

Chapter 2 An Introduction to Cost Terms and Purposes

2.1 Identify and distinguish between two manufacturing cost classification systems: direct and indirect, prime and conversion.

1) "Cost" is defined by accountants as a resource sacrificed or foregone to achieve a specific objective.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-1

2) Costs of Sales is another way of phrasing Cost of Goods Sold.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-1

3) An actual cost is a predicted cost.

Answer: FALSE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-1

4) Nearly all accounting systems accumulate forecasted costs.

Answer: FALSE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-1

5) A cost object is anything for which a separate measurement of costs is desired.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-1

6) Indirect costs cannot be economically traced directly to the cost objective.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-1

7) Delivery charges are typically considered to be an indirect cost because it cannot be traced to each customer.

Answer: FALSE

Diff: 2 Type: TF

Skill: Understand

Objective: LO 2-1

8) A cost is classified as a direct or indirect cost based on the applicable cost object.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-1

9) Cost tracing assigns indirect costs to the chosen cost object.

Answer: FALSE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-1

10) Factors affecting direct/indirect cost classifications are the materiality of the cost in question, the information-gathering technology used, and the operations.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-1

11) Rent for the building that contains the manufacturing and engineering departments can all be charged as manufacturing overhead costs.

Answer: FALSE

Diff: 2 Type: TF

Skill: Understand

Objective: LO 2-1

12) The plant supervisor's salary is a direct labour cost.

Answer: FALSE

Diff: 2 Type: TF

Skill: Understand

Objective: LO 2-1

13) Conversion costs include all direct manufacturing costs.

Answer: FALSE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-1

14) Prime costs consist of direct and indirect manufacturing labour.

Answer: FALSE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-1

15) Conversion costs are all manufacturing costs other than direct materials.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-1

16) Products, services, departments, and customers may be cost objects.

Answer: TRUE

Diff: 2 Type: TF

Skill: Understand

Objective: LO 2-1

17) Costs are accounted for in two basic stages: assignment followed by accumulation.

Answer: FALSE

Explanation: Costs are accounted for in two basic stages: accumulation followed by assignment.

Diff: 2 Type: TF

Skill: Understand

Objective: LO 2-1

18) A cost object is always either a product or a service.

Answer: FALSE

Explanation: A cost object could be anything management wishes to determine the cost of, for example, a department.

Diff: 2 Type: TF

Skill: Remember

Objective: LO 2-1

19) Assigning direct costs poses more problems than assigning indirect costs.

Answer: FALSE

Explanation: Tracing direct costs is quite straightforward, whereas assigning indirect costs to a number of different cost objects can be very challenging.

Diff: 2 Type: TF

Skill: Understand

Objective: LO 2-1

20) A department could be considered a cost object.

Answer: TRUE

Diff: 2 Type: TF

Skill: Understand

Objective: LO 2-1

21) *Cost assignment* is a term that refers solely to allocating indirect costs among diverse cost objects.

Answer: FALSE

Explanation: *Cost assignment* is a general term that encompasses both (1) tracing direct costs to a distinct cost object and (2) allocating indirect costs among diverse cost objects.

Diff: 2 Type: TF

Skill: Remember

Objective: LO 2-1

22) Materiality refers to the significance of the cost in question.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-5

23) Anything for which a separate measurement of costs is desired is known as

- A) a cost item.
- B) a cost object.
- C) a fixed cost item.
- D) a variable cost object.
- E) a cost driver.

Answer: B

Diff: 1 Type: MC

Skill: Remember

Objective: LO 2-1

24) Which of the following is a cost object?

- A) direct materials
- B) customers
- C) conversion costs
- D) cost assignments
- E) indirect labour

Answer: B

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-1

25) Which of the following is an indirect production cost?

- A) materials placed into production
- B) calibrating factory equipment
- C) labour placed into production
- D) cost of shipping a product to the customer
- E) advertising

Answer: B

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-1

26) Actual costs are defined as

- A) costs incurred.
- B) direct costs.
- C) indirect costs.
- D) predicted costs.
- E) sunk costs.

Answer: A

Diff: 1 Type: MC

Skill: Remember

Objective: LO 2-1

27) Whether a company traces costs directly to an output unit or not depends upon

- A) the materiality of the contribution a cost makes to the total cost per output unit.
- B) the amount of similar costs in the cost assignment.
- C) the effect of cost tracing on overhead.
- D) the employment of cost management.
- E) the amount of customer satisfaction.

Answer: A

Diff: 2 Type: MC

Skill: Remember

Objective: LO 2-1

28) Which one of the following items is typically an example of an indirect cost of a cost object?

- A) courier charges for shipment delivery
- B) manufacturing plant electricity
- C) direct manufacturing labour
- D) wood used for furniture manufacture
- E) refundable sales tax on direct materials

Answer: B

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-1

29) Prime costs can include

- A) conversion costs.
- B) direct material costs.
- C) indirect manufacturing labour.
- D) machine set up costs.
- E) advertizing costs.

Answer: B

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-1

30) Which one of the following examples could be classified as a direct cost?

- A) The costs of an entire factory's electricity related to a product; the product line is the cost object.
- B) The printing costs incurred for payroll cheque processing; the payroll cheque processing is the cost object.
- C) The salary of a maintenance supervisor in the manufacturing plant; Product A is the cost object.
- D) The costs incurred for electricity in the office; the accounting office is the cost object.
- E) The cost of advertising the products.

Answer: B

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-1

31) The determination of a cost as being either direct or indirect depends upon

- A) the accounting system.
- B) the allocation system.
- C) the cost tracing system.
- D) only the cost object chosen to determine its individual costs.
- E) the choice of the cost object, and the materiality of the cost in question.

Answer: E

Diff: 2 Type: MC

Skill: Remember

Objective: LO 2-1

32) Cost assignment is

- A) always arbitrary.
- B) linking actual costs to cost objects.
- C) the same as cost accumulation.
- D) finding the difference between budgeted and actual costs.
- E) the same as cost conversion.

Answer: B

Diff: 2 Type: MC

Skill: Remember

Objective: LO 2-1

33) Wages paid to machine operators on an assembly line are an example of which type of cost?

- A) direct manufacturing labour costs
- B) direct manufacturing overhead costs
- C) direct materials costs
- D) indirect manufacturing overhead costs
- E) indirect material costs

Answer: A

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-1

34) Which of the following is TRUE concerning prime costs?

- A) Prime costs are direct manufacturing costs.
- B) They include indirect manufacturing labour.
- C) They equal the sum of direct manufacturing costs plus conversion costs.
- D) They equal the sum of fixed manufacturing costs plus conversion costs.
- E) They are indirect manufacturing costs.

Answer: A

Diff: 1 Type: MC

Skill: Remember

Objective: LO 2-1

35) Cost tracing is

- A) the assignment of direct costs to the chosen cost object.
- B) a function of cost allocation.
- C) the process of tracking both direct and indirect costs associated with a cost object.
- D) the process of determining the actual cost of the cost object.
- E) the assignment of both direct and indirect costs associated with a cost object.

Answer: A

Diff: 2 Type: MC

Skill: Remember

Objective: LO 2-1

36) Cost allocation is

- A) the process of tracking both direct and indirect costs associated to a cost object.
- B) the process of determining the actual cost of the cost object.
- C) the assignment of indirect costs to the chosen cost object.
- D) a function of cost tracing.
- E) the assignment of direct costs to the chosen cost object.

Answer: C

Diff: 2 Type: MC

Skill: Remember

Objective: LO 2-1

37) Classifying a cost as either direct or indirect depends upon

- A) the behaviour of the cost in response to volume changes.
- B) whether the cost is expensed in the period in which it is incurred.
- C) whether the cost can be traced to the cost object.
- D) whether an expenditure is avoidable or not in the future.
- E) the inventory classification system.

Answer: C

Diff: 2 Type: MC

Skill: Remember

Objective: LO 2-1

38) A manufacturing plant produces two product lines: football equipment and hockey equipment. Direct costs for the football equipment line are the

- A) beverages provided daily in the plant break room.
- B) monthly lease payments for a specialized piece of equipment needed to manufacture the football helmet.
- C) salaries of the clerical staff that work in the company administrative offices.
- D) utilities paid for the manufacturing plant.
- E) advertising costs.

Answer: B

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-1

39) A manufacturing plant produces two product lines: football equipment and hockey equipment. An indirect cost for the hockey equipment line is the

- A) material used to make the hockey sticks.
- B) labour to bind the shaft to the blade of the hockey stick.
- C) shift supervisor for the hockey line.
- D) plant supervisor.
- E) salesperson travelling expenses.

Answer: D

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-1

40) Factors affecting direct/indirect cost classification include all of the following EXCEPT the

- A) cost assignment method.
- B) materiality of the cost in question.
- C) selection of the cost object.
- D) available information-gathering technology.
- E) design of operations.

Answer: A

Diff: 2 Type: MC

Skill: Remember

Objective: LO 2-1

41) Manufacturing overhead includes

- A) corporate insurance cost.
- B) the executive officers' salaries.
- C) marketing costs.
- D) supplies used in the human resources department.
- E) plant utilities.

Answer: E

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-1

42) What is the meaning of the term "cost object"? Give an example of a cost object that would be used in a manufacturing company, a merchandising company, and a service sector company?

Answer: A cost object is anything for which a measurement of costs is desired. An example of a cost object for a manufacturing company might be the cost of manufacturing a particular product. An example of a cost object for a merchandising company might be a particular department of a retail store. An example of a cost object for a service sector company might be the cost to serve or supply a particular customer.

Diff: 2 Type: ES

Skill: Understand

Objective: LO 2-1

43) What are the differences between direct costs and indirect costs? Give an example of each.

Answer: *Direct* costs are costs that can be traced easily and economically to the product manufactured or the service rendered. Examples of direct costs include direct materials and direct manufacturing labour used in a product. *Indirect* costs cannot be easily identified in a cost efficient manner (economically) with individual products or services rendered, and are usually assigned using allocation formulas. In a plant that manufactures multiple products, examples of indirect costs include the plant supervisor's salary and the cost of machines used to produce more than one type of product.

Diff: 2 Type: ES

Skill: Understand

Objective: LO 2-1

Sheen Manufacturing has four manufacturing cost pools and many types of costs, some of which are listed below. Match the type of cost with the most appropriate cost pool or as a period cost.

- A) Cost pool - indirect factory operating costs
- B) Cost pool - direct factory labour
- C) Cost pool - indirect factory labour
- D) Period cost

44) amortization on buildings and equipment

Diff: 1 Type: MA

Skill: Understand

Objective: LO 2-1

45) fringe benefits for factory workers

Diff: 1 Type: MA

Skill: Understand

Objective: LO 2-1

46) idle time wages

Diff: 1 Type: MA

Skill: Understand

Objective: LO 2-1

47) lubricants for machines

Diff: 1 Type: MA

Skill: Understand

Objective: LO 2-1

48) night security

Diff: 1 Type: MA

Skill: Understand

Objective: LO 2-1

49) factory worker overtime premiums

Diff: 1 Type: MA

Skill: Understand

Objective: LO 2-1

50) factory worker overtime premiums

Diff: 1 Type: MA

Skill: Understand

Objective: LO 2-1

51) property insurance on the factory

Diff: 1 Type: MA

Skill: Understand

Objective: LO 2-1

52) property taxes on the administration office

Diff: 1 Type: MA

Skill: Understand

Objective: LO 2-1

53) safety hats and shoes

Diff: 1 Type: MA

Skill: Understand

Objective: LO 2-1

54) factory supervisor's salaries

Diff: 1 Type: MA

Skill: Understand

Objective: LO 2-1

55) utilities on the administrative building

Diff: 1 Type: MA

Skill: Understand

Objective: LO 2-1

56) utilities on the factory

Diff: 1 Type: MA

Skill: Understand

Objective: LO 2-1

Answers: 44) A 45) C 46) C 47) A 48) A 49) A 50) C 51) A 52) D 53) A 54) C 55) D 56) A

57) Office Supply Company manufactures office furniture. Recently the company decided to develop a formal cost accounting system. The company is currently converting all costs into classifications as related to its manufacturing processes.

Required:

For the following items, label each as being appropriate for

- direct cost tracing of the finished furniture,
- indirect cost allocation of an indirect manufacturing cost to the finished furniture, or
- as a nonmanufacturing item.

Item	Direct Cost Tracing	Indirect Cost Allocation	Nonmanu- facturing
Carpenter wages	_____	_____	_____
Amortization - office building	_____	_____	_____
Glue for assembly	_____	_____	_____
Lathe department supervisor	_____	_____	_____
Lathe amortization	_____	_____	_____
Lathe maintenance	_____	_____	_____
Lathe operator wages	_____	_____	_____
Lumber	_____	_____	_____
Sales staff wages	_____	_____	_____
Metal brackets for drawers	_____	_____	_____
Washroom supplies	_____	_____	_____

Answer: Item	Direct Cost Tracing	Indirect Cost Allocation	Nonmanu- facturing
Carpenter wages	X		
Amortization - office building			X
Glue for assembly		X	
Lathe department supervisor		X	
Lathe amortization		X	
Lathe maintenance		X	
Lathe operator wages	X		
Lumber	X		
Sales staff wages		X	
Metal brackets for drawers	X		
Washroom supplies		X	
Diff: 2 Type: ES			
Skill: Understand			
Objective: LO 2-1			

2.2 Differentiate fixed from variable cost behaviour and explain the relationship of cost behaviour to direct and indirect cost classifications.

1) A relevant range is the range of the cost driver in which a specific relationship between cost and driver is valid.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-2

2) Changes in particular cost drivers automatically result in decreases in overall costs.

Answer: FALSE

Explanation: Changes can also result in cost increases.

Diff: 2 Type: TF

Skill: Understand

Objective: LO 2-2

3) A fixed cost is a cost that changes per unit as cost driver volume changes.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-2

4) Total variable costs change in direct proportion to changes in cost driver volume.

Answer: TRUE

Diff: 2 Type: TF

Skill: Remember

Objective: LO 2-2

5) The variable cost per unit of a product should stay the same throughout the relevant range of production.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-2

6) An appropriate cost driver for shipping costs might be the number of units shipped.

Answer: TRUE

Diff: 2 Type: TF

Skill: Understand

Objective: LO 2-2

7) Fixed costs do not have cost drivers, at least in the short-run.

Answer: TRUE

Diff: 2 Type: TF

Skill: Remember

Objective: LO 2-2

8) Costing systems that identify the cost of each activity such as testing, design, or setup are called *management-based costing systems*.

Answer: FALSE

Explanation: Costing systems that identify the cost of each activity such as testing, design, or setup are called *activity-based costing systems*.

Diff: 2 Type: TF

Skill: Remember

Objective: LO 2-2

9) Competition places an increased emphasis on cost reductions. For an organization to reduce costs it must focus on

A) maximizing the cost allocation system.

B) reporting non-value added costs separately from value-added costs.

C) efficiently managing the use of the cost drivers in those value-added activities.

D) the cost allocation process.

E) reducing the number of cost drivers.

Answer: C

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-2

10) Which of the following statements about cost management is TRUE?

A) It requires that managers actively strive to increase revenues.

B) It only focuses on inventoriable costs.

C) It is not affected by the organization's customers.

D) It only applies to period costs.

E) It requires efficient management of the use of the cost drivers in the value-added activities.

Answer: E

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-2

11) Which one of the following is a variable cost in a grocery store?

A) rent

B) president's salary

C) inventory of vegetables

D) property taxes

E) administrative salaries

Answer: C

Diff: 1 Type: MC

Skill: Understand

Objective: LO 2-2

12) Which of the following is a fixed cost in a clothing store?

- A) store manager's salary
- B) electricity
- C) sales commissions
- D) inventory
- E) paper for the cash register

Answer: A

Diff: 1 Type: MC

Skill: Understand

Objective: LO 2-2

13) If each furnace required a hose that costs \$20 and 2,000 furnaces are produced for the month, the \$40,000 total cost for hoses

- A) is considered to be a direct fixed cost.
- B) is considered to be a direct variable cost.
- C) is considered to be an indirect fixed cost.
- D) is considered to be an indirect variable cost.
- E) is considered to be variable or fixed, depending on the relevant range.

Answer: B

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-2

Use the information below to answer the following question(s).

Macadamia Co. produced and sold 40,000 units last year. **Per unit** revenue and costs were as follows:

Revenue		\$100.00
Cost of Goods Sold:		
Direct Materials	\$15.00	
Direct Labour	30.00	
Variable Manufacturing Overhead	20.00	
Fixed Manufacturing Overhead	<u>10.00</u>	
Total Cost of Goods Sold		<u>75.00</u>
Gross Margin		\$25.00
Selling and Administrative Costs:		
Sales Commissions (10% of Sales)	\$10.00	
Administrative Salaries	<u>20.00</u>	
Total Selling and Administrative		<u>30.00</u>
Operating Income <Loss>		<\$5.00>

Fixed manufacturing overhead and administrative salaries are fixed costs. The per unit amounts are based on last year's production.

14) Calculate last year's operating income when the company produced and sold 40,000 units.

- A) \$0
- B) \$<200,000>
- C) \$<500,000>
- D) \$<800,000>
- E) \$<1,000,000>

Answer: B

Explanation: B) $40,000 \times [100 - (15 + 30 + 20 + 10)] - [40,000 \times (20 + 10)] = \$<200,000>$

Diff: 1 Type: MC

Skill: Apply

Objective: LO 2-2

15) Calculate this year's operating income if the company plans to produce and sell 50,000 units.

- A) \$50,000
- B) \$0
- C) \$<250,000>
- D) \$<550,000>
- E) \$250,000

Answer: A

Explanation: A) $50,000 \times [100 - (15 + 30 + 20 + 10)] - [40,000 \times (20 + 10)] = \$50,000$

Diff: 3 Type: MC

Skill: Apply

Objective: LO 2-2

16) Calculate this year's operating income if the company plans to produce and sell 60,000 units.

- A) \$150,000
- B) \$0
- C) \$<300,000>
- D) \$<650,000>
- E) \$300,000

Answer: E

Explanation: E) $60,000 \times [100 - (15 + 30 + 20 + 10)] - [40,000 \times (20 + 10)] = \$300,000$

Diff: 3 Type: MC

Skill: Apply

Objective: LO 2-2

Use the information below to answer the following question(s).

Big Island Coffee Co. produced and sold 120,000 units last year. **Per unit** revenue and costs were as follows:

Revenue		\$35.00
Cost of Goods Sold:		
Direct Materials	\$20.00	
Direct Labour	3.00	
Variable Manufacturing Overhead	2.00	
Fixed Manufacturing Overhead	1.00	
Total Cost of Goods Sold		<u>26.00</u>
Gross Margin		\$9.00
Selling and Administrative Costs:		
Sales Commissions (10% of sales)	\$3.50	
Administrative Salaries	6.00	
Total Selling and Administrative		<u>9.50</u>
Operating Income <Loss>		<\$0.50>

Fixed manufacturing overhead and administrative salaries are fixed costs. The per unit amounts are based on last year's production.

17) Calculate last year's operating income when the company produced and sold 120,000 units.

- A) \$0
- B) \$<60,000>
- C) \$<500,000>
- D) \$<800,000>
- E) \$<1,000,000>

Answer: B

Explanation: B) $120,000 \times \$0.50 = \$<60,000>$

Diff: 1 Type: MC

Skill: Apply

Objective: LO 2-2

18) Calculate this year's operating income if the company plans to produce and sell 200,000 units.

- A) \$460,000
- B) \$0
- C) \$<100,000>
- D) \$900,000
- E) \$980,000

Answer: A

Explanation: A) $200,000 \times [35 - (20 + 3 + 2 + 3.50)] - [120,000 \times (1 + 6)] = \$460,000$

Diff: 3 Type: MC

Skill: Apply

Objective: LO 2-2

19) Calculate this year's operating income if the company plans to produce and sell 60,000 units.

- A) \$120,000
- B) \$0
- C) \$<30,000>
- D) \$<100,000>
- E) \$<450,000>

Answer: E

Explanation: E) $60,000 \times [35 - (20 + 3 + 2 + 3.50)] - [120,000 \times (1 + 6)] = \$<450,000>$

Diff: 3 Type: MC

Skill: Apply

Objective: LO 2-2

20) Cost behaviour refers to

- A) how costs react to a change in the level of activity.
- B) whether a cost is incurred in a manufacturing, merchandising, or service company.
- C) classifying costs as either inventoriable or period costs.
- D) whether a particular expense has been ethically incurred.
- E) how costs react to a change in selling price.

Answer: A

Diff: 1 Type: MC

Skill: Remember

Objective: LO 2-2

21) A mixed cost is

- A) a fixed cost.
- B) a cost with fixed and variable elements.
- C) a variable cost.
- D) always an indirect cost.
- E) a cost with direct and indirect elements.

Answer: B

Diff: 1 Type: MC

Skill: Remember

Objective: LO 2-2

22) Variable costs

- A) are always indirect costs.
- B) increase in total when the actual level of activity increases.
- C) include most personnel costs and depreciation on machinery.
- D) can always be traced directly to the cost object.
- E) change in relation to selling price.

Answer: B

Diff: 1 Type: MC

Skill: Remember

Objective: LO 2-2

23) The relevant range is important because

- A) it specifies which costs should be used for a given decision.
- B) it provides a basis for determining a range of acceptable cost alternatives.
- C) it is required to determine inventoriable costs under Canadian GAAP.
- D) it specifies the limits beyond which the relationship of cost to cost drivers may not be valid.
- E) it determines the time horizon.

Answer: D

Diff: 2 Type: MC

Skill: Remember

Objective: LO 2-2

24) Which of the following statements about the key features of cost accounting and cost management is TRUE?

- A) When making decisions about what products to produce, managers need to know how revenue and costs vary with changes in output levels.
- B) Managers need to understand that period costs remain the same from one period to the next.
- C) The costing system allocates direct costs and traces indirect costs to products.
- D) When making decisions, managers must understand that all revenue and costs are relevant.
- E) Cost accounting is used for managerial decision making, not for financial statements.

Answer: A

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-2

25) Fixed costs

- A) may include either direct or indirect costs.
- B) vary with production or sales volumes.
- C) include parts and materials used to manufacture a product.
- D) can be adjusted in the short run to meet actual demands.
- E) remain fixed regardless of the relevant range of production.

Answer: A

Diff: 2 Type: MC

Skill: Remember

Objective: LO 2-2

- 26) Fixed costs depend on the
A) amount of resources used.
B) amount of resources acquired.
C) volume of production.
D) volume of sales.
E) allocation method.

Answer: B

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-2

- 27) Which one of the following is a variable cost for an insurance company?
A) rent
B) president's salary
C) sales commissions
D) property taxes
E) amortization on the office equipment

Answer: C

Diff: 1 Type: MC

Skill: Understand

Objective: LO 2-2

- 28) Which of the following is a fixed cost for an automobile manufacturing plant?
A) straight-line amortization on factory equipment
B) electricity used by assembly-line machines
C) sales commissions
D) windows for each car produced
E) labour cost of assembly line workers

Answer: A

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-2

- 29) Combs, Inc., reports the following information for September:

Sales	\$15,000
Variable costs	3,000
Fixed costs	<u>4,000</u>
Operating income	<u>\$8,000</u>

Required:

If sales double in October, what is the projected operating income?

Answer: $(\$15,000 \times 2) - (\$3,000 \times 2) - \$4,000 = \$20,000$

Diff: 2 Type: ES

Skill: Apply

Objective: LO 2-2

30) A new employee in the accounting department is having difficulty understanding two sets of accounting terms—variable and fixed costs as opposed to period and product costs. He understands that variable costs change during an accounting period while fixed costs do not. However, he explains that a period cost implies that it is for a period of time and is, therefore, also fixed. Does his assumption imply that all product costs are then variable?

Required:

As part of your responsibility to train new staff, explain the difference between these terms.

Answer: First, you should explain that all costs should be first classified as either variable or fixed. This concept deals with cost behaviour and not with what the costs are associated in the organization. Many decisions are made about costs because of the type of behaviour they exhibit.

Second, a cost can be assigned to "why you are in business" activities (product costs) of the organization or to "support" activities (period costs) of the organization. For a manufacturing firm period costs are all costs which have no direct relationship to the manufacturing process.

Period costs are always expenses during the accounting period while product costs are inventoriable because they can be assigned to the products being produced.

Diff: 2 Type: ES

Skill: Understand

Objective: LO 2-2

31) A manufacturing company contracts with the labour union to guarantee full employment for all employees with at least 10 years seniority. The Company expects to be working at capacity for the next 2 years (the life of the contract), so this was seen as a bargaining concession without any cost to the company. On average, an employee earns \$30 per hour, including benefits. The work force consists of 800 employees, with seniority ranging from 1 year to 18 years.

Required:

Analyze the direct labour cost in term of variable costs, fixed costs, and the relevant range.

Answer: Usually, we think of direct labour as a variable cost, since it increases in proportion to the increases in output. However in this case, the manufacturer has converted a portion of the direct labour cost into a fixed cost, since the union contract appears to require the company to pay full wages to all employees with at least 10 years seniority, regardless of the level of production. The direct labour costs in excess of this amount would still be a variable cost. The relevant range would be the number of employees with at least 10 years seniority, times the wage for a regular work week. This will be the case until the contract expires.

Diff: 2 Type: ES

Skill: Understand

Objective: LO 2-2

32) Describe a variable cost. Describe a fixed cost. Explain why the distinction between variable and fixed costs is important in cost accounting.

Answer: *Total variable* costs increase with increased production or sales volumes; *Unit variable* cost remains constant no matter the level of activity; all within the relevant range.

Fixed costs are not influenced by fluctuations in production or sales volumes. *Unit fixed* costs will decrease as activity level increases; within the relevant range.

Without the knowledge of cost behaviors, budgets and other forecasting tools will be inaccurate and unreliable. Understanding whether a cost behaves as a variable or a fixed cost is essential to estimating and planning for business success.

Diff: 2 Type: ES

Skill: Remember

Objective: LO 2-2

33) Eichhorn Company's Process Engineering department has the responsibility of rearranging the individual work tasks for each assembly line worker, with the goal of utilizing each worker as much as possible. Currently, on average, each assembly line worker only has tasks that require 47 minutes per hour, and the plant manager wants this increased by at least 10 %. The company builds the Eichhorn Rocket Roadster, which is selling out of dealers' showrooms faster than the company's assembly plants can produce them. If production can't be increased, then sales will soon suffer.

Required:

Explain the effect on total costs of production, using the number of engineering changes (from Process Engineering) and at least two other cost drivers. Choose the cost driver that you think is most logical in the circumstances, and begin your answer with a brief explanation of a cost driver.

Answer: A cost driver is any factor that affects total costs. When a new engineering change has to be implemented, obviously there will be down time for staff to learn the new work processes, and for any physical changes required on the assembly line that may result in rearranging the workload tasks (such as material handling changes). These costs would have to be balanced against the expected savings by being able to utilize the production worker's time more efficiently. The costs of the engineer's time would not be relevant.

A second cost driver would be the units of production. As the workers time utilization becomes more efficient, production should increase, so total variable costs will increase. Total fixed costs will not increase assuming no problems with the relevant range. The direct manufacturing labour costs would increase in total, but as indicated above, we expect decreased variable direct manufacturing labour cost per unit.

Another possible cost driver is the number of setups. To the extent that the number of setups is increased by the engineering changes, then total costs will increase, and these costs would have to be considered when contemplating the engineering changes. In this situation, it appears that production must be increased, and that the plant manager is most concerned with achieving this through reducing the direct labour required per unit, rather than by reducing labour costs per unit. Therefore, the most likely cost driver in this situation would be the number of units produced.

Diff: 3 Type: ES

Skill: Understand

Objective: LO 2-2

34) Boone Hospital wants to determine, to the extent possible, the actual cost for each patient stay. It is a general health care facility with all basic services but does not perform specialized services such as organ transplants.

Required:

Complete the following table by

- Classifying each cost as a direct or indirect cost with respect to each patient.
- Classifying each item as fixed or variable with respect to the number of patient days (sum of days each patient was in hospital) the hospital incurs.

Cost	Direct	Indirect	Fixed	Variable
Cleaning activities				
Electronic monitoring				
Lab test charges				
Meals for patients				
Medicine				
Nurses' salaries				
Operating room usage				
Parking maintenance				
Security				

Answer:

Cost	Direct	Indirect	Fixed	Variable
Cleaning activities		X		X
Electronic monitoring	X			X
Lab test charges	X			X
Meals for patients	X			X
Medicine	X			X
Nurses' salaries	X		X	
Operating room usage	X		X	
Parking maintenance		X	X	
Security		X	X	

Diff: 2 Type: ES

Objective: LO 2-2

35) Whippany manufacturing wants to estimate costs for each product they produce at its Troy plant. The Troy plant produces three products at this plant, and runs two flexible assembly lines. Each assembly line can produce all three products.

Required:

- Classify each of the following costs as either direct or indirect for each product.
- Classify each of the following costs as either fixed or variable with respect to the number of units produced of each product.

	<u>Direct</u>	<u>Indirect</u>	<u>Fixed</u>	<u>Variable</u>
Assembly line labour wages				
Plant manager's wages				
Depreciation on the assembly line equipment				
Component parts for the product				
Wages of security personnel for the factory				

Answer:

	<u>Direct</u>	<u>Indirect</u>	<u>Fixed</u>	<u>Variable</u>
Assembly line labour wages	X			X
Plant manager's wages		X	X	
Depreciation on the assembly line equipment		X	X	
Component parts for the product	X			X
Adhesive to hold the parts together and is an insignificant part of the final cost of the product		X		X

Diff: 2 Type: ES

Objective: LO 2-2

36) Butler Hospital wants to estimate the cost for each patient stay. It is a general health care facility offering only basic services and not specialized services such as organ transplants.

Required:

- Classify each of the following costs as either direct or indirect with respect to each patient.
- Classify each of the following costs as either fixed or variable with respect to hospital costs per day.

	<u>Direct</u>	<u>Indirect</u>	<u>Fixed</u>	<u>Variable</u>
Electronic monitoring	_____	_____	_____	_____
Meals for patients	_____	_____	_____	_____
Nurses' salaries	_____	_____	_____	_____
Parking maintenance	_____	_____	_____	_____
Security	_____	_____	_____	_____
Answer:	<u>Direct</u>	<u>Indirect</u>	<u>Fixed</u>	<u>Variable</u>

Electronic monitoring	X			X
Meals for patients	X			X
Nurses' salaries	X	X		
Parking maintenance		X	X	
Security		X	X	

Diff: 2 Type: ES

Objective: LO 2-2

2.3 Interpret unitized fixed costs appropriately when making cost management decisions.

1) A unit cost is computed by dividing a total cost by some number of units.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-3

2) Unit costs are considered to be an average cost per unit.

Answer: TRUE

Diff: 2 Type: TF

Skill: Understand

Objective: LO 2-3

3) When a manager is making a decision based on cost figures, it is preferable that he (she) thinks in terms of unit costs.

Answer: FALSE

Explanation: As a general rule, first calculate total costs, then compute a unit cost, if it is needed for a particular decision.

Diff: 2 Type: TF

Skill: Remember

Objective: LO 2-3

4) When 50,000 units are produced the fixed costs are \$10 per unit. Therefore when 100,000 units are produced fixed costs will remain at \$10 per unit.

Answer: FALSE

Diff: 2 Type: TF

Skill: Understand

Objective: LO 2-3

5) Wheel and Tire Manufacturing currently produces 1,000 tires per month. The following per unit data apply for sales to regular customers:

Direct materials	\$20
Direct manufacturing labour	3
Variable manufacturing overhead	6
Fixed manufacturing overhead	<u>10</u>
Total manufacturing costs	<u>\$39</u>

The plant has capacity for 3,000 tires and is considering expanding production to 2,000 tires. What is the total cost of producing 2,000 tires?

A) \$39,000

B) \$78,000

C) \$68,000

D) \$62,000

Answer: C

Explanation: C) $[(\$20 + \$3 + \$6) \times 2,000 \text{ units}] + (\$10 \times 1,000 \text{ units}) = \$68,000$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-3

6) Christi Manufacturing provided the following information for last month:

Sales	\$10,000
Variable costs	3,000
Fixed costs	<u>5,000</u>
Operating income	<u>\$2,000</u>

If sales double next month, what is the projected operating income?

A) \$4,000

B) \$7,000

C) \$9,000

D) \$12,000

E) \$6,000

Answer: C

Explanation: C) $(\$10,000 \times 2) - (\$3,000 \times 2) - \$5,000 = \$9,000$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-3

7) Kym Manufacturing provided the following information for last month:

Sales	\$12,000
Variable costs	4,000
Fixed costs	<u>1,000</u>
Operating income	<u>\$7,000</u>

If sales double next month, what is the projected operating income?

- A) \$14,000
- B) \$15,000
- C) \$18,000
- D) \$19,000
- E) \$20,000

Answer: B

Explanation: B) $(\$12,000 \times 2) - (\$4,000 \times 2) - \$1,000 = \$15,000$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-3

8) Springfield Manufacturing produces electronic storage devices, and uses the following three-part classification for its manufacturing costs: direct materials, direct manufacturing labour, and indirect manufacturing costs. Total indirect manufacturing costs for January were \$300 million, and were allocated to each product on the basis of direct manufacturing labour costs of each line. Summary data for January for the most popular electronic storage device, the Big Bertha, was:

	Big Bertha
Direct manufacturing material costs	\$9,000,000
Direct manufacturing labour costs	\$3,000,000
Indirect manufacturing costs	\$8,500,000
Units produced	40,000

Required:

- a. Compute the total manufacturing cost per unit for each product produced in January.
- b. Suppose production will be reduced to 30,000 units in February. If indirect manufacturing costs include fixed costs then explain if the total cost per unit be higher or lower than in January.

Answer:

- a. Unit costs for January were:

$(\$9,000,000 + \$3,000,000 + \$8,500,000)/40,000 = \512.50 per unit

- b. Unit costs will be higher in February if only 30,000 units are to be produced. Since fewer units are expected to be produced in February, total fixed costs will be spread over fewer units. This will result in an increase in total cost per unit since variable costs per unit will most likely not change with the decreased production.

Diff: 2 Type: ES

Skill: Apply

Objective: LO 2-3

9) Gimble Manufacturing Inc. makes vibration control springs for heating, ventilating, and air conditioning (HVAC) equipment. Materials cost \$52 per spring set, and the machinists are paid \$44 per hour. A machinist can produce four sets of springs per hour. Fixed manufacturing costs for springs are \$5,000 per period. Non-manufacturing spring set costs are fixed at \$11,000 per period. Each spring set sells for \$75 and Gimble sells on average 4,000 spring sets per period.

Required:

- Competition has entered the market and is selling spring sets for an introductory price of \$66. Can Gimble Manufacturing Inc. meet this price and still make a profit?
- How would your answer to requirement a. change if Gimble sells on average 8,000 spring sets per period.
- What should Gimble Manufacturing Inc.'s management do in the short-run and for the long-term if it appears that \$66 is going to be the new market price for the future.

Answer:

- No.

Revenue (4,000 × \$66)	\$ 264,000
Cost of goods sold:	
Materials (4,000 × \$52)	\$ 208,000
Direct labour (4,000 × (\$44/4))	44,000
Fixed manufacturing costs	5,000
Cost of goods sold	<u>257,000</u>
Gross margin	\$ 7,000
Fixed non-manufacturing costs	<u>11,000</u>
Net operating loss	<u>\$ (4,000)</u>

- Yes.

Revenue (8,000 × \$66)	\$ 528,000
Cost of goods sold:	
Materials (8,000 × \$52)	\$ 416,000
Direct labour (8,000 × (\$44/4))	88,000
Fixed manufacturing costs	5,000
Cost of goods sold	<u>509,000</u>
Gross margin	\$19,000
Fixed non-manufacturing costs	<u>11,000</u>
Net operating loss	<u>\$ 8,000</u>

- The spring sets have a unit contribution margin of \$3 (\$66 - \$52 - \$11) so meeting the price in the short-run will at least contribute to fixed costs. In the long-term the company will have to lower costs or differentiate its' product in such a way that it can command a higher price.

Diff: 3 Type: ES

Skill: Analyze

Objective: LO 2-3

10) Things are not going well for the widget industry this year. The well-known cyclical nature of widget sales is in a downturn and your plant has been ordered to cut costs by its American parent corporation. The plant manager explains that he has shown the lead by negotiating a \$1.50 hourly wage decrease with the production workers, based on a formula that pegs a \$1.50 per hour wage increase/decrease to sales volume, and since sales are down this year, so are hourly wage costs. In the quarterly management meeting, the sales manager complained that sales could have been higher, but that somehow costs had increased, at least that's what the reports out of your office in management accounting, indicated. The Purchasing manager assured everyone that she was able to obtain raw materials at the same price as last year, and unfortunately, you as the management accountant, were not in attendance at the meeting. Your assistant, a new employee attended in your place, and promised at the meeting to redo the reports and find the errors. Your assistant has come to you as he cannot find any errors in the reports. Consequently, the plant manager wants you to redo the reports, find the error reports produced by your department for the last quarter and to explain to your boss, the plant manager, why average costs have increased.

Required:

Assuming there are no errors in the cost reports, explain to the plant manager how direct labour costs could be decreased and direct materials costs could be the same as last year, and yet the selling price cannot be lowered without sacrificing net income for the plant.

Answer: The key to the problem lies in recognizing the difference between variable and fixed costs, and understanding the implication that declining volume has on average costs. Part of the solution may be due to indirect materials, but one would assume this is a minor factor. The major factor is that there are fewer units of widgets to absorb the fixed costs. On a per widget basis, the plant is saving say, \$1.50 per hour in labour costs, but each widget has to absorb more of the fixed costs. If the \$1.50 per hour component is not a significant part of the cost, compared to the fixed cost per unit at that level of production, for example, if the direct labour per widget is only 6 minutes, then the savings in variable cost per widget is only \$0.15. This isn't much in savings when the fixed costs per unit have to increase. The next point is that setting the sales price perhaps should not consider actual fixed cost burden, but the plant could consider using a budgeted amount, and lower the sales price somewhat in hopes that this would increase sales.

Diff: 3 Type: ES

Skill: Understand

Objective: LO 2-3

11) The vice president of production has just completed the January meeting with all production department heads. Everyone is upset that the production variances for the month were unfavourable. They do not understand why everything was unfavourable. January is typically the company's lowest production month of the year.

The company uses annual average unit costs for production evaluation purposes. The average costs are based on the prior year's actual performance with adjustments for any predicted changes in the coming year. Both production and economic items are considered in setting the averages for each new year.

Required:

Explain the problems with using average costs in evaluating production.

Answer: One of the problems with average unit costs is that actual costs may never be average. The probable shortcoming with the situation presented is that the costs included a fixed cost element and with the production low the fixed costs were averaged using a denominator that was smaller than the year's average which caused the unit averages to increase.

Diff: 2 Type: ES

Skill: Understand

Objective: LO 2-3

2.4 Apply cost information to produce a GAAP-compliant income statement showing proper cost of goods sold and a balance sheet showing proper inventory valuation.

1) Manufacturing-sector companies purchase materials and other resources for conversion into various finished goods.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-4

2) Manufacturing firms have three types of inventory: direct materials, work in process, and merchandise.

Answer: FALSE

Explanation: finished goods

Diff: 2 Type: TF

Skill: Remember

Objective: LO 2-4

3) Direct materials inventory is products held for resale.

Answer: FALSE

Explanation: finished goods inventory

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-4

4) Work-in-process consists of partially completed goods not yet ready for sale.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-4

5) Operating income does not include interest expense and income taxes.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-4

6) Service-sector companies provide services or intangible products to their customers.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-4

7) Merchandising companies purchase products and sell them to customers without changing their basic form.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-4

8) Manufacturing sector firms normally hold three types of inventory: direct materials inventory, work-in-process inventory, and finished goods inventory.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-4

9) Inventoriable costs are reported as an asset when incurred and expensed on the income statement when the product is sold.

Answer: TRUE

Diff: 2 Type: TF

Skill: Remember

Objective: LO 2-4

10) Period costs are never included as part of inventory.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-4

11) Inventoriable costs for merchandising companies are held in the work-in-process account.

Answer: FALSE

Explanation: Inventoriable costs for merchandising companies are held in the finished goods inventory account.

Diff: 1 Type: TF

Use the information below to answer the following question(s).

Consider the following data of the Vancouver Company for the year 2016:

Sandpaper-Plant	\$10,000	Leasing costs - plant	\$120,000
Materials handling-Plant	100,000	Amortization- equip.	70,000
Coolants-Plant	7,000	Property taxes - equip.	10,000
Indirect manufacturing labour	86,000	Fire insurance - equip.	5,000
Direct manufacturing labour	680,000	Direct material purchases	980,000
Direct materials, 1/1/2016	120,000	Direct materials 12/31/2016	86,000
Finished goods, 1/1/2016	210,000	Sales	4,000,000
Finished goods, 12/31/2016	400,000	Sales commissions	200,000
WIP, 1/1/2016	30,000	Sales salaries	180,000
WIP, 12/31/2016	20,000	Advertising costs	150,000
Administration costs	250,000		

12) What is the unit cost for the direct materials for 2016 assuming direct materials costs are for the production of 1,014,000 units?

- A) \$0.80
- B) \$0.95
- C) \$1.00
- D) \$1.08
- E) \$1.11

Answer: C

Explanation: C) $(\$120,000 + \$980,000 - \$86,000) / 1,014,000 \text{ units} = \1.00

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-4

13) What is the unit cost for the plant leasing costs for 2016 assuming plant leasing costs are for the production of 1,014,000 units?

- A) \$0.119
- B) \$0.118
- C) \$0.110
- D) \$0.900
- E) \$0.943

Answer: B

Explanation: B) $\$120,000 / 1,014,000 \text{ units} = .1183431 \text{ or } .118$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-4

14) What is the unit cost for the direct materials for 2016 assuming direct materials are for the production of 507,000 units?

- A) \$0.80
- B) \$0.95
- C) \$2.00
- D) \$1.08
- E) \$1.10

Answer: C

Explanation: C) $(\$120,000 + \$980,000 - \$86,000)/507,000 \text{ units} = \2.00

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-4

15) What is the unit cost for the plant leasing cost for 2016 assuming plant leasing costs are for the production of 2,000,000 units?

- A) 0.35
- B) 0.18
- C) 0.12
- D) 0.06
- E) 0.04

Answer: D

Explanation: D) $\$120,000/2,000,000 \text{ units} = \0.06

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-4

Use the information below to answer the following question(s).

The following information pertains to Payton's Shoe Manufacturing:

Manufacturing costs	\$1,000,000
Shoes manufactured	100,000
Beginning inventory	0 pairs

99,500 pairs of shoes are sold during the year for \$18.

16) What is Payton's manufacturing cost per pair of shoes?

- A) \$10.00
- B) \$10.05
- C) \$100.00
- D) \$18.00
- E) \$9.95

Answer: A

Explanation: A) $\$1,000,000/100,000 = \10.00

Diff: 1 Type: MC

Skill: Apply

Objective: LO 2-4

17) What is the amount of Payton's ending finished goods inventory?

- A) \$99,500
- B) \$8,000
- C) \$5,000
- D) \$500
- E) \$0

Answer: C

Explanation: C) $(100,000 - 99,500) \times \$10.00 = \$5,000$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-4

18) What is the amount of Payton's gross profit?

- A) \$995,000
- B) \$1,000,000
- C) \$1,791,000
- D) \$796,000
- E) \$896,000

Answer: D

Explanation: D) $99,500 \times (\$18 - \$10) = \$796,000$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-4

19) The following information pertains to the Stratford Company:

Beginning finished goods inventory	\$60,000
Cost of goods manufactured	410,000
Ending finished goods inventory	34,000

What is the cost of goods sold?

- A) \$436,000
- B) \$384,000
- C) \$376,000
- D) \$316,000
- E) \$444,000

Answer: A

Explanation: A) $\$60,000 + \$410,000 - \$34,000 = \$436,000$

Diff: 1 Type: MC

Skill: Apply

Objective: LO 2-4

Use the information below to answer the following question(s).

Montreal Industries Inc. had the following activities during the year:

Direct materials:	
Beginning inventory	\$50,000
Purchases	154,000
Ending inventory	26,000
Direct manufacturing labour	40,000
Manufacturing overhead	30,000
Ending work-in-process inventory	10,000
Beginning work-in-process inventory	2,000
Ending finished goods inventory	40,000
Beginning finished goods inventory	60,000

20) What is Montreal's cost of direct materials used during the year?

- A) \$204,000
- B) \$178,000
- C) \$128,000
- D) \$24,000
- E) \$218,000

Answer: B

Explanation: B) $\$50,000 + \$154,000 - \$26,000 = \$178,000$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-4

21) What is Montreal's cost of goods manufactured during the year?

- A) \$268,000
- B) \$248,000
- C) \$240,000
- D) \$238,000
- E) \$260,000

Answer: C

Explanation: C) $\$178,000 + \$40,000 + \$30,000 + \$2,000 - \$10,000 = \$240,000$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-4

22) What is Montreal's cost of goods sold during the year?

- A) \$260,000
- B) \$232,000
- C) \$220,000
- D) \$200,000
- E) \$240,000

Answer: A

Explanation: A) $\$60,000 + \$240,000 - \$40,000 = \$260,000$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-4

23) Manufacturing-sector companies

- A) purchase materials and convert them to finished goods.
- B) buy goods and resell them.
- C) provide services or intangible products.
- D) have only period costs.
- E) have one classification of inventory.

Answer: A

Diff: 1 Type: MC

Skill: Remember

Objective: LO 2-4

24) Merchandising-sector companies

- A) purchase materials and convert them to finished goods.
- B) buy goods and resell them.
- C) provide services or intangible products.
- D) have only variable costs.
- E) have period and some manufacturing costs.

Answer: B

Diff: 1 Type: MC

Skill: Remember

Objective: LO 2-4

25) Manufacturing-sector companies report on the balance sheet

- A) only merchandise inventory.
- B) only finished goods inventory.
- C) direct materials inventory, work-in-process inventory, and finished goods inventory accounts.
- D) no inventory accounts.
- E) only work in progress inventory.

Answer: C

Diff: 1 Type: MC

Skill: Remember

Objective: LO 2-4

- 26) For a manufacturing company, direct material costs may be included in
- A) direct materials inventory only.
 - B) merchandise inventory only.
 - C) both work-in-process inventory and finished goods inventory.
 - D) direct materials inventory, work-in-process inventory, and finished goods inventory accounts.
 - E) period costs.

Answer: D

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-4

- 27) Which of the following statements would be correct in a manufacturing business?
- A) Completed goods are not normally included in the finished goods inventory.
 - B) Completed goods are part of the work in process category.
 - C) Work-in-process inventory, at the end of the accounting period, includes direct materials but not direct labour.
 - D) Materials put into production are classified as work-in-process inventory.
 - E) There can be no beginning finished goods inventory.

Answer: D

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-4

- 28) Goods available for sale that are not in ending inventory
- A) are included in goods available for sale in the next year.
 - B) are included in the work-in-process inventory at the end of the year.
 - C) are not accounted for until the next year.
 - D) are incorporated in the cost of goods sold amount.
 - E) are included in beginning inventory.

Answer: D

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-4

Answer the following question using the information below.

Pederson Company reported the following:

Manufacturing costs	\$2,000,000
Units manufactured	50,000
Units sold	47,000 units sold for \$75 per unit
Beginning inventory	0 units

29) What is the average manufacturing cost per unit?

- A) \$40.00
- B) \$42.55
- C) \$75.50
- D) \$35.00
- E) \$42.25

Answer: A

Explanation: A) $\$2,000,000 / 50,000 = \40

Diff: 1 Type: MC

Skill: Apply

Objective: LO 2-4

30) What is the amount of gross margin?

- A) \$1,750,000
- B) \$3,525,000
- C) \$3,405,000
- D) \$1,645,000
- E) \$1,525,000

Answer: D

Explanation: D) $47,000 \times (\$75 - (\$2,000,000 / 50,000)) = \$1,645,000$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-4

31) What is the amount of finished goods inventory?

- A) \$2,000,000
- B) \$12,000
- C) \$225,000
- D) \$127,659
- E) \$120,000

Answer: E

Explanation: E) $(50,000 - 47,000) \times (\$2,000,000 / 50,000) = \$120,000$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-4

Answer the following question(s) using the information below.

The following information pertains to Alleigh's Mannequins:

Manufacturing costs	\$1,500,000
Units manufactured	30,000
Units sold	29,500 units sold for \$85 per unit
Beginning inventory	0 units

32) What is the average manufacturing cost per unit?

- A) \$50.00
- B) \$50.85
- C) \$17.65
- D) \$85.00
- E) \$49.50

Answer: A

Explanation: A) $\$1,500,000 / 30,000 = \50.00

Diff: 1 Type: MC

Skill: Apply

Objective: LO 2-4

33) What is the amount of ending finished goods inventory?

- A) \$42,500
- B) \$24,750
- C) \$25,000
- D) \$25,425
- E) \$42,500

Answer: C

Explanation: C) $(30,000 - 29,500) \times (\$1,500,000 / \$30,000) = \$25,000$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-4

34) What is the amount of gross margin?

- A) \$1,475,000
- B) \$1,500,000
- C) \$1,047,250
- D) \$1,032,500
- E) \$1,007,425

Answer: D

Explanation: D) $29,500 \times (\$85 - (\$1,500,000 / \$30,000)) = \$1,032,500$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-4

Use the information below to answer the following question(s).

Frazer Inc. had the following activities in the year:

Direct materials:	
Beginning inventory	\$100,000
Purchases	308,000
Ending inventory	52,000
Direct manufacturing labour	80,000
Manufacturing overhead	60,000
Ending work in process inventory	20,000
Beginning work in process inventory	4,000
Ending finished goods inventory	80,000
Beginning finished goods inventory	120,000

35) What is Frazer's cost of goods manufactured?

- A) \$536,000
- B) \$496,000
- C) \$480,000
- D) \$476,000
- E) \$512,000

Answer: C

Explanation: C) $(\$100,000 + \$308,000 - \$52,000) + \$80,000 + \$60,000 + \$4,000 - \$20,000 = \$480,000$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-4

36) What is Frazer's cost of goods sold?

- A) \$520,000
- B) \$464,000
- C) \$440,000
- D) \$400,000
- E) \$516,000

Answer: A

Explanation: A) $\$120,000 + \$480,000 - \$80,000 = \$520,000$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-4

37) Which of the following formulae would determine costs of goods sold in a merchandising entity?

- A) Purchases - Ending inventory
- B) Beginning inventory + Purchases - Ending inventory
- C) Beginning inventory - Purchases + Ending inventory
- D) Beginning inventory - Ending inventory - Purchases
- E) Ending Inventory - Beginning inventory - Purchases

Answer: B

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-4

38) Which of the following formulas determine cost of goods sold in a manufacturing entity?

- A) Beginning work-in-process inventory + Cost of goods manufactured - Ending work-in-process inventory = Cost of goods sold
- B) Beginning work-in-process inventory + Cost of goods manufactured + Ending work-in-process inventory = Cost of goods sold
- C) Cost of goods manufactured - Beginning finished goods inventory - Ending finished goods inventory = Cost of goods sold
- D) Cost of goods manufactured + Beginning finished goods inventory - Ending finished goods inventory = Cost of goods sold
- E) Beginning work-in-process inventory - Cost of goods manufactured + Ending work-in-process inventory = Cost of goods sold

Answer: D

Diff: 2 Type: MC

Skill: Understand

Objective: LO 2-4

39) The following information pertains to Tom's Country Wood Shop:

Beginning finished goods, 1/1/2015	\$15,000
Ending finished goods, 12/31/2015	9,500
Cost of goods sold	56,000
Sales	112,500
Operating expenses	25,000

What is the cost of goods manufactured for 2015?

- A) \$56,500
- B) \$31,500
- C) \$50,500
- D) \$61,500
- E) \$66,500

Answer: C

Explanation: C) $\$56,000 + \$9,500 - \$15,000 = \$50,500$

Diff: 2 Type: MC

Skill: Analyze

Objective: LO 2-4

40) Which of the following is TRUE of period costs?

- A) They are also called fixed costs.
- B) They are part of the cost of goods sold.
- C) They are expected to benefit future periods.
- D) They are costs incurred to generate revenue in a specific time period except the cost of manufacturing accumulated as cost of goods sold.
- E) For merchandising sector companies they include all costs not related to the cost of goods purchased for resale.

Answer: D

Diff: 2 Type: MC

Skill: Remember

Objective: LO 2-4

41) Generally, costs which are initially recorded as an asset and subsequently become an expense are called

- A) inventoriable costs.
- B) non-manufacturing costs.
- C) manufacturing costs.
- D) non-capitalized costs.
- E) non-inventoriable costs.

Answer: A

Diff: 1 Type: MC

Skill: Remember

Objective: LO 2-4

42) Finished goods inventory would normally include

- A) direct materials in stock and awaiting use in the manufacturing process.
- B) goods partially worked on but not yet fully completed.
- C) goods fully completed but not yet sold.
- D) products in their original form intended to be sold without changing their basic form.
- E) goods completed and sold.

Answer: C

Diff: 1 Type: MC

Skill: Remember

Objective: LO 2-4

43) Inventoriable costs

- A) include administrative and marketing costs.
- B) are expensed in the accounting period in which the products are sold.
- C) are particularly useful in management accounting.
- D) are also referred to as nonmanufacturing costs.
- E) are similar to period costs.

Answer: B

Diff: 2 Type: MC

Skill: Remember

Objective: LO 2-4

Answer the following question(s) using the information below.

The Singer Company manufactures several different products. Unit costs associated with Product ICT101 are as follows:

Direct materials	\$60
Direct manufacturing labour	10
Variable manufacturing overhead	18
Fixed manufacturing overhead	32
Sales commissions (2% of sales)	4
Administrative salaries	<u>16</u>
Total	<u>\$140</u>

44) What are the variable costs per unit associated with Product ICT101?

- A) \$18
- B) \$22
- C) \$88
- D) \$92
- E) \$28

Answer: D

Explanation: D) $\$60 + \$10 + \$18 + \$4 = \$92$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-3, 4

45) What are the fixed costs per unit associated with Product ICT101?

- A) \$102
- B) \$48
- C) \$52
- D) \$32
- E) \$36

Answer: B

Explanation: B) $\$32 + 16 = \48

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-3, 4

46) What are the inventoriable costs per unit associated with Product ICT101?

- A) \$120
- B) \$140
- C) \$50
- D) \$88
- E) \$70

Answer: A

Explanation: A) $\$60 + \$10 + \$18 + \$32 = \$120$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-3, 4

47) What are the period costs per unit associated with Product ICT101?

- A) \$4
- B) \$16
- C) \$20
- D) \$52

Answer: C

Explanation: C) $\$4 + 16 = \20

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-3, 4

Answer the following question(s) using the information below.

The West Company manufactures several different products. Unit costs associated with Product ORD203 are as follows:

Direct materials	\$40
Direct manufacturing labour	8
Variable manufacturing overhead	12
Fixed manufacturing overhead	23
Sales commissions (2% of sales)	6
Administrative salaries	9
Total	<u>\$98</u>

48) What are the variable costs per unit associated with Product ORD203?

- A) \$60
- B) \$83
- C) \$66
- D) \$48
- E) \$12

Answer: C

Explanation: C) $\$40 + \$8 + \$12 + \$6 = \$66$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-3, 4

49) What are the inventoriable costs per unit associated with Product ORD203?

- A) \$60
- B) \$66
- C) \$48
- D) \$83
- E) \$92

Answer: D

Explanation: D) $\$40 + \$8 + \$12 + \$23 = \$83$

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-3, 4

50) What are the fixed costs per unit associated with Product ORD203?

- A) \$23
- B) \$32
- C) \$35
- D) \$44
- E) \$38

Answer: B

Explanation: B) $\$23 + 9 = \32

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-3, 4

51) What are the period costs per unit associated with Product ORD203?

- A) \$15
- B) \$6
- C) \$9
- D) \$27
- E) \$48

Answer: A

Explanation: A) $\$6 + 9 = \15

Diff: 2 Type: MC

Skill: Apply

Objective: LO 2-3, 4

Use the information below to answer the following question(s).

Ontario Industries Inc. had the following activities during the year:

Direct materials:	
Beginning inventory	\$40,000
Purchases	165,000
Ending inventory	32,000
Direct manufacturing labour	46,000
Manufacturing overhead	?
Ending work-in-process inventory	12,000
Beginning work-in-process inventory	?
Ending finished goods inventory	?
Beginning finished goods inventory	80,000
Cost of goods manufactured	242,000
Manufacturing costs incurred	248,000
Cost of goods sold	247,000
Total manufacturing costs to account for	254,000

52) What is the amount of Ontario Industries Inc.'s ending finished goods inventory?

- A) \$55,000
- B) \$75,000
- C) \$70,000
- D) \$65,000
- E) \$60,000

Answer: B

Explanation: B) $\$247,000 - \$242,000 - \$80,000 = \$75,000$

Direct materials:	
Beginning inventory	\$40,000
Purchases	165,000
Ending inventory	32,000
Direct materials used	\$173,000
Direct manufacturing labour	46,000
Manufacturing overhead	29,000
Manufacturing costs incurred	\$248,000
Beginning work-in-process inventory	6,000
Total manufacturing cost to account for	\$254,000
Ending work-in-process inventory	12,000
Cost of goods manufactured	<u>\$242,000</u>
Beginning finished goods inventory	\$80,000
Cost of goods manufactured	242,000
Ending finished goods inventory	75,000
Cost of goods sold	<u>\$247,000</u>

Diff: 2 Type: MC

Skill: Analyze

Objective: LO 2-4

53) What is the amount of direct materials used by Ontario Industries Inc.?

- A) \$168,000
- B) \$165,000
- C) \$173,000
- D) \$205,000
- E) \$170,000

Answer: C

Explanation: C) $\$40,000 + \$165,000 - \$32,000 = \$173,000$

Diff: 1 Type: MC

Skill: Apply

Objective: LO 2-4

54) What is the amount of the manufacturing overhead incurred at Ontario Industries Inc.?

A) \$16,000

B) \$41,000

C) \$35,000

D) \$23,000

E) \$29,000

Answer: E

Explanation: C)

E) $\$248,000 - \$173,000 - \$46,000 = \$29,000$

Diff: 3 Type: MC

Skill: Analyze

Objective: LO 2-4

55) What is the amount of the beginning work-in-process inventory at Ontario Industries Inc.?

A) \$1,000

B) \$5,000

C) \$12,000

D) \$6,000

E) \$4,000

Answer: D

Explanation: C)

D) $\$254,000 - \$248,000 = \$6,000$

Diff: 3 Type: MC

Skill: Analyze

Objective: LO 2-4

56) Macadamia Co. produced and sold 40,000 units last year. **Per unit** revenue and costs were as follows:

Revenues		\$120.00
Cost of Goods Sold:		
Direct Materials	\$15.00	
Direct Labour	20.00	
Variable Manufacturing Overhead	10.00	
Fixed Manufacturing Overhead	<u>6.00</u>	
Total Cost of Goods Sold		<u>51.00</u>
Gross Margin		\$69.00
Selling and Administrative Costs:		
Sales Commissions (10% of Sales)	\$12.00	
Administrative Salaries	<u>5.00</u>	
Total Selling and Administrative		<u>17.00</u>
Operating Income <Loss>		<u>\$52.00</u>

The Fixed Manufacturing Overhead provides a capacity of 50,000 units. The Production Manager has proposed leasing a new machine at a cost of \$80,000 per year. This will reduce Direct Labour by 30% and improve quality so the the selling price per unit can be increased by \$10. Production and sales are expected to remain the same as last year.

Required:

Prepare a statement of operating income assuming the leasing proposal is accepted.

Answer:

		1 unit		40,000 units
Revenue (\$120 + \$10)		\$130		\$5,200,000
Cost of goods sold				
DM	\$15		\$600,000	
DL \$20 × (1 - 30%)	14		560,000	
VMOH	10		400,000	
FMOH (\$6 × 40,000 + \$80,000)/40,000	8	<u>47</u>	<u>320,000</u>	<u>1,880,000</u>
Gross Profit		\$83		\$3,320,000
Selling & Administration Costs				
Sales Commissions (10% of Sales)	\$13		\$520,000	
Administration Salaries	<u>5</u>	<u>18</u>	<u>200,000</u>	<u>720,000</u>
Operating Income		\$65		\$2,600,000

Recommendation: Accept the leasing proposal as it raises OI by \$13 per unit or \$520,000.

Diff: 3 Type: ES

Skill: Apply

Objective: LO 2-4

57) Big Bird Pet Store had the following financial activities for June. Revenue was \$860,000 with cost of goods sold equalling \$440,000. Salaries and wages of all employees were \$100,000. Fringe benefits were 15 percent of salaries and wages. Rent on the building was \$100,000 and equipment amortization was \$46,000. Office supplies and utilities totalled \$28,000. Income taxes withheld from employees totalled \$46,000 for the month while ending accounts payable were \$24,680. Cash flows from accounts receivable totalled \$880,000.

Required:

Using an income statement format, determine the operating income of the store.

Answer:

Big Bird Pet Store
Income Statement
For the Month of June

Revenues		\$860,00
Cost of Goods Sol	\$440,000	
Salaries and Wages	100,000	
Fringe Benefits	15,000	
Rent	100,000	
Equipment Amortization	46,000	
Office supplies and utilities	28,000	<u>729,000</u>
Operating Income <Loss>		<u><u>\$131,000</u></u>

Diff: 2 Type: ES

Skill: Apply

Objective: LO 2-4

58) Ames Power Point had sales in October of \$28,000,000 for its three stores in Toronto. The beginning merchandise inventories for October and November were \$5,000,000 and \$4,000,000, respectively. October purchases totalled \$19,000,000. All sales are on account (terms 2/15, net 30 days) and are collected 50 percent in the month of the sale and 50 percent in the following month. One-half of all sales discounts are taken for a total of \$265,000. September sales totalled \$25,000,000 while November sales were \$30,000,000. Additional information for October is as follows:

Supplies used	\$1,000,000
Salaries and benefits	1,500,000
Maintenance	45,000
Amortization	9,000
Utilities	35,000
Principal payment on maturing bonds	2,000,000

Required:

Using an appropriately formatted income statement, determine the operating income of the company.

Answer:

Ames Power Point Company
Income Statement
For the Month of October

Sales	\$28,000,000	
Less: Sales Discounts	<u>265,000</u>	
Net Sales		\$27,735,000
Cost of Goods Sold		
Beginning inventory	\$5,000,000	
Purchases	19,000,000	
Cost of Goods Available for sale	\$24,000,000	
Ending inventory	<u>4,000,000</u>	<u>20,000,000</u>
Gross Margin		\$7,735,000
Other costs		
Supplies	\$1,000,000	
Amortization	9,000	
Salaries & benefits	1,500,000	
Maintenance	45,000	
Utilities	<u>35,000</u>	
Total other costs		<u>2,589,000</u>
Operating Income <Loss>		<u>\$5,146,000</u>

Diff: 3 Type: ES

Skill: Apply

Objective: LO 2-4

59) Eschlman Manufacturing Company had the following account balances for the quarter ending September 30, unless otherwise noted:

Amortization of manufacturing equipment	\$88,000
Amortization of office equipment	41,200
Direct manufacturing labour	160,000
Direct materials used	126,000
Finished goods inventory (July 1)	180,000
Finished goods inventory (September 30)	170,000
General office expenses	101,800
Indirect manufacturing labour	62,000
Indirect materials used	28,000
Marketing distribution costs	10,000
Miscellaneous plant overhead	45,000
Plant utilities	30,800
Property taxes on plant building	9,600
Property taxes on salespersons' company vehicles	4,000
Work-in-process inventory (July 1)	46,800
Work-in-process inventory (September 30)	57,000

Required:

- Prepare a cost of goods manufactured schedule for the quarter.
- Prepare a cost of goods sold schedule for the quarter.

Answer:

- a. Eschliman Manufacturing Company
Cost of Goods Manufactured Schedule
For the Quarter Ending September 30

Direct materials used		\$126,000
Direct manufacturing labour		160,000
Manufacturing overhead		
Amortization of mfg. equip.	\$88,000	
Indirect mfg. labour	62,000	
Indirect materials	28,000	
Miscellaneous plant overhead	45,000	
Plant utilities	30,800	
Property taxes on building	<u>9,600</u>	<u>263,400</u>
Manufacturing costs incurred		\$549,400
Add beginning work-in-process inventory		46,800
Total manufacturing costs		\$596,200
Less: ending work-in-process inventory		<u>57,000</u>
Cost of goods manufactured		<u>\$539,200</u>

- b. Eschliman Manufacturing Company
Cost of Goods Sold Schedule
For the Quarter Ending September 30

Beginning finished goods inventory	\$180,000
Cost of goods manufactured	<u>539,200</u>
Cost of goods available for sale	\$719,200
Ending finished goods inventory	<u>170,000</u>
Cost of goods sold	<u>\$549,200</u>
Diff: 3 Type: ES	
Skill: Apply	
Objective: LO 2-4	

60) The following information is taken from the records of Britton Company for March:

Purchases:

Direct materials	\$9,000,000
Indirect materials	200,000
Office supplies	420,000
Sales	36,000,000
Salaries and Benefits:	
Selling and administrative	4,000,000
Direct manufacturing labour	6,000,000
Rent*	4,000,000
Utilities*	1,200,000
Advertising	700,000

Inventories:	<u>March 1</u>	<u>March 31</u>
Direct materials	\$4,400,000	\$1,600,000
Indirect materials	500,000	600,000
Office supplies	150,000	180,000
Finished goods	24,000,000	16,000,000

* Of these costs, 60 percent are assigned to manufacturing and 40 percent to selling and administration.

Required:

- Prepare a schedule of cost of goods manufactured.
- Prepare an income statement for the month.
- Compute the prime costs using a two-part production costing system, conversion costs, and indirect manufacturing costs.

Answer:

a.

Britton Company
Cost of Goods Manufactured Schedule
For March

Direct materials:

Beginning inventory	\$4,400,000	
Purchases of direct materials	<u>9,000,000</u>	
Cost of direct materials available	\$13,400,000	
Ending inventory	<u>1,600,000</u>	
Direct materials used		\$11,800,000
Direct manufacturing labour		6,000,000
Manufacturing overhead:		
Rent (60%)	\$2,400,000	
Utilities (60%)	720,000	
Indirect materials (\$200,000 + \$500,000 - \$600,000)	<u>100,000</u>	<u>3,220,000</u>
Cost of goods manufactured		<u>\$21,020,000</u>

b.

Britton Company
Income Statement
For the Month of March

Sales		\$36,000,000
Cost of goods sold		
Beginning inventory	\$24,000,000	
Cost of goods manufactured	<u>21,020,000</u>	
Cost of goods available for sale	\$45,020,000	
Ending inventory	<u>16,000,000</u>	<u>29,020,000</u>
Gross margin		\$6,980,000
<u>Other costs</u>		
Supplies (\$420,000 + \$150,000 - \$180,000)	\$390,000	
Selling and administrative salaries	4,000,000	
Rent (40%)	1,600,000	
Utilities (40%)	480,000	
Advertising	<u>700,000</u>	<u>7,170,000</u>
Operating Income <Loss>		<u>\$(190,000)</u>

c.

Prime costs \$11,800,000

Conversion costs \$3,220,000 + \$6,000,000 = \$9,220,000

Indirect manufacturing costs = \$3,220,000

Diff: 3 Type: ES

Skill: Apply

Objective: LO 2-1, 4

61) Farley Muffler Inc. received the following monthly report from its newly hired accountant, who quit after only a week on the job.

Farley Muffler Inc.
Cost of Goods Sold Schedule

Finished Goods Inventory (beginning)	\$15,000
Work-in-Process Inventory (beginning)	<u>3,000</u>
Total	\$18,000

Current Manufacturing Costs:

Salaries and wages:

Direct manufacturing labour	\$5,000	
Indirect manufacturing labour	2,000	
Sales salaries	4,000	
Administrative	<u>3,000</u>	\$14,000

Other:

Manufacturing supplies	\$1,500		
Manufacturing amortization	3,500		
Insurance on showroom	1,000		
Miscellaneous factory overhead	<u>6,500</u>	<u>12,500</u>	<u>26,500</u>
Total Work in Process			\$44,500
Ending Work-in-Process and Finished Goods Inventory			<u>0</u>
Cost of Goods Sold			<u>\$44,500</u>

Farley Muffler, Inc.
Income Statement

Sales	\$100,000
Less direct materials	<u>20,000</u>
Gross profit	\$80,000

Less other expenses:

Cost of goods sold	\$44,500	
Office supplies	250	
Manufacturing utilities	1,000	
Office utilities	<u>250</u>	<u>46,000</u>
Net Income		<u>\$34,000</u>

Required:

- a. Prepare a cost of goods manufactured schedule.
- b. Prepare an income statement in good form.

Answer:

a.

Farley Muffler Inc.
Cost of Goods Manufactured Schedule

Direct materials		\$20,000
Direct Manufacturing labour		5,000
Indirect manufacturing cost:		
Utilities	\$1,000	
Supplies	1,500	
Amortization	3,500	
Indirect manufacturing labour	2,000	
Miscellaneous factory overhead	<u>6,500</u>	<u>14,500</u>
Manufacturing cost incurred		\$39,500
Add beginning work in process inventory		<u>3,000</u>
Total manufacturing costs		\$42,500
Less ending work in process inventory		<u>0</u>
Cost of goods manufactured		<u>\$42,500</u>

b.

Farley Muffler Inc.
Income Statement

Sales		\$100,000
Cost of goods sold:		
Beginning finished goods inventory	\$15,000	
Cost of goods manufactured	<u>42,500</u>	
Cost of goods available for sale	\$57,500	
Ending finished goods inventory	<u>0</u>	
Cost of goods sold		<u>57,500</u>
Gross margin		\$42,500
Other costs:		
Office supplies	\$250	
Office utilities	250	
Sales salaries and wages	4,000	
Administrative salaries and wages	3,000	
Insurance on showroom	<u>1,000</u>	<u>8,500</u>
Operating income		<u>\$34,000</u>

Diff: 3 Type: ES

Skill: Apply

Objective: LO 2-4

62) Find the required amounts, assuming each is an independent case.

a. Direct Materials	Beginning balance	\$14,000
	Ending balance	28,000
	Purchases	96,000
	Direct materials used	?
b. Finished Goods Inventory	Cost of goods manufactured	124,000
	Ending balance	40,000
	Cost of goods sold	122,000
	Beginning balance	?
c. Work in Process Inventory	Ending Balance	44,000
	Cost of goods manufactured	42,000
	Beginning balance	16,000
	Current manufacturing costs	?
d. Merchandise Inventory	Purchases	420,000
	Cost of goods sold	446,000
	Beginning balance	82,000
	Ending balance	?

Answer:

a. Direct materials used $\$14,000 + \$96,000 - \$28,000 = \$82,000$

b. Beginning balance of finished goods inventory
 $\$40,000 + \$122,000 - \$124,000 = \$38,000$

c. Current manufacturing costs $\$42,000 + \$44,000 - \$16,000 = \$70,000$

d. Ending balance of merchandise inventory
 $\$82,000 + \$420,000 - \$446,000 = \$56,000$

Diff: 3 Type: ES

Skill: Apply

Objective: LO 2-4

63) Evans Inc., had the following activities during 2015:

Direct materials:

Beginning inventory	\$40,000
Purchases	123,200
Ending inventory	20,800
Direct manufacturing labour	32,000
Manufacturing overhead	24,000
Beginning work-in-process inventory	1,600
Ending work-in-process inventory	8,000
Beginning finished goods inventory	48,000
Ending finished goods inventory	32,000

Required:

- What is the cost of direct materials used during 2015?
- What is cost of goods manufactured for 2015?
- What is cost of goods sold for 2015?

Assume that Evans uses a two-part classification system for prime and conversion costs.

- What amount of prime costs was added to production during 2015?
- What amount of conversion costs was added to production during 2015?

Answer:

- $\$40,000 + \$123,200 - \$20,800 = \$142,400$
- $\$142,400 + \$32,000 + \$24,000 + \$1,600 - \$8,000 = \$192,000$
- $\$192,000 + \$48,000 - \$32,000 = \$208,000$
- $\$142,400 + \$32,000 = \$174,400$
- $\$32,000 + \$24,000 = \$56,000$

Diff: 2 Type: ES

Skill: Apply

Objective: LO 2-4

64) Messinger Manufacturing Company had the following account balances for the quarter ending March 31, unless otherwise noted:

Work-in-process inventory (January 1)	\$140,400
Work-in-process inventory (March 31)	171,000
Finished goods inventory (January 1)	540,000
Finished goods inventory (March 31)	510,000
Direct materials used	378,000
Indirect materials used	84,000
Direct manufacturing labour	480,000
Indirect manufacturing labour	186,000
Property taxes on manufacturing plant building	28,800
Salespersons' company vehicle costs	12,000
Amortization of manufacturing equipment	264,000
Amortization of office equipment	123,600
Miscellaneous plant overhead	135,000
Plant utilities	92,400
General office expenses	305,400
Marketing distribution costs	30,000

Required:

- a. Prepare a cost of goods manufactured schedule for the quarter.
- b. Prepare a cost of goods sold schedule for the quarter.

Answer:

a.

Messinger Manufacturing Company
Cost of Goods Manufactured Schedule
For quarter ending March 31

Direct materials used		\$378,000
Direct manufacturing labour		480,000
Manufacturing overhead		
Amortization of manufacturing equipment	\$264,000	
Indirect manufacturing labour	186,000	
Indirect materials	84,000	
Miscellaneous plant overhead	135,000	
Plant utilities	92,400	
Property taxes on building	<u>28,800</u>	<u>790,200</u>
Manufacturing costs incurred		\$1,648,200
Add beginning work-in-process inventory		<u>140,400</u>
Total manufacturing costs		\$1,788,600
Less ending work-in-process inventory		<u>171,000</u>
Cost of goods manufactured		<u>\$1,617,600</u>

b.

Messinger Manufacturing Company
Cost of Goods Sold Schedule
For the quarter ending March 31

Beginning finished goods inventory	\$540,000
Cost of goods manufactured	<u>1,617,600</u>
Cost of goods available for sale	2,157,600
Ending finished goods inventory	<u>(510,000)</u>
Cost of goods sold	<u>\$1,647,600</u>

Diff: 2 Type: ES

Skill: Apply

Objective: LO 2-4

65) Helmer Sporting Goods Company manufactured 100,000 units in 2015 and reported the following costs:

Sandpaper	\$32,000	Leasing costs-plant	\$384,000
Materials handling	320,000	Amortization-equipment	224,000
Coolants & lubricants	22,400	Property taxes-equipment	32,000
Indirect manufacturing labour	275,200	Fire insurance-equipment	16,000
Direct manufacturing labour	2,176,000	Direct material purchases	3,136,000
Direct materials, 1/1/15	384,000	Direct materials, 12/31/15	275,200
Finished goods, 1/1/15	672,000	Sales revenue	12,800,000
Finished goods, 12/31/15	1,280,000	Sales commissions	640,000
Work-in-process, 1/1/15	96,000	Sales salaries	576,000
Work-in-process, 12/31/15	64,000	Advertising costs	480,000
		Administration costs	800,000

Required:

- What is the cost of direct materials used during 2015?
- What manufacturing costs were added to WIP during 2015?
- What is cost of goods manufactured for 2015?
- What is cost of goods sold for 2015?

Answer:

- $\$384,000 + \$3,136,000 - \$275,200 = \$3,244,800$
- $\$3,244,800 + \$2,176,000 + \$32,000 + \$320,000 + \$22,400 + \$275,200 + \$384,000 + \$224,000 + \$32,000 + \$16,000 = \$6,726,400$
- $\$6,726,400 + \$96,000 - \$64,000 = \$6,758,400$
- $\$6,758,400 + \$672,000 - \$1,280,000 = \$6,150,400$

Diff: 3 Type: ES

Skill: Apply

Objective: LO 2-4

66) Saskatchewan Industries Inc. had the following account balances at the end of the current year:

Direct materials:	
Beginning inventory	\$?
Purchases	130,000
Ending inventory	19,000
Direct manufacturing labour	58,000
Manufacturing overhead	?
Cost of goods manufactured	232,000
Beginning work-in-process inventory	?
Ending finished goods inventory	?
Beginning finished goods inventory	21,000
Ending work-in-process inventory	8,000
Manufacturing costs incurred	231,000
Cost of goods sold	238,000
Total manufacturing costs to account for	240,000
Direct materials used	136,000

Required:

Determine the amounts for direct materials beginning inventory, manufacturing overhead, beginning work-in-process inventory, and ending finished goods inventory.

Answer:

Direct materials:	
Beginning inventory	\$25,000
Purchases	130,000
Ending inventory	19,000
Direct materials used	\$136,000
Direct manufacturing labour	58,000
Manufacturing overhead	37,000
Manufacturing costs incurred	\$231,000
Beginning work-in-process inventory	9,000
Total manufacturing cost to account for	\$240,000
Ending work-in-process inventory	8,000
Cost of goods manufactured	<u>\$232,000</u>
Beginning finished goods inventory	\$21,000
Cost of goods manufactured	232,000
Ending finished goods inventory	15,000
Cost of goods sold	<u>\$238,000</u>

Diff: 3 Type: ES

Skill: Analyze

Objective: LO 2-4

67) Manitoba Industries Inc. had the following account balances at the end of the current year:

Direct materials:	
Beginning inventory	\$13,000
Purchases	?
Ending inventory	17,000
Direct manufacturing labour	?
Manufacturing overhead	28,000
Cost of goods manufactured	210,000
Beginning work-in-process inventory	11,000
Ending finished goods inventory	17,000
Beginning finished goods inventory	?
Ending work-in-process inventory	?
Manufacturing costs incurred	213,000
Cost of goods sold	215,000
Total manufacturing costs to account for	224,000
Direct materials used	118,000

Required:

Determine the amounts for direct material purchases, direct manufacturing labour, ending work-in-process inventory, and beginning finished goods inventory.

Answer:

Direct materials:	
Beginning inventory	\$13,000
Purchases	122,000
Ending inventory	17,000
Direct materials used	\$118,000
Direct manufacturing labour	67,000
Manufacturing overhead	28,000
Manufacturing costs incurred	\$213,000
Beginning work-in-process inventory	11,000
Total manufacturing cost to account for	\$224,000
Ending work-in-process inventory	14,000
Cost of goods manufactured	<u>\$210,000</u>
Beginning finished goods inventory	\$22,000
Cost of goods manufactured	210,000
Ending finished goods inventory	17,000
Cost of goods sold	<u>\$215,000</u>

Diff: 3 Type: ES

Skill: Analyze

Objective: LO 2-4

68) Newfoundland Industries Inc. had the following account balances at the end of the current year:

Direct materials:	
Beginning inventory	\$13,000
Purchases	122,000
Ending inventory	?
Direct manufacturing labour	67,000
Manufacturing overhead	28,000
Cost of goods manufactured	210,000
Beginning work-in-process inventory	?
Ending finished goods inventory	?
Beginning finished goods inventory	22,000
Ending work-in-process inventory	14,000
Manufacturing costs incurred	?
Cost of goods sold	215,000
Total manufacturing costs to account for	224,000
Direct materials used	118,000

Required:

Determine the amounts for direct material ending inventory, manufacturing costs incurred, ending work-in-process inventory, and ending finished goods inventory.

Answer:

Direct materials:	
Beginning inventory	\$13,000
Purchases	122,000
Ending inventory	17,000
Direct materials used	\$118,000
Direct manufacturing labour	67,000
Manufacturing overhead	28,000
Manufacturing costs incurred	\$213,000
Beginning work-in-process inventory	11,000
Total manufacturing cost to account for	\$224,000
Ending work-in-process inventory	14,000
Cost of goods manufactured	<u>\$210,000</u>
Beginning finished goods inventory	\$22,000
Cost of goods manufactured	210,000
Ending finished goods inventory	17,000
Cost of goods sold	<u>\$215,000</u>

Diff: 3 Type: ES

Skill: Analyze

Objective: LO 2-4

69) Explain the difference between an inventoriable cost and a period cost. What potential problems does an inaccurate classification of product and period costs cause?

Answer: Inventoriable costs are all costs of a product that are considered as assets in the balance sheet when they are incurred and which become cost of goods sold only when the product is sold. Period costs are treated as expenses of the accounting period in which they are incurred. An inaccurate classification of inventoriable and period costs could lead to violations of the matching principle, which states that costs used in producing revenue should be matched on the income statement when the revenue is recognized. In extreme cases, net income for a given period might be significantly misstated if proper matching does not occur.

Diff: 2 Type: ES

Skill: Apply

Objective: LO 2-4

Each of the following items pertains to one of these companies: Bedell Electronics (a manufacturing company), Gregory Food Retailers (a merchandising company), and Larson Real Estate (a service sector company). Match each item with either an inventoriable cost or a period cost.

- A) period
- B) inventoriable

70) salary of Bedell Electronics president

Diff: 2 Type: MA

Skill: Understand

Objective: LO 2-4

71) depreciation on Bedell Electronics assembly equipment

Diff: 2 Type: MA

Skill: Understand

Objective: LO 2-4

72) salaries of Bedell's assembly line workers

Diff: 2 Type: MA

Skill: Understand

Objective: LO 2-4

73) depreciation on freezers at Gregory Food Retailing

Diff: 2 Type: MA

Skill: Understand

Objective: LO 2-4

74) salary of a receptionist at Larson Real Estate

Diff: 2 Type: MA

Skill: Understand

Objective: LO 2-4

75) purchase of frozen food for sale to customers by Gregory Food Retailers

Diff: 2 Type: MA

Skill: Understand

Objective: LO 2-4

76) salaries of frozen food personnel at Gregory Food Retailing

Diff: 2 Type: MA

Skill: Understand

Objective: LO 2-4

77) depreciation on a computer at Larson Real Estate

Diff: 2 Type: MA

Skill: Understand

Objective: LO 2-4

78) salary of a real estate agent at Larson Real Estate

Diff: 2 Type: MA

Skill: Understand

Objective: LO 2-4

Answers: 70) A 71) B 72) B 73) A 74) A 75) B 76) A 77) A 78) A

2.5 Explain cost identification, classification, and management systems and their use within the decision framework.

1) Product costs are the sum of the costs assigned to a product for a specific purpose.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-5

2) For purposes of calculating inventory costs under GAAP, only production costs can be used.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-5

3) Overtime premium is normally considered as a component of direct labour.

Answer: FALSE

Explanation: Overtime premium is normally considered as part of indirect labour since it is usually not associated with a particular job.

Diff: 2 Type: TF

Skill: Remember

Objective: LO 2-5

4) If a worker is paid for 8 hours, but is idle for 1 of those 8 hours, the 1 hour of idle time would be considered a component of direct labour.

Answer: FALSE

Explanation: Idle time is normally considered a component of indirect labour since it is usually not associated with a particular job.

Diff: 2 Type: TF

Skill: Remember

Objective: LO 2-5

5) Overtime premium consists of the wages paid to all workers (for both direct labour and indirect labour) in excess of their straight-time wage rates.

Answer: TRUE

Diff: 1 Type: TF

Skill: Remember

Objective: LO 2-5

6) The total of the costs assigned to a particular product for a specific purpose is called

- A) direct cost.
- B) inventoriable cost.
- C) marketing cost.
- D) product cost.
- E) prime cost.

Answer: D

Diff: 1 Type: MC

Skill: Remember

Objective: LO 2-5

7) Which of the following statements is TRUE?

- A) Product costs and period costs are the same.
- B) Inventoriable costs are expensed as incurred according to GAAP.
- C) Inventoriable costs are costs that remain in inventory after the product is sold.
- D) "Product costs" refers to the particular costs allocated to a product to make a specific decision.
- E) Conversion costs are non-manufacturing costs.

Answer: D

Diff: 2 Type: MC

Skill: Remember

Objective: LO 2-5

8) Product costs used for pricing and product-mix decisions generally include

- A) manufacturing costs only.
- B) design costs plus manufacturing costs.
- C) all costs incurred along the value chain.
- D) distribution costs only.
- E) prime costs but not conversion costs.

Answer: C

Diff: 3 Type: MC

Skill: Remember

Objective: LO 2-5

9) Product costs used for external reporting under GAAP include

- A) manufacturing costs only.
- B) design costs plus manufacturing costs.
- C) all costs incurred along the value chain.
- D) prime costs but not conversion costs.
- E) only conversion costs.

Answer: A

Diff: 2 Type: MC

Skill: Remember

Objective: LO 2-5

10) Why is it possible that a raw material such as glue might be considered as an indirect material for one furniture manufacturer and as a direct material for another furniture manufacturer?

Answer: It is possible for a raw material such as glue to be considered as an indirect material by one furniture manufacturer and as a direct material by another furniture manufacturer. The decision is largely a choice by the manufacturer and depends on a number of factors including the materiality of the cost in question, the cost of gathering the information, and the design of the manufacturing process. If the product in question has an insignificant cost, it might not be worth the trouble to trace the cost of the glue to each piece of furniture, and the glue would be considered indirect. If the cost of tracing the cost of the glue is high in relation to the benefits received from tracing it, the glue would likely be considered as indirect material. If the design of the manufacturing process easily permits all the glue to be traced to a single type of furniture, then it would be easy for a company to consider that material to be direct. Overall, the direct/indirect classification is decided on a cost/benefit basis.

Diff: 3 Type: ES

Skill: Apply

Objective: LO 2-5

11) When should the overtime premium of direct manufacturing labour be considered an indirect manufacturing cost? A direct manufacturing cost?

Answer: The overtime premium of direct manufacturing labour should be considered an indirect manufacturing cost when it is attributable to the overall volume of work, and a direct manufacturing cost when a "rush job" is the sole source of the overtime.

Diff: 2 Type: ES

Skill: Remember

Objective: LO 2-5

12) The types of costs included in the product cost differ depending on the purpose of the costing.

Describe the generic value chain categories that are pertinent to product costs regarding GAAP-compliant inventoriable costs; and, product costs for product pricing and product mix decisions.

Answer: GAAP compliant inventoriable costs are limited to manufacturing costs which are represented in the production costs category on the value chain.

For pricing and product mix decisions all costs related to a product are relevant so the product cost can include costs from all value chain categories.

Diff: 2 Type: ES

Skill: Understand

Objective: LO 2-5