answer (B) is correct. Waste is the amount of raw materials left over from a production process or production cycle for which there is no further use. Waste is usually not salable at any price and must be discarded.

- Answer (C) is incorrect because Abnormal spoilage is spoilage that is not expected to occur under normal, efficient operating conditions. The cost of abnormal spoilage should be separately identified and reported to management. Abnormal spoilage is typically treated as a period cost (a loss) because of its unusual nature.

- Answer (D) is incorrect because Normal spoilage is the spoilage that occurs under normal operating conditions. It is essentially uncontrollable in the short run. Normal spoilage arises under efficient operations and is treated as a product cost.
[333] Gleim #: 4.1.6 -- Source: CMA 0205 2-22

- Answer (A) is incorrect because the normal spoilage for the period is 1,000 units.
- Answer (B) is incorrect because the total spoilage for the period is 1,700 units.
- Answer (C) is incorrect because failing to subtract the ending work-in-process to arrive at total spoilage results in 3,200 units.
- Answer (D) is correct. Kepler’s abnormal spoilage for the period can be calculated as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning work-in-process</td>
<td>2,200</td>
</tr>
<tr>
<td>Add: started and completed</td>
<td>4,000</td>
</tr>
<tr>
<td>Less: transferred out</td>
<td>(3,000)</td>
</tr>
<tr>
<td>Less: ending work-in-process</td>
<td>(1,500)</td>
</tr>
<tr>
<td>Total spoilage for period</td>
<td>1,700</td>
</tr>
<tr>
<td>Less: normal spoilage</td>
<td>(1,000)</td>
</tr>
<tr>
<td>Abnormal spoilage for period</td>
<td>700</td>
</tr>
</tbody>
</table>

[334] Gleim #: 4.4.92 -- Source: Publisher

- Answer (A) is incorrect because the amount of $18,900,000 omits the variable costs.
- Answer (B) is incorrect because the amount of $26,910,000 equals the life-cycle costs at a unit price of $1,125.
- Answer (C) is correct. At a unit price of $900, upstream costs equal $3,000,000 ($1,000,000 + $2,000,000). Fixed costs of production and the fixed downstream costs equal $15,900,000 [($1,500,000 + $1,500,000 + $180,000) × 5 years], and variable costs of production and the variable downstream costs equal $7,200,000 [6,000 units × ($100 + $100 + $40) × 5 years]. Thus, the life cycle costs at a price of $900 equal $26,100,000 ($3,000,000 + $15,900,000 + $7,200,000).
- Answer (D) is incorrect because the amount of $28,350,000 equals the life-cycle costs at a unit price of $750.
[335] Gleim #: 6.6.61 -- Source: CMA 1296 3-22

- Answer (A) is correct. According to SMA 4R, internal failure costs are incurred when detection of defective products occurs before shipment. Examples of internal failure costs are scrap, rework, tooling changes, and downtime.

- Answer (B) is incorrect because Prevention costs are incurred to avoid defective output. Examples include preventive maintenance, employee training, review of equipment design, and evaluation of suppliers.

- Answer (C) is incorrect because Training costs are prevention costs.

- Answer (D) is incorrect because The costs of external failure, such as warranty expense, product liability, and customer ill will, arise when problems are discovered after products have been shipped.

[336] Gleim #: 3.3.104 -- Source: CMA 690 5-27

- Answer (A) is correct. Discretionary costs are characterized by uncertainty about the relationship between input (the costs) and the value of the related output. Advertising and research are examples. They should be contrasted with engineered costs, that is, costs having a clear input-output relationship (e.g., the cost of direct materials).

- Answer (B) is incorrect because Opportunity cost is the return available from the next best use of a resource.

- Answer (C) is incorrect because Differential (incremental) costs are those that vary among decision options.

- Answer (D) is incorrect because Committed costs are fixed costs arising from the possession of plant and equipment and a basic organization. These costs are affected primarily by long-run decisions as to a company’s desired capacity.


- Answer (A) is correct. Prevention attempts to avoid defective output, e.g., by employee training, review of equipment design, preventive maintenance, and evaluation of suppliers. Accordingly, the preventive costs equal $701,000 ($275,000 design reviews + $180,000 process engineering + $90,000 scheduled maintenance + $156,000 training).

- Answer (B) is incorrect because The amount of $768,000 includes the cost of product testing equipment and labor inspection of raw materials. Both costs are appraisal costs.

- Answer (C) is incorrect because The amount of $736,000 includes the cost of product testing equipment (an appraisal cost).

- Answer (D) is incorrect because The amount of $643,000 omits scheduled equipment maintenance and includes labor inspection of raw materials (an appraisal cost).
Answer (A) is incorrect because Machine hours is an appropriate activity base when overhead varies with machine time used.

Answer (B) is correct. In labor intensive industries, overhead is usually allocated based on a labor activity base. If more overhead is incurred by the more highly skilled and paid employees, the overhead rate should be based upon direct labor cost rather than direct labor hours.

Answer (C) is incorrect because Direct labor hours is appropriate when overhead is incurred uniformly by all types of employees.

Answer (D) is incorrect because Direct materials cost would be inappropriate for a labor intensive industry.

Answer (A) is incorrect because Allocation does not affect the coordination of production activity.

Answer (B) is correct. Service department costs are indirect costs allocated to production departments to better determine overhead rates when the measurement of full (absorption) costs is desired. Overhead should be charged to production on some equitable basis to provide information useful for such purposes as allocation of resources, pricing, measurement of profits, and cost reimbursement.

Answer (C) is incorrect because Allocation of costs has no effect on the efficiency of the provision of services when the department that receives the allocation has no control over the costs being controlled.

Answer (D) is incorrect because Costs can be controlled by the service departments without allocation. However, allocation encourages cost control by the production departments. If the costs are allocated, managers have an incentive not to use services indiscriminately.

Answer (A) is incorrect because Variable (direct) costing does not inventory fixed overhead.

Answer (B) is correct. Absorption (full) costing considers all manufacturing costs to be inventoriable as product costs. These costs include variable and fixed manufacturing costs, whether direct or indirect. The alternative to absorption is known as variable (direct) costing.

Answer (C) is incorrect because Conversion costs include direct labor and overhead but not direct materials.

Answer (D) is incorrect because Variable (direct) costing does not inventory fixed overhead.
[341] Gleim #: 4.3.72 -- Source: CMA 693 3-2

- Answer (A) is **correct**. With the automation of factories and the corresponding emphasis on activity-based costing (ABC), companies are finding new ways of allocating indirect factory overhead. One change is that plant-wide application rates are being used less often because a closer matching of costs with cost drivers provides better information to management. ABC results in a more accurate application of indirect costs because it provides more refined data. Instead of a single cost goal for a process, a department, or even an entire plant, an indirect cost pool is established for each identified activity. The related cost driver, the factor that changes the cost of the activity, also is identified.

- Answer (B) is incorrect because Multiple cost pools are preferable. They permit a better matching of indirect costs with cost drivers.

- Answer (C) is incorrect because Throughput time (the rate of production over a stated time), clearly drives (influences) costs.

- Answer (D) is incorrect because Computerization has decreased the amount of direct labor to the point that some companies are treating direct labor as an indirect factory overhead cost.

[342] Gleim #: 5.1.20 -- Source: CMA 1285 4-14

- Answer (A) is incorrect because The amount of $200,000 is the operating income under variable costing.

- Answer (B) is incorrect because The amount of $600,000 is the operating income that results from capitalizing $240,000 fixed manufacturing costs and $160,000 of selling and administrative costs (the $160,000 is incorrect as all selling and administrative costs should be expensed).

- Answer (C) is **correct**. Absorption costing net income is computed as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales (120,000 units × $40)</td>
<td>$4,800,000</td>
</tr>
<tr>
<td>Variable production costs</td>
<td></td>
</tr>
<tr>
<td>(200,000 units × $30)</td>
<td>$6,000,000</td>
</tr>
<tr>
<td>Fixed production costs</td>
<td>600,000</td>
</tr>
<tr>
<td>Total production costs</td>
<td>$6,600,000</td>
</tr>
<tr>
<td>Ending inventory (80,000 units × $33)</td>
<td>(2,640,000)</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>(3,960,000)</td>
</tr>
<tr>
<td>Gross profit</td>
<td>$ 840,000</td>
</tr>
<tr>
<td>Selling and administrative expenses</td>
<td>(400,000)</td>
</tr>
<tr>
<td>Operating income</td>
<td>$ 440,000</td>
</tr>
</tbody>
</table>

- Answer (D) is incorrect because The amount of $840,000 is the gross profit under absorption costing, i.e., before selling and administrative expenses.
[343] Gleim #: 3.2.40 -- Source: CMA 694 3-5

- **Answer (A) is correct.** A fixed cost is one that remains unchanged within the relevant range for a given period despite fluctuations in activity. Such items as rent, property taxes, depreciation, and supervisory salaries are normally fixed costs because they do not vary with changes in production. Power costs, however, are at least partially variable because they increase as usage increases.

- **Answer (B) is incorrect because Rent is an example of fixed factory overhead.**

- **Answer (C) is incorrect because Property taxes are an example of fixed factory overhead.**

- **Answer (D) is incorrect because Depreciation is an example of fixed factory overhead.**

[344] Gleim #: 5.1.35 -- Source: CMA 0408 2-102

- **Answer (A) is incorrect because Marketing costs for the airline cannot be traced to individual trips.**

- **Answer (B) is correct.** Fuel, food service, and airport landing fees are all variable and traceable to individual flights.

- **Answer (C) is incorrect because Flight crew salaries do not vary with the number of trips or miles (fixed cost).**

- **Answer (D) is incorrect because Communication system operation and ramp personnel do not vary with the number of trips or miles (fixed cost).**

[345] Gleim #: 4.3.66 -- Source: CMA 696 3-16

- **Answer (A) is incorrect because Activity-based costing identifies the activities associated with cost incurrence and the drivers of those activities. Costs are then assigned to cost objects based on the demands they make on activities.**

- **Answer (B) is incorrect because Process value analysis relates to a single process.**

- **Answer (C) is correct.** Value-chain analysis for assessing competitive advantage is an integral part of the strategic planning process. Value-chain analysis is a continuous process of gathering, evaluating, and communicating information for business decision making. A value chain depicts how customer value accumulates along a chain of activities that lead to an end product or service. A value chain consists of the activities required to research and develop, design, produce, market, deliver, and support its product. Extended value-chain analysis expands the view of the parties involved to include those upstream (e.g., suppliers) and downstream (e.g., customers).

- **Answer (D) is incorrect because Computer-integrated manufacturing uses computers to control all aspects of manufacturing in a single location.**
Answer (A) is incorrect because The life-cycle model includes the upstream (R&D and design) and downstream (marketing, distribution, and customer service) elements of the value chain as well as manufacturing costs.

Answer (B) is incorrect because Life-cycle costing emphasizes the significance of locked-in costs, target costing, and value engineering for pricing and cost control. Thus, cost savings at all stages of the life cycle are important.

Answer (C) is correct. Life-cycle costing estimates a product's revenues and expenses over its expected life cycle. This approach is especially useful when revenues and related costs do not occur in the same periods. It emphasizes the need to price products to cover all costs, not just those for production. Hence, costs are determined for all value-chain categories: upstream (R&D, design), manufacturing, and downstream (marketing, distribution, and customer service). The result is to highlight upstream and downstream costs in the cost planning process that often receive insufficient attention.

Answer (D) is incorrect because The life-cycle model includes the upstream (R&D and design) and downstream (marketing, distribution, and customer service) elements of the value chain as well as manufacturing costs.

Answer (A) is incorrect because The amount of $3.10 is based on FIFO equivalent units and weighted-average cost.

Answer (B) is incorrect because Omitting the equivalent units in EWIP results in $3.31.

Answer (C) is incorrect because The FIFO unit cost is $2.92.

Answer (D) is correct. The weighted-average method averages the work performed in the prior period with the work done in the current period. The two layers of units to analyze are those completed during the period and those still in EWIP. The units completed totaled 184,000. The 48,000 units in EWIP are 40% complete as to conversion cost, the equivalent of 19,200 units. Thus, total equivalent units for conversion cost under the weighted-average method equaled 203,200. Moreover, the conversion cost in BWIP is combined in the weighted-average calculation with the conversion cost incurred during the current period. The equivalent-unit conversion cost is therefore $3.00 \([\frac{20,320 \text{ DL in BWIP} + 15,240 \text{ FOH in BWIP} + 182,880 \text{ DL in May} + 391,160 \text{ FOH in May}}{203,200}]\).

Answer (A) is incorrect because The three basic goals of MRP are the right part in the right quantity at the right time.

Answer (B) is correct. The three basic goals of MRP are the right part in the right quantity at the right time.

Answer (C) is incorrect because The three basic goals of MRP are the right part in the right quantity at the right time.

Answer (D) is incorrect because The three basic goals of MRP are the right part in the right quantity at the right time.
[349] Gleim #: 4.2.29 -- Source: Publisher

- Answer (A) is incorrect because the weighted-average cost per equivalent unit is $2.30.
- Answer (B) is incorrect because total materials cost divided by FIFO equivalent units of materials equals $2.51.
- Answer (C) is correct. The FIFO equivalent units of materials equal 208,000. Accordingly, unit cost of materials under FIFO is $2.25 ($468,000 materials cost in May ÷ 208,000 EU).
- Answer (D) is incorrect because dividing May’s costs by the equivalent units calculated under the weighted-average method results in $2.06.

[350] Gleim #: 6.1.15 -- Source: Publisher

- Answer (A) is incorrect because lean production is often part of a JIT manufacturing system.
- Answer (B) is incorrect because cells are the configurations of manufacturing equipment that facilitate JIT and lean production.
- Answer (C) is incorrect because kanban is a Japanese system for inventory control that is often implemented as part of JIT manufacturing.
- Answer (D) is correct. Safety stock involves always keeping enough raw materials on hand to overcome the effects of an interruption in supply. In a JIT system, manufacturers are completely dependent upon the reliability of their suppliers in delivering raw materials as they are needed. Keeping safety stock undercuts the entire philosophy of JIT.

[351] Gleim #: 5.2.67 -- Source: CMA 0408 2-117

- Answer (A) is correct. Joint products must be valued for external financial reporting purposes based on the full (absorption) cost of the product. Any common costs attributable to the joint production process must therefore be allocated on a systematic and rational basis.
- Answer (B) is incorrect because a variance between budgeted and actual costs is scrutinized regardless of the method of allocating common costs.
- Answer (C) is incorrect because the decision to discontinue a joint product is based on the incremental profit from that product, not the allocation of common costs.
- Answer (D) is incorrect because the selling price of a by-product is determined by market forces outside the manufacturer’s control, not by the manufacturer’s cost structure.
[352] Gleim #: 3.3.99 -- Source: CMA 1277 5-5

- Answer (A) is incorrect because The difference in total costs that results from selecting one alternative instead of another is an incremental cost.
- Answer (B) is incorrect because A cost that cannot be avoided because it has already been incurred is a sunk cost.
- Answer (C) is incorrect because A cost that continues to be incurred even though there is no activity is a fixed cost.
- Answer (D) is correct. An imputed cost does not entail any dollar outlay but is relevant to the decision-making process.

[353] Gleim #: 5.3.92 -- Source: CIA 1185 IV-10

- Answer (A) is incorrect because Cost of goods sold should be credited (not debited) for its share of overapplied overhead.
- Answer (B) is incorrect because Cost of goods sold, finished goods inventory, and work-in-process inventory should be credited (not debited).
- Answer (C) is incorrect because Although commonly used, the immediate write-off method is not as conceptually sound as the allocation among cost of goods sold, finished goods inventory, and work-in-process inventory.
- Answer (D) is correct. Under a normal costing system, overhead is applied to all jobs worked on during the period at a predetermined rate. Because cost of goods sold, finished goods inventory, and work-in-process inventory all relate to these jobs, each should be adjusted by its proportionate share of over- or underapplied overhead. This apportionment may be based on either the percentage of total overhead (theoretically preferable) or the percentage of total cost. The entry to close overapplied overhead requires credits to these three accounts.
Answer (A) is incorrect because The variable portion when improperly calculating only at the lowest level of production is $165,000.

Answer (B) is incorrect because The variable portion when improperly calculating only at the highest level of production is $150,000.

Answer (C) is correct. The high-low method can be applied to calculate the two portions of a mixed cost. The numerator is the difference between the cost at the highest level of activity and the cost at the lowest level ($160,000 – $132,000 = $28,000). The denominator is the difference between the highest level of activity from the lowest level (80,000 – 60,000 = 20,000). The variable portion of the total mixed cost is derived by dividing these two figures ($28,000 ÷ 20,000 = $1.40 per gallon). The fixed portion can be calculated by inserting the appropriate values for either the high or low level as follows:

\[
\text{Fixed portion} = \frac{\text{Total cost} - \text{Variable portion}}{	ext{80,000} - \text{60,000}} = \frac{$160,000 - (80,000 \times $1.40)}{20,000} = \frac{$160,000 - $112,000}{20,000} = \frac{$48,000}{20,000} = $1.40
\]

The total handling cost for a production level of 75,000 can now be determined: $48,000 + (75,000 \times $1.40) = $153,000.

Answer (D) is incorrect because The amount of $146,000 results from incorrectly assuming that, because 75,000 is halfway between the high and low levels of production given, the cost will be halfway between $160,000 and $132,000.

Answer (A) is incorrect because Units started and completed in November plus 20% of ending work-in-process equals 3,400 units (3,000 + 400).

Answer (B) is incorrect because The number of units started and completed in November plus units completed and transferred out from BI plus 20% of ending work-in-process equals 4,400 units (3,000 + 1,000 + 400).

Answer (C) is correct. The difference between the weighted-average and FIFO methods of process costing is how BWIP is handled. FIFO makes a distinction between the costs in BWIP and the costs of goods started this period. Weighted average does not. Thus, when there is no BWIP, there is no difference between the two costing methods. Because 6,000 units have been started (1,000 BWIP + 5,000 started this period), and all materials are added at the beginning of the process, equivalent units for materials equal 6,000.

Answer (D) is incorrect because The number of units started in November is 5,000.
[356] Gleim #: 5.2.50 -- Source: CMA 1292 3-4

- Answer (A) is incorrect because Purchase costs are joint costs.
- Answer (B) is incorrect because Sales salaries for the production period do not affect the decision.
- Answer (C) is correct. Joint products are created from processing a common input. Joint costs are incurred prior to the split-off point and cannot be identified with a particular joint product. As a result, joint costs are irrelevant to the timing of sale. However, separable costs incurred after the split-off point are relevant because, if incremental revenues exceed the separable costs, products should be processed further, not sold at the split-off point.
- Answer (D) is incorrect because Joint costs have no effect on the decision as to when to sell a product.

[357] Gleim #: 5.1.41 -- Source: CMA 0408 2-107

- Answer (A) is incorrect because The amount of $145,000 results from improperly including marketing costs.
- Answer (B) is incorrect because The amount of $85,000 results from including only the variable portion of manufacturing cost and improperly including a portion of marketing cost.
- Answer (C) is incorrect because The amount of $50,000 results from including only the variable portion of manufacturing cost.
- Answer (D) is correct. Chassen’s ending inventory consists of 10,000 units, made up of $500,000 variable manufacturing cost (10,000 × $5) and $200,000 fixed manufacturing cost (10,000 × $2).

[358] Gleim #: 5.2.58 -- Source: CIA 1194 III-48

- Answer (A) is incorrect because The amount of $370,370 includes additional processing costs.
- Answer (B) is correct. The net realizable value (NRV) method is an appropriate method of allocation when products cannot be sold at split-off. Further processing of R, which is salable at split-off, is not economical because the cost of $150,000 exceeds the benefit [2,500 units × ($150 – $100) = $125,000]. Thus, R’s NRV is $250,000 (2,500 units × $100 price at split-off). However, S and T must be processed further. S’s NRV is $425,000 [(5,000 units × $115) – $150,000], and T’s NRV is $125,000 [(7,500 units × $30) – $100,000]. Given that the NRV of T is a reduction of joint cost, the total joint cost to be allocated is therefore $595,000 ($720,000 – $125,000 NRV of T). Accordingly, based on the NRV method, the joint cost allocated to R is $220,370 \{[(250,000 R’s NRV ÷ (250,000 R’s NRV + 425,000 S’s NRV))] × 595,000 allocable joint cost\}. Because further processing of R is uneconomical, the total cost of R is $220,370.
- Answer (C) is incorrect because The amount of $595,000 is the allocable joint cost.
- Answer (D) is incorrect because The amount of $374,630 is the joint cost allocated to S.
[359] Gleim #: 4.2.46 -- Source: CMA 692 3-4

- Answer (A) is incorrect because Conversion-cost EUP based on the weighted-average method is 42,800 units.
- Answer (B) is incorrect because The number of 34,800 units assumes the beginning inventory was 100% complete.
- Answer (C) is correct. The equivalent units for conversion costs equal total units to account for, minus work done on beginning inventory, minus work not done on ending inventory. Hence, the equivalent units for conversion costs equal 40,800 units \([50,000 \text{ units} - (25\% \times 8,000 \text{ units}) - (60\% \times 12,000 \text{ units})]\).
- Answer (D) is incorrect because The ending inventory was 40% complete, resulting in subtracting 60%, not 40%, of the 12,000 items in ending inventory to determine work not on ending inventory.

[360] Gleim #: 5.4.116 -- Source: CMA 691 3-19

- Answer (A) is correct. The step-down method allocates service costs to both service and production departments but does not involve reciprocal allocations among service departments. Accordingly, Quality Control will receive no allocation of maintenance costs. The first step is to allocate quality control costs to the Maintenance Department. Maintenance is expected to use 20% \((7,000 \div 35,000)\) of the available quality control hours and will be allocated \$70,000 \((\$350,000 \times 20\%)\) of quality control costs. Thus, total allocable maintenance costs equal \$270,000 \((\$70,000 + \$200,000)\). The Assembly Department is estimated to use 40% \((12,000 \div 30,000)\) of the available maintenance hours. Consequently, it will be allocated maintenance costs of \$108,000 \((\$270,000 \times 40\%).
- Answer (B) is incorrect because The Assembly Department will be allocated maintenance costs of \$108,000.
- Answer (C) is incorrect because The Assembly Department will be allocated maintenance costs of \$108,000.
- Answer (D) is incorrect because The Assembly Department will be allocated maintenance costs of \$108,000.

[361] Gleim #: 6.1.5 -- Source: CIA 597 III-94

- Answer (A) is incorrect because The supplier may seek a concession on the selling price that will raise purchasing costs, but the manufacturing company’s stockout costs will increase.
- Answer (B) is incorrect because Fewer purchase orders are processed by the manufacturer, so the ordering costs are likely to decrease. However, the cost of quality is not necessarily affected by a JIT system.
- Answer (C) is correct. The objective of a JIT system is to reduce carrying costs by eliminating inventories and increasing the deliveries made by suppliers. Ideally, shipments are received just in time to be incorporated into the manufacturing process. This system increases the risk of stockout costs because the inventory buffer is reduced or eliminated.
- Answer (D) is incorrect because The cost of quality is not necessarily affected by a JIT system.
Answer (A) is incorrect because Total service years of employees in each division is not a basis for predicting changes in personnel department costs.

Answer (B) is correct. The cause-and-effect criterion seeks a relationship between cost and the cost objective (for example, an operating division) such that changes in total costs can be predicted based on activities of the cost objective. Thus, the number of employees in an operating division is likely to correlate with incurrence of costs by the personnel department.

Answer (C) is incorrect because Total book value of identifiable division assets is not a basis for predicting changes in personnel department costs.

Answer (D) is incorrect because Square footage would be more appropriate for allocating building and maintenance costs than personnel costs.

Answer (A) is incorrect because The amount of $30,000 per month plus $35.00 per sales order is based on orders instead of sales, and the March shipping costs are incorrectly matched with the April orders.

Answer (B) is incorrect because The amount of $58,000 per month plus $23.33 per sales order is based on orders.

Answer (C) is correct. Using the high-low method, the variable and fixed costs for shipping can be calculated. The difference in cost levels divided by the difference in unit volume equals the variable cost per unit of $1.40 \([($114,000 – $93,000) ÷ (70,000 – 55,000)]\). The variable cost for 70,000 units is $98,000 \((70,000 × $1.40)\). Subtracting the variable cost from total shipping cost results in the fixed cost of $16,000 \($114,000 – $98,000\).

Answer (D) is incorrect because The average cost over 4 months is $1.66.

Answer (A) is incorrect because Manufacturing lead (cycle) time is the sum of setup time and manufacturing time for a customer order. It is a component of customer response time.

Answer (B) is incorrect because Excess capacity is unused capacity.

Answer (C) is incorrect because Theoretical capacity makes no allowance for unavoidable interruptions.

Answer (D) is correct. Practical capacity is the maximum level at which output is produced efficiently, with an allowance for unavoidable interruptions, for example, for holidays and scheduled maintenance. Because this level will be higher than expected capacity, its use will ordinarily result in underapplied fixed factory overhead.
Answer (B) is correct. Prime costs are the combined costs of direct materials and direct labor.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning materials inventory</td>
<td>$ 67,000</td>
</tr>
<tr>
<td>Add: purchases</td>
<td>163,000</td>
</tr>
<tr>
<td>Add: transportation in</td>
<td>4,000</td>
</tr>
<tr>
<td>Less: purchase returns</td>
<td>(2,000)</td>
</tr>
<tr>
<td>Materials available</td>
<td>$232,000</td>
</tr>
<tr>
<td>Less: ending materials inventory</td>
<td>(62,000)</td>
</tr>
<tr>
<td>Materials used in production</td>
<td>$170,000</td>
</tr>
<tr>
<td>Direct materials</td>
<td>$170,000</td>
</tr>
<tr>
<td>Direct labor</td>
<td>200,000</td>
</tr>
<tr>
<td>Total prime costs</td>
<td>$370,000</td>
</tr>
</tbody>
</table>

Answer (C) is incorrect because the amount of $168,000 equals purchases of materials adjusted for the change in inventories.

Answer (D) is incorrect because the amount of $170,000 equals the materials used.

Answer (A) is incorrect because the amount of $2,500 assumes that work-in-process inventory is 100% complete as to conversion costs and that 500 bats are in inventory.

Answer (B) is incorrect because the amount of $10,000 assumes that work-in-process inventory is 100% complete as to conversion costs.

Answer (C) is incorrect because the amount of $20,000 assumes that work-in-process is 100% complete as to conversion costs and that 6,000 units were transferred out.

Answer (D) is correct. The equivalent units for raw materials would be 10,000 \( (8,000 + 2,000) \) since the work-in-process is 100% complete as to materials. Therefore, dividing the $33,000 by 10,000 units results in a unit cost for materials of $3.30. The equivalent units for conversion costs would be 8,500 units \( [8,000 + (2,000 \text{ units} \times .25)] \). Dividing the $17,000 of conversion costs by 8,500 equivalent units results in a unit cost of $2 per bat. Therefore, the total cost of goods transferred out would be $5.30, consisting of $3.30 for materials and $2 for conversion costs. Multiplying $5.30 times the 8,000 bats completed results in a total transfer of $42,400. Consequently, the cost of the ending work-in-process must have been $7,600 ($50,000 total costs incurred – $42,400).
Answer (A) is incorrect because Cost D is variable.

Answer (B) is incorrect because Cost B is semivariable.

Answer (C) is incorrect because Cost A is variable.

Answer (D) is correct. To properly understand the nature of a cost, its behavior in total and on a per-unit basis can be examined. Dividing the total costs incurred by the activity levels yields the following per-unit results:

<table>
<thead>
<tr>
<th></th>
<th>10,000</th>
<th>12,000</th>
<th>15,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost A</td>
<td>$1.42</td>
<td>$1.42</td>
<td>$1.42</td>
</tr>
<tr>
<td>Cost B</td>
<td>1.55</td>
<td>1.47</td>
<td>1.45</td>
</tr>
<tr>
<td>Cost C</td>
<td>1.00</td>
<td>0.67</td>
<td>0.50</td>
</tr>
<tr>
<td>Cost D</td>
<td>1.63</td>
<td>1.63</td>
<td>1.63</td>
</tr>
</tbody>
</table>

Costs A and D increase steadily across the relevant range in total but remain constant on a per-unit basis; they are thus variable costs. Cost B increases disproportionately across the relevant range in total and decreases disproportionately on a per-unit basis; B is thus a semivariable cost.

Answer (A) is correct. One of the benefits of activity-based costing is the discovery of cost relationships that went unnoticed under traditional accounting methods.

Answer (B) is incorrect because Software exists to help firms implement activity-based management.

Answer (C) is incorrect because Activity-based costing generally results in many more cost pools than under traditional accounting methods.

Answer (D) is incorrect because Activity-based costing is suitable for service-type functions.
[369] Gleim #: 6.1.3 -- Source: CPA 594 TMG-50

- Answer (A) is incorrect because Changing to JIT increases inventory turnover and decreases inventory as a percentage of total assets.
- Answer (B) is correct. A JIT system is intended to minimize inventory. Inventory should be delivered or produced just in time to be used. Thus, JIT increases inventory turnover (cost of sales ÷ average inventory) and decreases inventory as a percentage of total assets.
- Answer (C) is incorrect because Changing to JIT increases inventory turnover and decreases inventory as a percentage of total assets.
- Answer (D) is incorrect because Changing to JIT increases inventory turnover and decreases inventory as a percentage of total assets.

[370] Gleim #: 6.3.28 -- Source: Publisher

- Answer (A) is incorrect because The amount of $175 results from subtracting all manufacturing costs, rather than just throughput cost, from selling price.
- Answer (B) is incorrect because The amount of $345 results from subtracting conversion cost, rather than throughput cost, from selling price.
- Answer (C) is incorrect because The amount of $265 results from subtracting prime cost, rather than throughput cost, from selling price.
- Answer (D) is correct. A theory of constraints (TOC) analysis proceeds from the assumption that only direct materials costs are truly variable in the short run. This is called throughput, or supervariable, costing. The relevant margin amount is throughput margin, which equals price minus direct materials. Thus, the relevant margin amount for this manufacturer is $490 ($660 – $170).
Answer (A) is correct. Dremmon’s absorption-basis operating income can be calculated as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Cost Per Unit</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td></td>
<td></td>
<td>$150,000</td>
</tr>
<tr>
<td>Beginning inventory</td>
<td>100 units</td>
<td>$110</td>
<td>$11,000</td>
</tr>
<tr>
<td>Variable production costs</td>
<td>700 units</td>
<td>$90</td>
<td>$63,000</td>
</tr>
<tr>
<td>Fixed production costs</td>
<td>700 units</td>
<td>$20</td>
<td>$14,000</td>
</tr>
<tr>
<td>Volume variance writeoff</td>
<td>50 units</td>
<td>$20</td>
<td>$1,000</td>
</tr>
<tr>
<td><strong>Goods available for sale</strong></td>
<td></td>
<td></td>
<td><strong>$89,000</strong></td>
</tr>
<tr>
<td>Less: ending inventory</td>
<td>50 units</td>
<td>$110</td>
<td><strong>(5,500)</strong></td>
</tr>
<tr>
<td><strong>Absorption cost of goods sold</strong></td>
<td></td>
<td></td>
<td><strong>(83,500)</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross margin</td>
<td></td>
<td>$66,500</td>
</tr>
<tr>
<td>Variable S&amp;A expenses</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>Fixed S&amp;A expenses</td>
<td>Fixed</td>
<td>(45,000)</td>
</tr>
<tr>
<td><strong>Operating income</strong></td>
<td></td>
<td><strong>$21,500</strong></td>
</tr>
</tbody>
</table>

- Answer (B) is incorrect because the amount of $28,000 results from including 100 units in ending inventory rather than 50 and from failing to write off the $1,000 overhead volume variance.
- Answer (C) is incorrect because the amount of $30,000 results from failing to include fixed manufacturing costs in cost of goods sold and failing to subtract ending inventory.
- Answer (D) is incorrect because the amount of $27,000 results from including 100 units in ending inventory rather than 50.

Answer (A) is incorrect because only the wages paid to the machine operator are directly identifiable with the production of specific finished goods.

Answer (B) is correct. Direct labor costs are wages paid to labor that can be specifically identified with the production of finished goods. Because the wages of a factory machine operator are identifiable with a finished product, the wages are a direct labor cost. Because a supervisor’s or vice-president’s salary is not identifiable with the production of specific finished goods, it is a part of factory overhead and not a direct labor cost.

Answer (C) is incorrect because only the wages paid to the machine operator are directly identifiable with the production of specific finished goods.

Answer (D) is incorrect because only the wages paid to the machine operator are directly identifiable with the production of specific finished goods.
Answer (A) is incorrect because Long-run pricing is dependent upon decisions about fixed costs, which are not the focus of variable costing.

Answer (B) is incorrect because Absorption costing is required for tax purposes.

Answer (C) is incorrect because GAAP reporting requires absorption costing.

Answer (D) is correct. Under variable costing, only the variable costs of manufacturing attach to the units of output; fixed costs are expensed in the period in which they are incurred. Thus, the variations in cost directly attributable to changes in production level are immediately apparent under variable costing.

Answer (A) is incorrect because Drill press activity adds value to products in the production process.

Answer (B) is incorrect because Design engineering activity adds value to products in the production process.

Answer (C) is correct. Analysis by activity provides for better cost control because of identification of nonvalue-adding activities. A value-added activity contributes to customer satisfaction or meets a need of the entity. A nonvalue-adding activity does not make such a contribution. It can be eliminated, reduced, or redesigned without impairing the quantity, quality, or responsiveness of the product or service desired by customers or the entity. For example, raw materials storage may be greatly reduced or eliminated in a just-in-time (JIT) production system without affecting customer value.

Answer (D) is incorrect because Heat treatment activity adds value to products in the production process.

Answer (A) is incorrect because The number of 9,000 improperly includes the Facilities Department, which would receive no allocation from Systems under the direct method.

Answer (B) is incorrect because The number of 9,300 improperly includes both service departments and production departments.

Answer (C) is correct. The direct method of service department allocation is the simplest. Service department costs are allocated directly to the producing departments without regard for services rendered by service departments to each other. Service department costs are allocated to production departments based on an allocation base appropriate to each service department’s function. The appropriate allocation base for the Systems Department is computer usage hours. Thus, the denominator for allocating Systems will be the total computer hours used by the production departments \( (3,600 + 1,800 + 2,700 = 8,100) \).

Answer (D) is incorrect because The number of computer hours used by the service departments is 1,200.
Answer (A) is incorrect because the amount of $422,750 results from using the step-down method but intermixing the starting rates.

Answer (B) is correct. The first step in applying the direct method is to determine the percentage of the total drivers for the two service departments that are to be assigned to the production departments:

<table>
<thead>
<tr>
<th>Allocate Maintenance</th>
<th>Proportion</th>
<th>% of Total</th>
<th>Amount to be Allocated</th>
<th>Departmental Allocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Machining</td>
<td>50</td>
<td>55.6%</td>
<td>$360,000</td>
<td>$200,000</td>
</tr>
<tr>
<td>To Fabrication</td>
<td>40</td>
<td>44.4%</td>
<td>360,000</td>
<td>160,000</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>100.0%</td>
<td>$360,000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Allocate Systems:</th>
<th>Proportion</th>
<th>% of Total</th>
<th>Amount to be Allocated</th>
<th>Departmental Allocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Machining</td>
<td>45</td>
<td>47.4%</td>
<td>$95,000</td>
<td>$45,000</td>
</tr>
<tr>
<td>To Fabrication</td>
<td>50</td>
<td>52.6%</td>
<td>95,000</td>
<td>50,000</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>100.0%</td>
<td>$95,000</td>
<td></td>
</tr>
</tbody>
</table>

The second step is to allocate the costs of the service departments:

<table>
<thead>
<tr>
<th>Service Departments</th>
<th>Production Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Totals before</td>
<td></td>
</tr>
<tr>
<td>allocation</td>
<td>Maint.</td>
</tr>
<tr>
<td>$360,000</td>
<td>$95,000</td>
</tr>
<tr>
<td>Allocate Maintenance</td>
<td></td>
</tr>
<tr>
<td>Allocate Systems</td>
<td></td>
</tr>
<tr>
<td>Totals after</td>
<td></td>
</tr>
<tr>
<td>allocation</td>
<td>$0</td>
</tr>
</tbody>
</table>

Answer (C) is incorrect because the amount of $418,000 results from multiplying the given percentages (50% of machining and 40% of systems) times the service department costs instead of using proportions, such as 50/90 and 45/95.

Answer (D) is incorrect because the amount of $442,053 results from applying the step-down method beginning with the maintenance department.
Answer (A) is incorrect because the contribution margin can be calculated only after variable costs and sales prices are determined. Some overhead is variable.

Answer (B) is incorrect because sales volume (or dollars) is less significant because overhead is based on production volume.

Answer (C) is correct. The most important factor in budgeting manufacturing overhead is production volume. Many overhead items have variable costs, and those that are fixed within a relevant range of output may increase if production exceeds that range. The other essential consideration is management’s judgment with respect to the nature and amount of costs to be incurred and expectations for production volume. Because overhead is applied based on predetermined rates, accurate judgment is important.

Answer (D) is incorrect because machine hours may not be the appropriate activity base. Moreover, some overhead is fixed regardless of the activity base.

Answer (A) is correct. The second step in a value-chain analysis is to determine how each value-creating activity can produce a competitive advantage for the firm. This step has multiple substeps:

1. Identify the firm’s competitive advantage (e.g., cost reduction, product differentiation) so that the firm’s position in the industry’s value chain can be clarified.
2. Identify the ways in which the firm’s value-creating activities can generate additional customer value.
3. Identify activities that are candidates for cost reduction or, in the case of non-core competencies, outsourcing.
4. Identify value-adding ways in which the firm’s remaining activities can be linked.

Answer (B) is incorrect because identifying the firm’s competitive advantage (e.g., cost reduction, product differentiation) so that the firm’s position in the industry’s value chain can be clarified is one of the phases of a value-chain analysis.

Answer (C) is incorrect because identifying activities that are candidates for cost reduction or, in the case of non-core competencies, outsourcing, is one of the phases of a value-chain analysis.

Answer (D) is incorrect because identifying ways in which the firm’s value-creating activities can generate additional customer value is one of the phases of a value-chain analysis.
Answer (A) is incorrect because Order of allocation also does not apply under the reciprocal method.

Answer (B) is incorrect because Under the step-down method, the amounts allocated are affected by the order of allocation.

Answer (C) is incorrect because Under the step-down method, the amounts allocated are affected by the order of allocation.

Answer (D) is correct. With the direct and reciprocal methods, the order of allocation is irrelevant. However, under the step-down method, some service department cost is allocated to other service departments before allocation to the operating departments. These first allocations change the proportions of the total constituted by each department.
Answer (A) is incorrect because the amount of $484,000 is the cost of goods manufactured.

Answer (B) is correct. This solution requires a series of computations. Total manufacturing cost is the sum of direct materials cost, direct labor cost, and manufacturing overhead.

- **Beginning materials**: $67,000
- **Add: purchases**: 163,000
- **Add: transportation in**: 4,000
- **Less: purchase returns**: (2,000)
  - **Materials available**: $232,000
- **Less: ending materials**: (62,000)
  - **Materials used in production**: $170,000

- **Direct materials**: $170,000
- **Direct labor**: 200,000
- **Manufacturing overhead (DL × 70%)**: 140,000
  - **Total manufacturing costs**: $510,000

- **Total manufacturing costs**: $510,000
- **Add: beginning work-in-process**: 145,000
- **Less: ending work-in-process**: (171,000)
  - **Costs transferred to finished goods**: $484,000

- **Beginning finished goods inventory**: $85,000
- **Add: cost of goods manufactured**: 484,000
  - **Goods available for sale**: $569,000
- **Less: ending finished goods inventory**: (78,000)
  - **Cost of goods sold**: $491,000

Answer (C) is incorrect because the amount of $502,000 is based on cost of goods manufactured of $495,000.

Answer (D) is incorrect because the amount of $476,000 is based on actual overhead costs and fails to adjust for the change in finished goods inventories.
Answer (A) is incorrect because Make-or-buy decisions depend on cost analyses.

Answer (B) is incorrect because Cost allocation permits a company to determine the profitability of a department and to make decisions relative to expanding or contracting its operations.

Answer (C) is incorrect because Cost allocation permits a company to determine the profitability of a product line and to decide whether to discontinue that line.

Answer (D) is correct. According to SMA 2A, allocation of costs is a distribution of costs that cannot be directly assigned to the cost objects that are assumed to have caused them. The process entails choosing a cost object, determining the direct and indirect costs that should be traced to the cost object, deciding how costs are to be aggregated (accumulated in cost pools) prior to allocation, and selecting the allocation base. Cost allocation is necessary for, among other things, product costing, pricing, investment and disinvestment decisions, managerial performance measurement, make-or-buy decisions, and determination of profitability. However, an allocation of costs does not enable a company to determine why the sales of a particular product have increased. Many factors affect consumer demand, such as advertising, consumer confidence, availability of substitutes, and changes in tastes. Cost allocation is an internal matter that does not affect demand except to the extent it results in a change in price.

Answer (A) is incorrect because Total costs are $695,000 based on a unit variable cost of $4.50 each.

Answer (B) is incorrect because The amount of $715,000 assumes a variable unit cost of $6.50 with no fixed costs.

Answer (C) is incorrect because The cost at a production level of 100,000 units is $650,000.

Answer (D) is correct. Direct materials unit costs are strictly variable at $2 ($200,000 ÷ 100,000 units). Similarly, direct labor has a variable unit cost of $1 ($100,000 ÷ 100,000 units). The $200,000 of manufacturing overhead for 100,000 units is 50%. The variable unit cost is $1. Selling costs are $100,000 fixed and $50,000 variable for production of 100,000 units, and the variable unit selling expenses is $.50 ($50,000 ÷ 100,000 units). The total unit variable cost is therefore $4.50 ($2 + $1 + $1 + $.50). Fixed costs are $200,000. At a production level of 110,000 units, variable costs are $495,000 (110,000 units × $4.50). Hence, total costs are $695,000 ($495,000 + $200,000).
[383] Gleim #: 3.2.54 -- Source: Publisher

- Answer (A) is incorrect because Fixed costs per unit decrease because there are more units to absorb the fixed costs and variable costs do not change over the relevant range.
- Answer (B) is incorrect because Variable costs per unit do not change over the relevant range.
- Answer (C) is incorrect because Fixed costs per unit decrease because there are more units to absorb the fixed costs.
- Answer (D) is correct. Fixed costs per unit decrease within the relevant range of activity as production increases because more units are available to absorb the constant amount of total fixed costs. Unit variable costs are assumed to remain the same per unit over the relevant range.

[384] Gleim #: 5.1.9 -- Source: CMA 1292 3-26

- Answer (A) is incorrect because Increasing production without a concurrent increase in demand applies more fixed costs to inventory.
- Answer (B) is correct. Under an absorption costing system, income can be manipulated by producing more products than are sold because more fixed manufacturing overhead will be allocated to the ending inventory. When inventory increases, some fixed costs are capitalized rather than expensed. Decreasing production, however, will result in lower income because more of the fixed manufacturing overhead will be expensed.
- Answer (C) is incorrect because Producing more of the products requiring the most direct labor will permit more fixed overhead to be capitalized in the inventory account.
- Answer (D) is incorrect because Deferring expenses such as maintenance will increase income in the current period (but may result in long-range losses caused by excessive down-time).

[385] Gleim #: 3.3.68 -- Source: CMA 678 4-12

- Answer (A) is incorrect because Costs that fluctuate with small changes in volume are variable costs.
- Answer (B) is incorrect because Costs incurred in a current period to achieve objectives other than the filling of orders by customers are known as discretionary costs.
- Answer (C) is correct. Controllable costs can be affected by the efforts of a manager.
- Answer (D) is incorrect because Costs that are unaffected by managerial decisions are costs such as committed costs and depreciation that was determined by decisions of previous periods.
Answer (A) is incorrect because Toilet tissue is a variable cost.

Answer (B) is correct. Direct costs are ones that can be associated with a particular cost object in an economically feasible way, that is, they can be traced to that object. Fixed costs are those that remain unchanged in total over the relevant range of production. A motel manager’s salary is traceable to the single location she manages, and it remains fixed over a set period of time regardless of the number of guests.

Answer (C) is incorrect because Water is a variable cost.

Answer (D) is incorrect because Advertising for the whole chain is not a direct cost of Roberta Johnson’s location.

Answer (A) is correct. Under the absorption method, all selling and administrative fixed costs are charged to the current period. Accordingly, $980,000 of selling expenses and $425,000 of actual fixed administrative expenses were expensed during the year. The fixed manufacturing costs must be calculated after giving consideration to the increase in inventory during the period (some fixed costs were capitalized) and to the underapplied overhead. The beginning finished goods inventory included 35,000 units, each of which had absorbed $5 of fixed manufacturing overhead. Each unit produced during the year also absorbed $5 of fixed manufacturing overhead. Given that 125,000 of those units were sold, cost of goods sold was debited for $625,000 of fixed overhead (125,000 units × $5). At year-end, the underapplied overhead was also added to cost of goods sold. Because production was expected to be 140,000 units, the overhead application rate for the $700,000 of planned fixed manufacturing overhead was $5 per unit. Only 130,000 units were manufactured. Hence, $650,000 (130,000 units × $5) of overhead was applied to units in process. Because inventory increased from 35,000 to 40,000 units (35,000 BI + 130,000 produced − 125,000 sold), $25,000 (5,000-unit increase × $5) of the applied fixed manufacturing overhead for the period was inventoried, not expensed. Actual overhead was $715,000, so the underapplied overhead was $65,000 ($715,000 − $650,000). This amount was charged to cost of goods sold at year-end. The total of the fixed costs expensed was therefore $2,095,000 ($980,000 selling expenses + $425,000 administrative expenses + $625,000 standard manufacturing overhead costs of units sold + $65,000 underapplied overhead).

Answer (B) is incorrect because The total fixed costs on the absorption costing basis were $2,095,000.

Answer (C) is incorrect because The total fixed costs on the absorption costing basis were $2,095,000.

Answer (D) is incorrect because The total fixed costs on the absorption costing basis were $2,095,000.
Answer (A) is incorrect because the value perceived by the ticket agent is not relevant to Johnson’s opportunity cost.

Answer (B) is incorrect because the best alternative use of the cash outlay was also an opportunity cost.

Answer (C) is correct. Opportunity cost, also called implicit cost, is the maximum benefit forgone by using a scarce resource for a given purpose and not for the next-best alternative. An example is the wages forgone by attending college instead of working full-time. Opportunity costs are contrasted with outlay costs, which require actual cash disbursements.

Answer (D) is incorrect because the best alternative use of the time it took to wait in line was also an opportunity cost.
Answer (A) is incorrect because the amount of $445,000 results from improperly allocating half the cost of Systems to each production department or by using the direct method of allocation.

Answer (B) is incorrect because the amount of $415,526 results from mixing up the allocation rates to all departments from each service department.

Answer (C) is incorrect because the amount of $422,750 results from intermixing the allocation rates between the two service departments.

Answer (D) is correct. The first step in applying the step-down method is to determine the percentage of the total driver for the first service department that is to be assigned to the other departments:

<table>
<thead>
<tr>
<th>Allocate Maintenance</th>
<th>Proportion</th>
<th>% of Total</th>
<th>Amount to be Allocated</th>
<th>Departmental Allocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Systems</td>
<td>10</td>
<td>10.0%</td>
<td>$360,000</td>
<td>$ 36,000</td>
</tr>
<tr>
<td>To Machining</td>
<td>50</td>
<td>50.0%</td>
<td>360,000</td>
<td>180,000</td>
</tr>
<tr>
<td>To Fabrication</td>
<td>40</td>
<td>40.0%</td>
<td>360,000</td>
<td>144,000</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0%</td>
<td></td>
<td>$360,000</td>
<td>$360,000</td>
</tr>
</tbody>
</table>

The second step is to allocate the costs of the first service department:

<table>
<thead>
<tr>
<th>Service Departments</th>
<th>Production Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tot. bef. allocation</td>
<td>$360,000 $200,000 $300,000 $955,000</td>
</tr>
<tr>
<td>Allocate Maint.</td>
<td>(360,000) 36,000 180,000 144,000 0</td>
</tr>
<tr>
<td>Totals after first allocation</td>
<td>$ 0 $131,000 $380,000 $444,000 $955,000</td>
</tr>
</tbody>
</table>

The third step is to determine the percentage of the total driver for the second allocated service department that is to be assigned to each of the remaining departments:

<table>
<thead>
<tr>
<th>Allocate Systems</th>
<th>Proportion</th>
<th>% of Total</th>
<th>Amount to be Allocated</th>
<th>Departmental Allocations</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Machining</td>
<td>45</td>
<td>47.4%</td>
<td>$131,000</td>
<td>$ 62,053</td>
</tr>
<tr>
<td>To Fabrication</td>
<td>50</td>
<td>52.6%</td>
<td>131,000</td>
<td>68,947</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0%</td>
<td></td>
<td>$131,000</td>
<td>$131,000</td>
</tr>
</tbody>
</table>

The final step is to allocate the costs of the second service department:
Answer (A) is incorrect because Using revenues would cause the Financial Consulting Division to bear as much of the burden as the Compliance Division.

Answer (B) is correct. The Financial Consulting Division has the fewest employees. Using that as the basis for allocation would therefore be the most advantageous.

Answer (C) is incorrect because Equal sharing would cause the same burden to be laid on the Financial Consulting Division as on the other divisions.

Answer (D) is incorrect because Contribution margin, while advantageous to the Financial Consulting Division, is not as advantageous as using the number of employees.

Answer (A) is incorrect because Expected annual activity is an approximation of actual volume levels for a specific year.

Answer (B) is incorrect because Normal capacity is the long-term average level of activity that will approximate demand over a period that includes seasonal, cyclical, and trend variations.

Answer (C) is incorrect because Master-budget capacity is the expected level of activity used for budgeting for a given year.

Answer (D) is correct. Theoretical (ideal) capacity is the maximum capacity given continuous operations with no holidays, downtime, etc. It assumes perfect efficiency at all times. Consequently, it can never be attained and is not a reasonable estimate of actual volume.
Answer (A) is incorrect because the amount of $4,800,000 is the amount that would be assigned to Six Oil.

Answer (B) is correct. The total production costs incurred are $10,000,000, consisting of crude oil of $5,000,000, direct labor of $2,000,000, and manufacturing overhead of $3,000,000. The total value of the output is as follows:

Two Oil (300,000 barrels × $20) $ 6,000,000
Six Oil (240,000 barrels × $30) 7,200,000
Distillates (120,000 barrels × $15) 1,800,000
Total sales value $15,000,000

Because Two Oil composes 40% of the total sales value ($6,000,000 ÷ $15,000,000), it will be assigned 40% of the $10,000,000 of joint costs, or $4,000,000.

Answer (C) is incorrect because the amount of $2,286,000 is based on the relative sales value of units sold.

Answer (D) is incorrect because the amount of $2,500,000 is based on the physical quantity of barrels sold.

Answer (A) is incorrect because the focus of quality control under a just-in-time system shifts from the discovery of defective parts to the prevention of quality problems. Zero defects are the ultimate goal.

Answer (B) is incorrect because minimization of inventory is a goal of the just-in-time system since many inventory-related activities are viewed as nonvalue-added.

Answer (C) is correct. Lot sizes based on immediate need are typical of just-in-time systems, while lot sizes based on formulas are characteristic of traditional inventory management systems.

Answer (D) is incorrect because the difference in lead times is a correct comparison between the two systems.
Answer (A) is incorrect because Prime costs are composed of raw material and direct labor costs.

Answer (B) is correct. Committed costs are those for which management has made a long-term commitment. They typically result when a firm holds fixed assets. Examples include long-term lease payments and depreciation. Committed costs are typically fixed costs.

Answer (C) is incorrect because Joint (common) costs are incurred in the production of two or more inseparable products up to the point at which the products become separable.

Answer (D) is incorrect because An opportunity cost is the maximum benefit forgone by using a scarce resource for a given purpose; it is the benefit provided by the next best use of a particular resource.

Answer (A) is incorrect because The amount of $19,800 equals the sum of 40% of S1’s preallocation costs and 50% of S2’s preallocation costs.

Answer (B) is incorrect because The amount of $21,949 is the total service cost allocated to P1.

Answer (C) is incorrect because The amount of $22,500 equals the average of the preallocation costs of S1 and S2.

Answer (D) is correct. The reciprocal method allocates service department costs to other service departments as well as to production departments by means of simultaneous equations, as shown below. Thus, total service cost allocated to P2 is $23,051 \([($31,224 \times 40%) + ($21,122 \times 50%)].\)

\[
\begin{align*}
S1 &= $27,000 + .2S2 \\
    &= $27,000 + .2(18,000 + .1S1) \\
    &= $27,000 + $3,600 + .02S1 \\
.98S1 &= $30,600 \\
S1 &= $31,224 \\
S2 &= $18,000 + .1S1 \\
    &= $18,000 + $3,122 \\
S2 &= $21,122
\end{align*}
\]
[396] Gleim #: 4.1.9 -- Source: CMA 0408 2-129

- Answer (A) is incorrect because Under job-order costing, the difference between the disposal value of the spoiled goods and the value of the goods in work-in-process control must be recognized as a loss.

- Answer (B) is correct. Under job-order costing, unit manufacturing cost is unaffected by abnormal spoilage. Also, the difference between the disposal value of the spoiled goods and the value of the goods in work-in-process control must be recognized as a loss, which will decrease operating income.

- Answer (C) is incorrect because Under job-order costing, the difference between the disposal value of the spoiled goods and the value of the goods in work-in-process control must be recognized as a loss.

- Answer (D) is incorrect because Under job-order costing, unit manufacturing cost is unaffected by abnormal spoilage.

[397] Gleim #: 3.4.127 -- Source: CMA 694 3-6

- Answer (A) is incorrect because Fixed costs are also included in the calculation of gross margin.

- Answer (B) is correct. Gross margin or gross profit is the excess of sales over cost of goods sold, calculated on a full absorption basis. Cost of goods sold would include all manufacturing costs, both fixed and variable.

- Answer (C) is incorrect because Fixed indirect manufacturing costs are included in the calculation of gross margin.

- Answer (D) is incorrect because Fixed costs are also included in the calculation of gross margin.

[398] Gleim #: 3.4.114 -- Source: CMA 1294 3-5

- Answer (A) is correct. A discretionary cost (a managed or program cost) results from a periodic decision about the total amount to be spent. It is also characterized by uncertainty about the relationship between input and the value of the related output. Examples are advertising and R&D costs.

- Answer (B) is incorrect because Incremental costs are the differences in costs between two decision choices.

- Answer (C) is incorrect because Committed costs are those for which management has made a long-term commitment. They typically result when a firm holds fixed assets. Examples include long-term lease payments and depreciation.

- Answer (D) is incorrect because An opportunity cost is the maximum benefit forgone by using a scarce resource for a given purpose. It is the benefit provided by the next best use of a particular resource.
Answer (A) is correct. Theory of constraints (TOC) analysis describes three basic measurements: throughput contribution (sales – direct materials), investments (raw materials; work-in-process; finished goods; R&D costs; and property, plant, and equipment), and operating costs (all costs except direct materials).

Answer (B) is incorrect because Gross margin, return on assets, and total sales are used in analyzing a firm’s profitability; they are not measurements used in TOC analysis.

Answer (C) is incorrect because These measurements are used under absorption (full) costing, not in TOC analysis.

Answer (D) is incorrect because Although the number of constraints/nonconstraints is important under the TOC, these numbers are not basic measurements used in TOC analysis. Operating leverage concerns contribution margin, which is not a basic measurement under TOC.

Answer (A) is incorrect because The figure of $0 is the amount allocated to work-in-process inventory.

Answer (B) is correct. Because the amount of underapplied overhead is considered material, the proper accounting treatment is to prorate this amount to work-in-process, finished goods inventory, and the cost of goods sold. Thus, the ending balances must be added together to get a denominator of $2,151,200 ($1,720,960 + $430,240 + $0). The proportion of the total that must be allocated to cost of goods sold is therefore .8 ($1,720,960 + $2,151,200). The amount of underapplied overhead is then multiplied by .8 to arrive at the amount of underapplied overhead allocated to cost of goods sold, or $156,400 ($195,500 × .8).

Answer (C) is incorrect because The figure of $39,100 is the amount allocated to finished goods inventory.

Answer (D) is incorrect because The figure of $195,500 is the amount of overhead underapplied.
Answer (A) is incorrect because the amount of $120,000 is the volume variance under absorption costing.

Answer (B) is incorrect because the amount of $90,000 is the difference between planned sales (495,000 units) and actual sales (510,000 units), times the fixed manufacturing overhead per unit ($6).

Answer (C) is correct. The difference between variable costing and absorption costing is that the former treats fixed manufacturing overhead as a period cost. The latter method treats it as a product cost. Given that sales exceeded production, both methods expense all fixed manufacturing overhead incurred during the year. However, 10,000 units (510,000 sales – 500,000 production) manufactured in a prior period were also sold. These units presumably were recorded at $10 under variable costing and $16 under absorption costing. Consequently, absorption costing operating income is $60,000 (10,000 units × $6) less than that under variable costing.

Answer (D) is incorrect because the amount of $57,600 equals 10,000 units times $5.76 per unit (total budgeted fixed manufacturing overhead ÷ 500,000 units).

Answer (A) is correct. The net allocable joint cost is $90,000, assuming the value of Morefeed is inventoried and treated as a reduction in joint costs. The caloric value of Alfa is 44,000,000 (4,400 × 10,000 pounds), the caloric value of Betters is 56,000,000 (11,200 × 5,000 pounds), and the total is 100,000,000. Of this total volume, Alfa makes up 44% and Betters 56%. Thus, $50,400 ($90,000 × 56%) should be allocated to Betters.

Answer (B) is incorrect because the figure of $39,208 is the amount allocated to Alfa if the 1,000,000 calories attributable to Morefeed is included in the computation.

Answer (C) is incorrect because the figure of $39,600 is the allocation to Alfa.

Answer (D) is incorrect because the figure of $40,920 is the allocation to Alfa if the sales value of the by-product is not treated as a reduction of joint cost.

Answer (A) is incorrect because the amount of $19,200 is based on fixed costs of $7,200.

Answer (B) is incorrect because the variable cost is $12,000.

Answer (C) is correct. The formula is for an annual period. Thus, the first step is to divide the $7,200 of fixed costs by 12 months to arrive at monthly fixed costs of $600. Variable costs will be $.60 per unit, or $12,000 for 20,000 units. The total flexible budget amount is therefore $12,600 ($600 + $12,000).

Answer (D) is incorrect because the annual fixed cost is $7,200.
Answer (A) is correct. The absorption method is required for financial statements prepared according to GAAP. It charges all costs of production to inventories. The prime costs of $800,000, variable manufacturing overhead of $100,000, and the fixed manufacturing overhead of $160,000 are included. They total $1,060,000.

Answer (B) is incorrect because the amount of $1,180,000 includes the fixed and variable selling and other expenses.

Answer (C) is incorrect because the amount of $800,000 equals only prime costs.

Answer (D) is incorrect because the amount of $900,000 equals inventoriable costs under variable costing.

Answer (A) is incorrect because Tullahoma’s offer does nothing to address the bottleneck operation.

Answer (B) is incorrect because Tullahoma’s offer will result in improved throughput contribution.

Answer (C) is correct. Tullahoma’s offer should be accepted because its cost is $40,000 (1,000 units × $40), and the increase in throughput contribution is $72,000 [1,000 units × ($120 unit price – $48 DM per unit)]. Hence, the relevant cost of Tullahoma’s offer is less than the incremental throughput contributed. Tullahoma’s offer effectively increases the capacity of the bottleneck operation. Chattanooga’s and Chickamauga’s offers should both be rejected because, even though their $7 and $5 unit costs are less than the $8 unit operating cost (excluding direct materials) for Operation 1 ($1,200,000 fixed costs ÷ 150,000 units), they will result in the incurrence of additional costs with no increase in throughput contribution, given that Operation 2 is already producing at its 150,000-unit capacity.

Answer (D) is incorrect because Chattanooga’s offer will result in the incurrence of additional costs that merely add capacity to a non-bottleneck operation.

Answer (A) is incorrect because Gross operating profit is the net result after deducting all manufacturing costs from sales, including both fixed and variable costs.

Answer (B) is incorrect because the breakeven point is the level of sales that equals the sum of fixed and variable costs.

Answer (C) is correct. The contribution margin is calculated by subtracting all variable costs from sales revenue. It represents the portion of sales that is available for covering fixed costs and profit.

Answer (D) is incorrect because Net profit is the remainder after deducting from revenue all costs, both fixed and variable.
[407] Gleim #: 3.4.108 -- Source: CMA 1295 3-26

- Answer (A) is incorrect because Variable costing is the same as direct costing, which expenses fixed costs as incurred.
- Answer (B) is incorrect because Cycle time is the period from the time a customer places an order to the time that product is delivered.
- Answer (C) is correct. An activity-based costing (ABC) system identifies the causal relationship between the incurrence of cost and the underlying activities that cause those costs. Under an ABC system, costs are applied to products on the basis of resources consumed (drivers).
- Answer (D) is incorrect because Direct costing is a system that treats fixed costs as period costs; in other words, production costs consist only of variable costs, while fixed costs are expensed as incurred.

[408] Gleim #: 4.3.79 -- Source: CMA 0205 2-24

- Answer (A) is incorrect because The per-unit material handling cost for Q, a variable cost, will not change as a result of the newly gained efficiency in the process for P.
- Answer (B) is incorrect because Material handling cost on a per-unit basis for Q is unaffected by the newly gained efficiency in the process for P.
- Answer (C) is correct. The material handling cost (a variable cost) for both products remains unchanged on a per-unit basis. However, the newly gained efficiency in the production of Product P means the machinery maintenance cost (a fixed cost) of the assembly department is being spread over fewer units of input, so per-unit fixed costs (for both products) will increase.
- Answer (D) is incorrect because The spreading of fixed costs over fewer units of input will cause Q’s machinery maintenance cost to increase.

[409] Gleim #: 4.2.18 -- Source: CMA 696 3-3

- Answer (A) is incorrect because The amount of $53,000 exceeds the actual costs incurred during the period. Given no beginning inventory, the amount transferred out cannot exceed the costs incurred during the period.
- Answer (B) is incorrect because A portion of the total costs is still in work-in-process.
- Answer (C) is incorrect because The amount of $40,000 assumes that work-in-process is 100% complete as to conversion costs.
- Answer (D) is correct. The total equivalent units for raw materials equals 10,000 because all materials for the ending work-in-process had already been added to production. Hence, the materials cost per unit was $3.30 ($33,000 ÷ 10,000). For conversion costs, the total equivalent units equals 8,500 [8,000 completed + (2,000 in EWIP × 25%)]. Thus, the conversion cost was $2.00 per unit ($17,000 ÷ 8,500). The total cost transferred was therefore $42,400 [8,000 units × ($3.30 + $2.00)].
[410] Gleim #: 3.3.71 -- Source: CIA 581 IV-23

- Answer (A) is incorrect because Incremental costing is not a common term either, but it could mean costing in increments.
- Answer (B) is correct. Joint products are common products created from processing a single input (e.g., gasoline, diesel fuel, and kerosene). Joint products have common costs until they reach the split-off point. Joint costing assigns common costs to joint products.
- Answer (C) is incorrect because Differential costing is not a commonly used term, but it could mean costing common products at a fixed differential.
- Answer (D) is incorrect because Indirect costing is a nonsense term. Direct costing charges products only with variable costs.

[411] Gleim #: 4.3.61 -- Source: CIA 1195 III-41

- Answer (A) is incorrect because High correlation between the cost items in a pool and the allocation base does not necessarily mean that a cause-and-effect relationship exists. Two variables may move together without such a relationship. The perceived relationship between the cost driver (allocation base) and the indirect costs should have economic plausibility and high correlation.
- Answer (B) is incorrect because Financial measures (e.g., sales dollars and direct labor costs) and nonfinancial measures (e.g., setups and units shipped) can be used as allocation bases.
- Answer (C) is incorrect because If an allocation base uniformly assigns costs to cost objects when the cost objects use resources in a nonuniform way, the base is smoothing or spreading the costs. Smoothing can result in undercosting or overcosting of products, with adverse effects on product pricing, cost management and control, and decision making.
- Answer (D) is correct. A cost allocation base is the common denominator for systematically correlating indirect costs and a cost object. The cost driver of the indirect costs is ordinarily the allocation base. In a homogeneous cost pool, all costs should have the same or a similar cause-and-effect relationship with the cost allocation base.

[412] Gleim #: 5.3.83 -- Source: Publisher

- Answer (A) is correct. The amount of overhead overapplied/underapplied is found by subtracting the actual incurred overhead from the actual applied overhead. The actual applied overhead is $934,500 (($15 \times 35,000 \text{ hours}) \times 1.78)$. Thus, the amount of underapplied overhead is $195,500 ($934,500 – $1,130,000).
- Answer (B) is incorrect because The figure of $195,500 is the amount underapplied.
- Answer (C) is incorrect because The figure of $168,800 results from subtracting actual incurred overhead from total budget overhead.
- Answer (D) is incorrect because The figure of $168,800 results from subtracting actual incurred overhead from total budget overhead.
Answer (A) is incorrect because The bottleneck operation is the drum in the drum-buffer-rope model.

Answer (B) is correct. Production flow through a constraint is managed using the drum-buffer-rope (DBR) system. The drum (i.e., the beat to which a production process marches) is the bottleneck operation. The constraint sets the pace for the entire process. The buffer is a minimal amount of work-in-process input to the drum that is maintained to ensure that it is always in operation. The rope is the sequence of activities preceding and including the bottleneck operation that must be coordinated to avoid inventory buildup.

Answer (C) is incorrect because The bottleneck operation is the drum in the drum-buffer-rope model.

Answer (D) is incorrect because The bottleneck operation is the drum in the drum-buffer-rope model.

Answer (A) is incorrect because When sales volume exceeds production, inventories decline. Thus, fixed factory overhead expensed will be greater under absorption costing.

Answer (B) is correct. Absorption (full) costing is the accounting method that considers all manufacturing costs as product costs. These costs include variable and fixed manufacturing costs whether direct or indirect. Variable (direct) costing considers only variable manufacturing costs to be product costs, i.e., inventoriable. Fixed manufacturing costs are considered period costs and are expensed as incurred. If production is increased without increasing sales, inventories will rise. However, all fixed costs associated with production will be an expense of the period under variable costing. Thus, this action will not artificially increase profits and improve the manager’s review.

Answer (C) is incorrect because Under variable costing, operating profit is a function of sales. Under absorption costing, it is a function of sales and production.

Answer (D) is incorrect because Increasing inventories increases absorption costing profit as a result of capitalizing fixed factory overhead.
Answer (A) is correct. The reciprocal method is the most complex and the most theoretically sound of the three service department allocation methods. The reciprocal method recognizes services rendered by all service departments to each other as well as to the production departments.

Answer (B) is incorrect because the direct method of service department allocation, the simplest of the three methods, consists of allocating service department costs directly to the producing departments without regard for services rendered by service departments to each other.

Answer (C) is incorrect because the step or step-down method, while more theoretically sound than the direct method, is less sound than the reciprocal method.

Answer (D) is incorrect because Dual-rate allocation is a term more properly associated with overhead assignment.

Answer (A) is incorrect because Reversing the correct calculations and improperly combining all three cost elements for one of the calculations results in $8 and $18.

Answer (B) is incorrect because the amount of $10 for prime cost results from failing to include direct labor.

Answer (C) is correct. Prime cost consists of direct materials and direct labor. Conversion cost consists of direct labor and manufacturing overhead. The per unit calculations are as follows:

<table>
<thead>
<tr>
<th>Direct materials</th>
<th>Direct labor</th>
<th>Manufacturing overhead</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2,000,000</td>
<td>$1,000,000</td>
<td>$1,000,000</td>
</tr>
</tbody>
</table>

Production level: 200,000 units

Per unit:

- Prime cost: $15
- Conversion cost: $8

Answer (D) is incorrect because Reversing the correct calculations results in $8 and $15.
Answer (A) is incorrect because the number of 3,800 units equal the 400 units in BWIP needed for completion plus the units started and completed in November plus the 20% of work-in-process complete as to conversion costs (400 + 3,000 + 400).

Answer (B) is incorrect because the number of 4,000 units equal the units completed and transferred out from BI plus units started and completed during November (1,000 + 3,000).

Answer (C) is incorrect because the number of 3,400 units consist of the units started and completed in November plus the 20% of work-in-process complete as to conversion costs (3,000 + 400).

Answer (D) is correct. Under the weighted-average method, work in the previous period on the beginning inventories is included along with the work added this period. Thus, the only difference between the FIFO calculations and the weighted-average calculation is the equivalent units for the beginning inventory. The 4,000 completed units (1,000 BWIP + 3,000 started this period) equal 4,000 equivalent units. The 2,000 units in EWIP are equivalent to 400 units (2,000 units × 20% complete). Thus, there are 4,400 conversion cost equivalent units.

Answer (A) is incorrect because Target pricing is used on products that have not yet been developed.

Answer (B) is incorrect because Target pricing can be used in any situation, but it is most likely to succeed when costs can be well controlled.

Answer (C) is correct. Target pricing and costing may result in a competitive advantage because it is a customer-oriented approach that focuses on what products can be sold at what prices. It is also advantageous because it emphasizes control of costs prior to their being locked in during the early links in the value chain. The company sets a target price for a potential product reflecting what it believes consumers will pay and competitors will do. After subtracting the desired profit margin, the long-run target cost is known. If current costs are too high to allow an acceptable profit, cost-cutting measures are implemented or the product is abandoned. The assumption is that the target price is a constraint.

Answer (D) is incorrect because Target pricing considers all costs in the value chain.
Answer (A) is incorrect because the amount of $10.75 is the total per-unit assigned indirect cost for Product A, not just receiving cost.

Answer (B) is incorrect because the amount of $28.13 is the per-unit receiving cost for Product B.

Answer (C) is incorrect because the amount of $19.50 results from simply dividing the total budgeted overhead by half the budgeted machine hours.

Answer (D) is correct. The first step in performing an activity-based costing assignment is to divide the dollar amount of the indirect cost activity in question by the number of units of the appropriate allocation base. Total receiving costs for both products amounted to $450,000. Between them, Products A and B had 200 (50 + 150) receiving orders. Thus, the allocation rate is $2,250 per order ($450,000 ÷ 200 orders). The amount allocated to Product A is $112,500 (50 orders × $2,250). Dividing this amount by the number of units of Product A (30,000) results in a per-unit receiving cost of $3.75.

Answer (A) is incorrect because average total cost per unit declines steadily as production volume increases over the relevant range.

Answer (B) is incorrect because fixed cost per unit varies indirectly with the activity level.

Answer (C) is incorrect because variable costs in total vary directly and proportionally with changes in volume.

Answer (D) is correct. Variable cost per unit remains constant in the short run regardless of the level of production. This is in contrast with variable costs in total, which vary directly and proportionally with changes in volume.

Answer (A) is incorrect because rework costs are not charged to finished goods.

Answer (B) is correct. Normal rework costs incurred because of factors common to all units produced ordinarily are charged to factory overhead control to spread the costs over all good units.

Answer (C) is incorrect because rework costs are applied to good units or, in the case of abnormal rework, charged to a loss account.

Answer (D) is incorrect because in a process-costing application, normal rework is customarily charged to overhead. In a job-order costing application, normal rework costs related to specific jobs are usually charged to the work-in-process account for the given job, not the control account.
Answer (A) is correct. ABC identifies the causal relationship between the incurrence of cost and activities, determines the drivers of the activities, establishes cost pools related to the drivers and activities, and assigns costs to ultimate cost objects on the basis of the demands (resources or drivers consumed) placed on the activities by those cost objects. Hence, ABC assigns overhead costs based on multiple allocation bases or cost drivers. Under the traditional, single-base system, the amount allocated is $3,987.50 ($27,500 × 14.5%). Under ABC, the amount allocated is $4,513 [(12 × $11.50) + (17,500 × $1.14) + (25 × $77)], or $525.50 more than under the traditional system.

- Answer (B) is incorrect because the ABC assignment of $4,513 is at a rate of $180.52 for each of the 25 orders.
- Answer (C) is incorrect because the total is $4,513 on the ABC basis.
- Answer (D) is incorrect because ABC yields a higher allocation.

Answer (A) is incorrect because Market development seeks new markets for current products.

- Answer (B) is correct. Market penetration is growth of existing products or development of existing markets. It occurs in mature firms within an industry.
- Answer (C) is incorrect because Diversification is launching new products for new markets.
- Answer (D) is incorrect because Product development is launching new products in existing markets.

Answer (A) is correct. Under the FIFO method, EUP for materials equal 104,000 [(16,000 units in BWIP × 40%) + (76,000 units started and completed × 100%) + (24,000 units in EWIP × 90%)]. Consequently, the equivalent unit cost of materials is $4.50 ($468,000 total materials cost in May ÷ 104,000 EUP).

- Answer (B) is incorrect because the amount of $4.80 omits the 6,400 EUP added to beginning work-in-process.
- Answer (C) is incorrect because the amount of $4.12 is based on EUP calculated under the weighted-average method.
- Answer (D) is incorrect because the amount of $4.60 is the weighted-average cost per equivalent unit.
Answer (A) is incorrect because B-40 generates an incremental loss after further processing.

Answer (B) is correct. The decision to sell-or-process-further is determined by whether the incremental revenue from further processing exceeds the incremental cost. Only J-60 produces an incremental profit.

<table>
<thead>
<tr>
<th></th>
<th>B-40</th>
<th>J-60</th>
<th>H-102</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales value after further processing</td>
<td>$12.25</td>
<td>$5.70</td>
<td>$9.75</td>
</tr>
<tr>
<td>Less: sales value at split-off</td>
<td>(10.00)</td>
<td>(4.00)</td>
<td>(7.25)</td>
</tr>
<tr>
<td>Incremental revenue per unit</td>
<td>$2.25</td>
<td>$1.70</td>
<td>$2.50</td>
</tr>
<tr>
<td>Less: cost to process further</td>
<td>(3.05)</td>
<td>(1.00)</td>
<td>(2.50)</td>
</tr>
<tr>
<td>Incremental profit per unit</td>
<td>$(0.80)</td>
<td>$0.70</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

Answer (C) is incorrect because B-40 and H-102 are the products that should not be processed further.

Answer (D) is incorrect because H-102 only breaks even after further processing.

Answer (A) is correct. Firms may gain a competitive advantage by outsourcing those activities which can be performed more efficiently, and thus at lower cost, by outside providers. Doing this allows the company to expend its effort on those activities which it performs comparatively well, referred to as its core competencies.

Answer (B) is incorrect because Undifferentiated activities is not a meaningful term in this context.

Answer (C) is incorrect because To stay in business, a firm must focus on its customers whether it outsources or not.

Answer (D) is incorrect because Focusing on suppliers is not a strategy for gaining a competitive advantage.
[427] Gleim #: 3.1.31 -- Source: CMA 0408 2-060

- Answer (A) is incorrect because the amount of $800,000 results from failing to subtract ending finished goods inventory.
- Answer (B) is correct. Scurry’s cost of goods sold can be calculated as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning inventory of finished goods</td>
<td>$100,000</td>
</tr>
<tr>
<td>Add: cost of goods manufactured</td>
<td>$700,000</td>
</tr>
<tr>
<td>Less: ending inventory of finished goods</td>
<td>$(200,000)</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>$600,000</td>
</tr>
</tbody>
</table>

- Answer (C) is incorrect because the amount of $500,000 results from failing to include beginning finished goods inventory.
- Answer (D) is incorrect because the amount of $950,000 results from improperly including work-in-process inventories.

[428] Gleim #: 4.2.50 -- Source: CMA 0408 2-127

- Answer (A) is incorrect because the amount of $120 is the total materials costs embedded in beginning work-in-process.
- Answer (B) is incorrect because the amount of $36 results from improperly taking one-third of the $120 embedded in beginning work-in-process.
- Answer (C) is correct. All materials are added at the beginning of this department, meaning that all units are 100% complete for purposes of materials immediately upon entering this department. The equivalent units of production (EUP) for materials for units transferred out is therefore 100 (100 units × 100%). Under the weighted-average method, the EUP of ending work-in-process must also be included. This number is 10 (10 units × 100%), which, added to the 100 transferred out, makes a total weighted-average EUP of 110. The numerator of the per-unit cost calculation must likewise contain both costs embedded in beginning work-in-process ($120) and those added during the month ($540), for a total of $660. The weighted-average per-unit cost is therefore $6.00 ($660 ÷ 110).
- Answer (D) is incorrect because the amount of $72 results from improperly multiplying the $120 beginning work-in-process materials costs by the 60% completion percentage for conversion.
[429] Gleim #: 5.1.8 -- Source: CMA 1292 3-5

- Answer (A) is **correct**. Under absorption costing, all manufacturing costs, both fixed and variable, are treated as product costs. Under variable costing, only variable costs of manufacturing are inventoried as product costs. Fixed manufacturing costs are expensed as period costs. Packaging and shipping costs are not product costs under either method because they are incurred after the goods have been manufactured. Instead, they are included in selling and administrative expenses for the period.

- Answer (B) is incorrect because Direct labor cost is a product cost under both methods.

- Answer (C) is incorrect because Factory insurance is a fixed manufacturing cost inventoried under absorption costing but written off as a period cost under variable costing.

- Answer (D) is incorrect because Manufacturing supplies are variable costs inventoried under both methods.

[430] Gleim #: 5.1.26 -- Source: CMA 1283 4-2

- Answer (A) is incorrect because The amount of $67 properly includes direct materials and direct labor but improperly includes a portion of manufacturing overhead.

- Answer (B) is **correct**. Prime costs consist of direct materials and direct labor. The total is $52 ($32 + $20).

- Answer (C) is incorrect because The amount of $73 properly includes direct materials and direct labor but improperly includes manufacturing overhead.

- Answer (D) is incorrect because The amount of $32 properly includes direct materials but improperly excludes direct labor.

[431] Gleim #: 5.3.96 -- Source: Publisher

- Answer (A) is incorrect because Normal volume is an average expected volume over a series of years. It will vary from the expected volume on a year-by-year basis.

- Answer (B) is **correct**. Overhead is applied according to a rate found by dividing budgeted overhead for a period by an estimated activity level. If actual activity differs from the denominator value (the predetermined activity level), a volume variance will occur. This variance equals the amount of over- or underapplied overhead attributable solely to the difference between budgeted and actual activity. The expected volume is that predicted for the period. Thus, the use of expected volume as a denominator should minimize expected over- or underapplied overhead.

- Answer (C) is incorrect because Theoretical (maximum or ideal) capacity is the absolute capacity assuming continuous operations, i.e., on Sundays, holidays, etc., and can never be attained.

- Answer (D) is incorrect because Practical capacity is theoretical capacity adjusted downward for holidays, maintenance time, etc. It is very difficult to attain.
Answer (A) is correct. Benchmarking is an ongoing process that entails quantitative and qualitative measurement of the difference between the company’s performance of an activity and the performance by a best-in-class organization. The benchmarking organization against which a firm is comparing itself need not be a direct competitor. The important consideration is that the benchmarking organization be an outstanding performer in its industry.

Answer (B) is incorrect because This is a true statement about benchmarking.

Answer (C) is incorrect because This is a true statement about benchmarking.

Answer (D) is incorrect because This is a true statement about benchmarking.

Answer (A) is incorrect because The best accounting method is the opposite (normal spoilage charged to good units, abnormal spoilage charged to a separate expense account).

Answer (B) is incorrect because The cost of a normal level of spoilage is left in cost of goods sold.

Answer (C) is correct. Under process costing, as with job-order costing, the cost of a normal level of spoilage is left in cost of goods sold; abnormal spoilage is recognized separately as a loss.

Answer (D) is incorrect because Abnormal spoilage is recognized separately as a loss.
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Question</th>
<th>Answer</th>
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<tbody>
<tr>
<td>1)</td>
<td>B</td>
<td>37)</td>
<td>D</td>
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<td>2)</td>
<td>A</td>
<td>38)</td>
<td>C</td>
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<td>3)</td>
<td>D</td>
<td>39)</td>
<td>B</td>
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<td>4)</td>
<td>C</td>
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<td>C</td>
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<td>5)</td>
<td>C</td>
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<td>6)</td>
<td>C</td>
<td>42)</td>
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<td>10)</td>
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<td>11)</td>
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<td>D</td>
<td>49)</td>
<td>D</td>
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<td>14)</td>
<td>A</td>
<td>50)</td>
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<td>15)</td>
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<td>17)</td>
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<td>20)</td>
<td>B</td>
<td>56)</td>
<td>A</td>
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<tr>
<td>21)</td>
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