Chapter 02 Cost Terms, Concepts, and Classifications

1. What would be the classification of corporate controller's salary?

A.
B.
C.
D.

2. How should the cost of the fire insurance for a manufacturing plant be classified?

A.
B.
C.
D.

3. How would the cost of rent for a manufacturing plant generally be classified?

A.
B.
C.
D.

4. For a lamp manufacturing company, the cost of the insurance on its vehicles that deliver lamps to customers is best described as a:

A.
B.
C.
D.

5. For a manufacturing company, which of the following is an example of a period rather than a product cost?

A.
B.
C.
D.

6. Which of the following would be considered a product cost for external financial reporting purposes?

A.
B.
C.
D.

7. Which of the following would **not** be treated as a product cost for external financial reporting purposes?

A.
B.
C.
D.

8. What would be the classification of the transportation costs incurred by a manufacturing company to ship its product to its customers?

A.
B.
C.
D.

9. The advertising costs incurred by Pepsi to air its commercials during the hockey season can best be described as a:

A.
B.
C.
D.

10. Micro Computer Company has set up a toll-free telephone line for customer inquiries regarding computer hardware produced by the company. How would the cost of this toll-free line be classified?

A.
B.
C.
D.

11. How would the wages of factory maintenance personnel usually be classified?

A.
B.
C.
D.

12. Prime costs consist of:

A.
B.
C.
D.

13. What does manufacturing overhead cost consist of?

A.
B.
C.
D.

14. Which of the following should **NOT** be included as part of manufacturing overhead at a company that makes office furniture?

A.
B.
C.
D.

15. Rossiter Company failed to record a credit sale at the end of the year, although the reduction in finished goods inventories was correctly recorded when the goods were shipped to the customer. Which one of the following statements is correct?

A.
B.
C.
D.

16. What is the outcome if the cost of goods sold is greater than the cost of goods manufactured?

A.
B.
C.
D.

17. Last month, when 10,000 units of a product were manufactured, the cost per unit was $60. At this level of activity, variable costs were 50% of total unit costs. If 10,500 units are manufactured next month and cost behaviour patterns remain unchanged, how will costs be affected?

A.
B.
C.
D.

18. Which of the following statements regarding variable cost is true?

A.
B.
C.
D.

19. Within the relevant range, what is the difference between variable costs and fixed costs?

A.
B.
C.
D.

20. The Zellers store in your home town is one of many Zeller's department stores across the province. Some of the costs associated with the store in your home town last month appear below:

Shoe Department Cost of Sales	$80,000
Other Department Salaries	62,000
Store Managers Salary	14,000
Shoe Department Sales Commissions	8,000
Store Utilities	13,000
Shoe Department Manager's Salary	9,000
Store Lease Cost	11,000
Store Janitorial Costs	11,000
Other Store Costs	98,000

The Shoe Department is one of many departments in the home town store. The direct costs of the Shoe Department total:

A.
B.
C.
D.

21. Which of the following best defines an opportunity cost?

A.
B.
C.
D.

22. To what does the term differential cost refer?

A.
B.
C.
D.

23. Which of the following costs is often important in decision making, but is omitted from conventional accounting records?

A.
B.
C.
D.

24. When a decision is made among a number of alternatives, the benefit that is lost by choosing one alternative over another is called what?

A.
B.
C.
D.

25. What does conversion cost consist of?

A.
B.
C.
D.

26. Prime cost consists of direct materials and what?

A.
B.
C.
D.

27. Which one of the following costs should NOT be considered a direct cost of serving a particular customer who orders a customized personal computer by phone directly from the manufacturer?

A.
B.
C.
D.

28. Which one of the following costs should NOT be considered an indirect cost of serving a particular customer at a Dairy Queen fast food outlet?

A.
B.
C.
D.

29. Green Company's costs for the month of August are as follows:

Direct materials used	$27,000
Direct labour	$34,000
Sales salaries	$14,000
Indirect labour	$10,000
Indirect materials	$15,000
General corporate administrative cost	$12,000
Taxes on manufacturing facility	$2,000
Rent on factory	$17,000

The beginning work-in-process inventory is $16,000 and the ending work-in-process inventory is $9,000. What is the cost of goods manufactured for the month?

A.
B.
C.
D.

30. A manufacturing company prepays its insurance coverage for a three-year period. The premium for the three years is $2,700 and is paid at the beginning of the first year. Eighty percent of the premium applies to manufacturing operations and 20% applies to selling and administrative activities. What amounts should be considered product costs and period costs respectively for the first year of coverage?

	Product Costs	Period Costs
A)	$2,700	$0
B)	$2,160	$540
C)	$1,440	$360
D)	$720	$180

A.
B.
C.
D.

31. You have the following data:

Cost of goods sold	$70
Direct labour	$20
Direct materials	$15
Cost of goods manufactured	$80
Work-in-process ending	$10
Finished goods ending	$15
Manufacturing overhead	$30

Which of the following represents the beginning work-in-process inventory?

A.
B.
C.
D.

32. During the month of May, Bennett Manufacturing Company purchases $43,000 of raw materials. The manufacturing overhead totals $27,000 and the total manufacturing costs are $106,000. Assuming a beginning inventory of raw materials of $8,000 and an ending inventory of raw materials of $6,000, what must be the total for direct labour?

A.
B.
C.
D.

33. You are given the following data for January:

Direct materials	$38,000
Direct labour	$24,000
Manufacturing overhead	$17,000
Beginning work in process inventory	$10,000
Ending work in process inventory	$11,000

Which of the following is the cost of goods manufactured?

A.
B.
C.
D.

34. During the month of June, Reardon Company incurs $17,000 of direct labour and $8,500 of manufacturing overhead, and purchases $15,000 of raw materials. Between the beginning and the end of the month, the raw-materials inventory increases by $2,000, the finished goods inventory increases by $1,500, and the work-in-process inventory decreases by $3,000. What is the cost of goods manufactured?

A.
B.
C.
D.

35. Mueller Company reports the following data for the year just ended:

Raw materials used in production	$800,000
Direct labour	$700,000
Total overhead costs	$900,000
Ending work-in-process inventory	$400,000
Cost of goods manufactured	$2,500,000

What was the beginning work-in-process inventory?

A.
B.
C.
D.

36. Williams Company's direct labour cost is 25% of its conversion cost. If the manufacturing overhead cost for the last period is $45,000 and the direct materials cost is $25,000, what is the direct labour cost?

A.
B.
C.
D.

37. The Lyons Company's cost of goods manufactured was $120,000 when its sales were $360,000 and its gross margin was $220,000. If the ending inventory of finished goods was $30,000, what was the beginning inventory of finished goods?

A.
B.
C.
D.

38. The gross margin for Cushing Company for the first quarter of last year was $325,000 when sales were $700,000. The beginning inventory of finished goods was $60,000, and the ending inventory of finished goods was $85,000. What was the cost of goods manufactured for the first quarter?

A.
B.
C.
D.

39. Last month, a manufacturing company had the following operating results:

Beginning finished goods inventory	$74,000
Ending finished goods inventory	$73,000
Sales	$464,000
Gross margin	$52,000

What was the cost of goods manufactured for the month?

A.
B.
C.
D.

40. The following information was provided by Wilson Company for the year just ended:

Beginning finished goods inventory	$150,750
Ending finished goods inventory	$140,475
Sales	$475,000
Gross margin	$150,000

What was the cost of goods manufactured for the year?

A.
B.
C.
D.

41. The following information was provided by Grand Company for the year just ended:

Decrease in finished goods inventory	$4,655
Sales	$500,000
Gross margin	$100,000

What was the cost of goods manufactured for the year?

A.
B.
C.
D.

42. The following inventory valuation errors were discovered by Knox Corporation's new controller just after the annual financial statements were published at the end of Year 3.

The Year 3 ending inventory was understated by $17,000.
The Year 2 ending inventory was understated by $61,000.
The Year 1 ending inventory was overstated by $23,000.

The net income for Knox in each of these years was:

	Year 3	Year 2	Year 1
Net income	$168,000	$254,000	$138,000

Assuming there were no income taxes, what was the adjusted net income in each year?

	Year 3	Year 2	Year 1
A)	$212,000	$170,000	$161,000
B)	$124,000	$338,000	$115,000
C)	$90,000	$338,000	$161,000
D)	$124,000	$170,000	$115,000

A.
B.
C.
D.

43. Delta Merchandising, Inc., has provided the following information for the year just ended:

Net sales	$128,500
Beginning inventory	$24,000
Purchases	$80,000
Gross margin	$38,550

What was the ending inventory for the company at year-end?

A.
B.
C.
D.

44. The beginning balance of the raw materials inventory account for May was $27,500. The ending balance for May was $28,750, and $128,900 of raw materials were used during the month. What was the cost of the materials purchased during the month?

A.
B.
C.
D.

45. Gabel Inc. is a merchandising company. Last month, the company's merchandise purchases totalled $63,000. The company's beginning merchandise inventory was $13,000, and its ending merchandise inventory was $15,000. What was the company's cost of goods sold for the month?

A.
B.
C.
D.

46. Haack Inc. is a merchandising company. Last month, the company's cost of goods sold was $84,000. The company's beginning merchandise inventory was $20,000, and its ending merchandise inventory was $18,000. What was the total amount of the company's merchandise purchases for the month?

A.
B.
C.
D.

47. During January, the cost of goods manufactured was $93,000. The beginning finished goods inventory was $16,000, and the ending finished goods inventory was $20,000. What was the cost of goods sold for the month?

A.
B.
C.
D.

48. Sally Smith is employed in the production of various electronic products, and she earns $8 per hour. She is paid time-and-a-half for work in excess of 40 hours per week. During a given week, she worked 45 hours and had no idle time. How much of her week's wages would be charged to manufacturing overhead?

A.
B.
C.
D.

49. During the first week of April, Gillian worked a total of 50 hours assembling products and had no idle time. Gillian is paid $15 per hour for regular time, and is paid time-and-a-half for all hours in excess of a 40-hour week. How much of Gillian's wages for the week should be charged to direct labour?

A.
B.
C.
D.

50. Robert Smith earns $16 per hour assembling products. For each hour over 40 he works in a week, he is paid time-and-a-half. During a given week, he worked 45 hours and had no idle time. How much of his weekly wages would be charged to the manufacturing overhead account?

A.
B.
C.
D.

The following data (in thousands of dollars) have been taken from the accounting records of Karling Corporation for the year just ended.

Sales	$990
Raw materials inventory, beginning	$40
Raw materials inventory, ending	$70
Purchases of raw materials	$120
Direct labour	$200
Manufacturing overhead	$230
Administrative expenses	$150
Selling expenses	$140
Work-in-process inventory, beginning	$70
Work-in-process inventory, ending	$50
Finished goods inventory, beginning	$120
Finished goods inventory, ending	$160

51. What was the cost (in thousands of dollars) of the raw materials used in production during the year?

A.
B.
C.
D.

52. What was the cost of goods manufactured (finished) for the year (in thousands of dollars)?

A.
B.
C.
D.

53. What was the cost of goods sold (in thousands of dollars) for the year?

A.
B.
C.
D.

54. What was the net income (in thousands of dollars) for the year?

A.
B.
C.
D.

The following data (in thousands of dollars) have been taken from the accounting records of Karlana Corporation for the year just ended.

Sales	$910
Raw materials inventory, beginning	$80
Raw materials inventory, ending	$20
Purchases of raw materials	$100
Direct labour	$130
Manufacturing overhead	$200
Administrative expenses	$160
Selling expenses	$140
Work-in-process inventory, beginning	$40
Work-in-process inventory, ending	$10
Finished goods inventory, beginning	$130
Finished goods inventory, ending	$150

55. What was the cost of the raw materials used in production (in thousands of dollars) during the year?

A.
B.
C.
D.

56. What was the cost of goods manufactured (finished) for the year (in thousands of dollars)?

A.
B.
C.
D.

57. What was the net income (in thousands of dollars) for the year?

A.
B.
C.
D.

The following data (in thousands of dollars) have been taken from the accounting records of Karlist Corporation for the just completed year.

Sales	$800
Raw materials inventory, beginning	$60
Raw materials inventory, ending	$70
Purchases of raw materials	$180
Direct labour	$100
Manufacturing overhead	$190
Administrative expenses	$110
Selling expenses	$150
Work-in-process inventory, beginning	$70
Work-in-process inventory, ending	$80
Finished goods inventory, beginning	$120
Finished goods inventory, ending	$160

58. What was the cost of the raw materials used in production (in thousands of dollars) during the year?

A.
B.
C.
D.

59. What was the cost of goods manufactured (finished) for the year (in thousands of dollars)?

A.
B.
C.
D.

60. What was the cost of goods sold (in thousands of dollars) for the year?

A.
B.
C.
D.

61. What was the Gross Margin (in thousands of dollars) for the year?

A.
B.
C.
D.

The following data pertain to Harriman Company's operations during July:

	July 1	July 31
Raw materials inventory	0	$5,000
Work-in-process inventory	?	$4,000
Finished goods inventory	$12,000	?

Other data:	
Cost of goods manufactured	$105,000
Raw materials used	$40,000
Manufacturing overhead costs	$20,000
Direct labour costs	$39,000
Gross Margin	$100,000
Sales	$210,000

62. What was the beginning work-in-process inventory?

A.
B.
C.
D.

63. What was the ending finished goods inventory?

A.
B.
C.
D.

Bergeron Inc. reported the following data for last year:

Work-in-process inventory, beginning	$100
Work-in-process inventory, ending	$150
Finished goods inventory, beginning	$180
Finished goods inventory, ending	$200
Direct labour cost	$300
Direct materials cost	$500
Manufacturing overhead cost	$400

64. Which of the following is the prime cost?

A.
B.
C.
D.

65. Which of the following is the conversion cost?

A.
B.
C.
D.

66. Which of the following is the cost of goods manufactured?

A.
B.
C.
D.

Geneva Steel Corporation produces large sheets of heavy gauge steel. The company showed the following amounts relating to its production for the year just completed:

Direct materials used in production	$110,000
Direct labour costs for the year	$55,000
Work in process, beginning	$22,000
Finished goods, beginning	$45,000
Cost of goods available for sale	$288,000
Cost of goods sold	$238,000
Work in process, ending	$16,000

67. What was the balance of the finished goods inventory at the end of the year?

A.
B.
C.
D.

68. What was the cost of goods manufactured for the year?

A.
B.
C.
D.

69. What was the manufacturing overhead cost for the year?

A.
B.
C.
D.

Boardman Company reported the following data for the month of January:

Inventories:	1/1	1/31
Raw materials	$32,000	$31,000
Work in process	$18,000	$12,000
Finished goods	$30,000	$35,000

Additional information:	
Sales revenue	$210,000
Direct labour costs	$40,000
Manufacturing overhead costs	$70,000
Selling expenses	$25,000
Administrative expenses	$35,000

70. If raw materials costing $35,000 were purchased during January, what were the total manufacturing costs for the month?

A.
B.
C.
D.

71. Assuming that cost of goods sold for January was $124,000, what was the net income for January?

A.
B.
C.
D.

72. Which of the following is Boardman Company's total conversion cost for January?

A.
B.
C.
D.

73. Assuming that cost of goods sold for Boardman Company for January was $140,000, what was the cost of goods manufactured for the month?

A.
B.
C.
D.

At a sales volume of 32,000 units, CD Company's total fixed costs are $64,000 and total variable costs are $60,000. The relevant range is 30,000 to 55,000 units.

74. If CD Company sells 43,000 units, what is the total expected cost?

A.
B.
C.
D.

75. If CD Company sells 50,000 units, what is the total expected cost per unit (rounded to the nearest cent)?

A.
B.
C.
D.

76. All costs incurred in a merchandising firm are considered to be period costs.

True False

77. In a manufacturing firm, depreciation is always considered a product cost for external financial reporting purposes.

True False

78. In external financial reports, factory utilities costs may be included in an asset account on the balance sheet at the end of the period.

True False

79. Advertising costs are considered product costs for external financial reports since they are incurred in order to promote specific products.

True False

80. Property taxes and insurance premiums paid on a factory building are examples of manufacturing overhead.

True False

81. Manufacturing overhead combined with direct materials is known as conversion cost.

True False

82. If the ending inventory of finished goods is understated, net income will be overstated.

True False

83. In a manufacturing company, goods available for sale equals the sum of the cost of goods manufactured and the beginning finished goods inventory.

True False

84. Variable costs are costs whose per unit costs vary as the activity level rises and falls.

True False

85. On a per unit basis, a fixed cost varies inversely with the level of activity.

True False

86. The following would typically be considered indirect costs of manufacturing a particular Boeing 747 to be delivered to Singapore Airlines: electricity to run production equipment, the factory manager's salary, and the cost of the General Electric jet engines installed on the aircraft.

True False

87. The following costs should be considered direct costs of providing delivery room services to a particular mother and her baby: the costs of drugs administered in the operating room, the attending physician's fees, and a portion of the liability insurance carried by the hospital to cover the delivery room.

True False

88. The following costs should be considered by a law firm to be indirect costs of defending a particular client in court: rent on the law firm's offices, the law firm's receptionist's wages, the costs of heating the law firm's offices, and the depreciation on the personal computer in the office of the attorney who has been assigned the client.

True False

89. A cost that differs from one month to another is known as a differential cost.

True False

90. Some companies classify labour fringe benefits for direct labour workers as part of the direct labour cost and some classify these costs as manufacturing overhead.

True False

91. Stony Electronics Corporation manufactures a portable radio designed for mounting on the wall of the bathroom. The following list represents some of the different types of costs incurred in the manufacture of these radios:

1) The plant manager's salary.
2) The cost of heating the plant.
3) The cost of heating executive offices.
4) The cost of printed circuit boards used in the radios.
5) Salaries and commissions of company salespersons.
6) Depreciation on office equipment used in the executive offices.
7) Depreciation on production equipment used in the plant.
8) Wages of janitorial personnel who clean the plant.
9) The cost of insurance on the plant building.
10) The cost of electricity to light the plant.
11) The cost of electricity to power plant equipment.
12) The cost of maintaining and repairing equipment in the plant.
13) The cost of printing promotional materials for trade shows.
14) The cost of solder used in assembling the radios.
15) The cost of telephone service for the executive offices.

Required:

Classify each of the items above as product (inventoriable) cost or period (noninventoriable) costs for the purpose of preparing external financial statements.

92. Bill Pope has developed a new device that is so exciting he is considering quitting his job in order to produce and market it on a large-scale basis. Bill will rent a garage for $300 per month for production purposes. Utilities will cost $40 per month. Bill has already taken an industrial design course at the local community college to help prepare for this venture. The course cost $300. Bill will rent production equipment at a monthly cost of $800. He estimates the material cost per unit will be $5, and the labour cost will be $3. He will hire workers and spend his time promoting the product. To do this, he will quit his job, which pays $3,000 per month. Advertising and promotion will cost $900 per month.

Required:

Complete the chart below by placing an "X" under each heading that helps to identify the cost involved. You can place an "X" under more than one heading for a single cost: for example, a cost may be a sunk cost, an overhead cost, and a product cost; you would place an "X" under each of these headings opposite the cost.

*** Between the alternatives of going into business to make the device or not going into business to make the device**. **See column heading "Differential Cost"**.

	Oppor-tunity Cost	Sunk Cost	Vari-able Cost	Fixed Cost	Mfg. Over-head	Product Cost	Sell-ing Cost	D e C
Garage rent								
Utilities								
Cost of the industrial design course								
Equipment rented								
Material cost								
Labor cost								
Present salary								
Advertising								

* Between the alternatives of going into business to make the device or not going into business to

make the device.

93. Logan Products, a small manufacturer, has submitted the items below concerning last year's operations. The president's secretary, trying to be helpful, has alphabetized the list.

Administrative salaries	$2,400
Advertising expense	$1,200
Depreciation—factory building	$800
Depreciation—factory equipment	$1,600
Depreciation—office equipment	$180
Direct labour cost	$21,900
Raw materials inventory, beginning	$2,100
Raw materials inventory, ending	$3,200
Finished goods inventory, beginning	$46,980
Finished goods inventory, ending	$44,410
General liability insurance expense	$240
Indirect labour cost	$11,800
Insurance on factory	$1,400
Purchases of raw materials	$14,600
Repairs and maintenance of factory	$900
Sales salaries	$2,000
Taxes on factory	$450
Travel and entertainment expense	$1,410
Work-in-process inventory, beginning	$1,670
Work-in-process inventory, ending	$1,110

Required:

a.) Prepare a schedule of cost of goods manufactured in good form for the year.
b.) Determine the cost of goods sold for the year.

94.

Laco Company acquired its factory building about 20 years ago. For a number of years, the company has rented out a small, unused part of the building. The renter's lease will expire soon. Rather than renewing the lease, Laco Company is considering using the space itself to manufacture a new product. Under this option, the unused space will continue to be depreciated on a straight-line basis, as in past years.

Direct materials and direct labour cost for the new product is $50 per unit. In order to store finished units of the new product, the company will rent a small warehouse nearby. The rental cost is $2,000 per month. It will cost the company an additional $4,000 each month to advertise the new product. A new production supervisor, hired to oversee production of the new product, will be paid $3,000 per month. The company will pay a sales commission of $10 for each unit of product that is sold.

Required:

Complete the chart below by placing an "X" under each column heading that helps to identify the costs listed to the left. You can place an "X" under more than one heading for a single cost: for example, a cost may be a product cost, an opportunity cost, and a sunk cost; you would place an "X" under each of these headings on the answer sheet opposite the cost.

	Oppor-tunity Cost	Sunk Cost	Vari-able Cost	Fixed Cost	Product Cost	Selling & Admin Cost	Dif-ent Cos
Rent on unused factory space							
Depreciation on the factory space							
Direct material and direct labor							
Rental cost of the small warehouse							
Advertising cost							
Production super-visor's salary							
Sales commissions							

***Between the alternatives of (1) renting the space out again or (2) using the space to produce the new product. See column heading "Differential Cost".**

95. The accounts for a manufacturing company for an accounting period are listed below. Find the unknown amounts indicated by question marks.

Sales	$39,000
Cost of goods sold	?
Purchases of direct materials	$11,000
Direct labour	$5,000
Finished goods inventory, beginning	$5,000
Work in process, beginning	$800
Work in process, ending	$3,000
Gross margin	$11,700
Finished goods inventory, ending	?
Accounts payable, beginning	$4,000
Accounts payable, ending	$2,800
Direct materials inventory, beginning	$1,000
Direct materials inventory, ending	$3,000
Indirect labour	$2,000
Indirect materials used	$4,000
Utilities expense, factory	$3,000
Depreciation on factory equipment	$7,000

96. Use the following information to determine the gross margin for Pacific States Manufacturing for the year just ended (all amounts are in thousands of dollars):

Sales	$31,800
Purchases of direct materials	$7,000
Direct labour	$5,000
Work-in-process inventory, 1/1	$800
Work-in-process inventory, 12/31	$3,000
Finished goods inventory, 1/1	$4,000
Finished goods inventory, 12/31	$5,300
Accounts payable, 1/1	$1,700
Accounts payable, 12/31	$1,500
Direct materials inventory, 1/1	$6,000
Direct materials inventory, 12/31	$1,000
Indirect labour	$600
Indirect materials used	$500
Utilities factory	$1,900
Depreciation on factory equipment	$3,500

97. The following information is from Marchant Manufacturing Co. for September:

Direct materials used in production	$95,000
Direct labour	$67,000
Total manufacturing cost	$234,000
Raw materials inventory, Sept. 1	$24,000
Work-in-process inventory, Sept. 1	$6,000
Finished goods inventory, Sept. 1	$101,000
Purchases of raw materials	$102,000
Cost of goods manufactured	$233,000
Administrative expense	$41,000
Selling expense	$56,000
Sales	$344,000
Gross margin	$127,000
Net income	$30,000

Required:

(a.) Compute the cost of goods sold.
(b.) Compute the balance in finished goods inventory at September 30.
(c.) Compute the balance in work-in-process inventory at September 30.
(d.) Compute the balance in raw materials inventory at September 30.
(e.) Compute the total manufacturing overhead.

(Hint: The easiest method of solving this problem is to sketch out the income statement and the schedule of cost of goods manufactured, enter the given amounts, and then enter the unknowns as plug figures.)

98. The following data (in thousands of dollars) have been taken from the accounting records of Larsen Corporation for the year just ended:

Sales	$860
Purchases of raw materials	$150
Direct labour	$110
Manufacturing overhead	$210
Administrative expenses	$130
Selling expenses	$180
Raw materials inventory, beginning	$40
Raw materials inventory, ending	$80
Work-in-process inventory, beginning	$20
Work-in-process inventory, ending	$80
Finished goods inventory, beginning	$80
Finished goods inventory, ending	$150

Required:

(a.) Prepare a schedule of cost of goods manufactured in good form.
(b.) Compute the cost of goods sold.
(c.) Using data from your answers above as needed, prepare an income statement in good form.

99. The following data (in thousands of dollars) have been taken from the accounting records of Larner Corporation for the year just completed:

Sales	$870
Purchases of raw materials	$110
Direct labour	$130
Manufacturing overhead	$200
Administrative expenses	$160
Selling expenses	$140
Raw materials inventory, beginning	$30
Raw materials inventory, ending	$60
Work-in-process inventory, beginning	$50
Work-in-process inventory, ending	$10
Finished goods inventory, beginning	$150
Finished goods inventory, ending	$140

Required:

(a.) Prepare a schedule of cost of goods manufactured in good form.
(b.) Compute the cost of goods sold.
(c.) Using data from your answers above as needed, prepare an income statement in good form.

100. The following data (in thousands of dollars) have been taken from the accounting records of Larmont Corporation for the year just completed:

Sales	$990
Purchases of raw materials*	$100
Direct labour	$240
Indirect labour	$100
Indirect Material	$10
Other Factory Overhead	$100
Administrative expenses	$100
Selling expenses	$140
Raw materials inventory, beginning*	$20
Raw materials inventory, ending*	$80
Work-in-process inventory, beginning	$50
Work-in-process inventory, ending	$30
Finished goods inventory, beginning	$160
Finished goods inventory, ending	$150

*Raw Materials consist of both direct and indirect materials.

Required:

(a.) Prepare a schedule of cost of goods manufactured in good form.
(b.) Compute the cost of goods sold.
(c.) Using data from your answers above as needed, prepare an income statement in good form.

101. The following costs relate to one month's activity in Martin Company:

Indirect materials	$300
Rent on factory building	$500
Maintenance of equipment	$50
Direct material used	$1,200
Utilities on factory	$250
Direct labour	$1,500
Selling expense	$500
Administrative expense	$300
Work-in-process inventory, beginning	$600
Work-in-process inventory, ending	$800
Finished goods inventory, beginning	$500
Finished goods inventory, ending	$250

Required:

(a.) Prepare a schedule of cost of goods manufactured in good form.
(b.) Determine the cost of goods sold.

102.

Brooke Foster is employed by Wong Laboratories, Inc., and is directly involved in preparing and packaging the company's leading sleep aid, RestWell. Brooke's basic wage rate is $15 per hour, and she is paid time-and-a-half for any work in excess of 40 hours per week. Additionally, Wong Laboratories provides a fringe benefit package that costs the company $5 for each hour of employee time (regular or overtime). During a recent week, Brooke worked 49 hours but was idle for 3 hours due to materials shortages.

Required:

(a.) Assume that Wong Laboratories treats all fringe benefits as part of manufacturing overhead. Compute Brooke's total wages and fringe benefits for the week and indicate how much of her wages and fringe benefits for the week would be allocated to direct labour and how much would be allocated to manufacturing overhead.
(b.) Assume that Wong Laboratories treats the part of fringe benefits related to direct labour as a component of direct labour cost. Compute Brooke's total wages and fringe benefits for the week and indicate how much of her wages and fringe benefits would be allocated to direct labour and how much would be allocated to manufacturing overhead.

103.

Fred Adams is employed by the Cedar Manufacturing Company on their assembly line. Fred is paid $15 per hour for regular time, and time-and-a-half for all work in excess of 40 hours per week. During the two weeks of the pay period just completed, Fred reported the following:

Week 1:	
Idle time due to machine breakdowns	3 hours
Idle time due to material shortages	2 hours
Overtime	None
Week 2:	
Idle time	None
Overtime	9 hours

Required:

Compute Fred's wages for each week and allocate Fred's wages for each week between direct labour cost and manufacturing overhead.

104. The following inventory and cost data for the just completed year are taken from the accounting records of Sankar Company:

Inventories	
Increase in raw materials	$4,000
Increase in work in process	30,000
Decrease in finished goods	90,000
Costs incurred	
Advertising expense	$200,000
Direct labour cost	180,000
Purchases of raw materials	264,000
Rent, factory building	60,000
Indirect factory labour	112,600
Sales commissions	70,000
Utilities, factory	18,000
Maintenance, factory equipment	48,000
Supplies, factory	1,400
Depreciation, office equipment	16,000
Depreciation, factory equipment	80,000

Required:

(a.) Calculate the cost of goods manufactured.
(b.) Calculate the cost of goods sold

105. The following selected account balances for the year ended December 31 are provided for Amita Company:

Purchases of raw materials	$260,000
Direct labour	65,000
Maintenance, factory	74,000
Selling and administrative salaries	179,000
Depreciation, factory equipment	110,000
Cleaning supplies	6,000
Sales commissions	350,000
Utilities, factory building	52,000
Rent, factory	90,000
Depreciation, sales equipment	80,000
Insurance, factory equipment	8,000
Advertising expense	300,000

In addition, you have the following information about inventories during the year:

Increase in raw materials	$10,000	
Decrease in work in process	$15,000	
Beginning finished goods	$30,000	(1,000 units)
Ending finished goods	$?	(3,400 units)
Equivalent units produced	$?	(27,600 unit

Assume the company uses FIFO.

Required:

(a.) Calculate the cost of the 27,600 equivalent units that were produced during the year.
(b.) Calculate the cost of the ending finished goods inventory.
(c.) Calculate the cost of goods sold.

106.

Mary Tappin, an assistant Vice President at Galaxy Toys, was disturbed to find on her desk a memo from her boss, Gary Resnick, to the controller of the company. The memo appears below:

Galaxy Toys Internal Memo

Sept 15

To: Harry Wilson, Controller
Fm: Gary Resnick, Executive Vice President

As you know, we won't start recording many sales until October when stores start accepting shipments from us for the Christmas season. Meanwhile, we are producing flat-out and are building up our finished goods inventories so that we will be ready to ship next month. Unfortunately, we are in a bind right now since it looks like the net income for the quarter ending on Sept 30 is going to be pretty awful. This may get us in trouble with the bank since they always review the quarterly financial reports and may call in our loan if they don't like what they see. Is there any possibility that we could change the classification of some of our period costs to product costs--such as the rent on the finished goods warehouse? Please let me know as soon as possible. The President is pushing for results.

Mary didn't know what to do about the memo. It wasn't intended for her, but its contents were alarming.

Required:

a. Why has Gary Resnick suggested reclassifying some period costs as product costs?
b. Why do you think Mary was alarmed about the memo?

107. For the majority of manufacturing companies, the distinction between period costs and product costs is essential because of its effect on net income for a period. Failure to make the distinction can affect the cost of goods manufactured and cost of goods sold.

Required:

Would the need to make the distinction between product costs and period costs still be essential if a manufacturing company were to adopt the just-in-time technique in the lean thinking model? Explain.

108. Manufacturing overhead is one of the three elements of manufacturing costs. Unlike direct materials and direct labour costs, assigning manufacturing overhead cost to products can be a very difficult task.

Required:

Do you agree with this aspect of manufacturing overhead? Why or why not?

109. Assume, as discussed in the chapter, actual manufacturing costs (that is, direct material used, direct labour, and manufacturing overhead) are charged to products in calculating the cost of goods manufactured.

Required:

As a manager, explain some of the potential problems such a system may give you.

Chapter 02 Cost Terms, Concepts, and Classifications Key

1. What would be the classification of corporate controller's salary?

A.
B.
C.
D.

Blooms Level: Understand
Difficulty: Easy
Garrison - Chapter 02 #1
Learning Objective: 2

2. How should the cost of the fire insurance for a manufacturing plant be classified?

A.
B.
C.
D.

Blooms Level: Understand
Difficulty: Medium
Garrison - Chapter 02 #2
Learning Objective: 1

3. How would the cost of rent for a manufacturing plant generally be classified?

A.
B.
C.
D.

Blooms Level: Understand
Difficulty: Medium
Garrison - Chapter 02 #3
Learning Objective: 1
Learning Objective: 2

4. For a lamp manufacturing company, the cost of the insurance on its vehicles that deliver lamps to customers is best described as a:

A.
B.
C.
D.

Blooms Level: Understand
Difficulty: Medium
Garrison - Chapter 02 #4
Learning Objective: 2

5. For a manufacturing company, which of the following is an example of a period rather than a product cost?

A.
B.
C.
D.

Blooms Level: Understand
Difficulty: Easy
Garrison - Chapter 02 #5
Learning Objective: 2

6. Which of the following would be considered a product cost for external financial reporting purposes?

A.
B.
C.
D.

Blooms Level: Understand
Difficulty: Medium
Garrison - Chapter 02 #6
Learning Objective: 2

7. Which of the following would **not** be treated as a product cost for external financial reporting purposes?

A.
B.
C.
D.

Blooms Level: Understand
Difficulty: Easy

Garrison - Chapter 02 #7
Learning Objective: 2

8. What would be the classification of the transportation costs incurred by a manufacturing company to ship its product to its customers?

A.
B.
C.
D.

Blooms Level: Understand
Difficulty: Easy
Garrison - Chapter 02 #8
Learning Objective: 2

9. The advertising costs incurred by Pepsi to air its commercials during the hockey season can best be described as a:

A.
B.
C.
D.

Blooms Level: Apply
Difficulty: Medium
Garrison - Chapter 02 #9
Learning Objective: 2
Learning Objective: 5

10. Micro Computer Company has set up a toll-free telephone line for customer inquiries regarding computer hardware produced by the company. How would the cost of this toll-free line be classified?

A.
B.
C.
D.

Blooms Level: Apply
Difficulty: Easy
Garrison - Chapter 02 #10
Learning Objective: 2

11. How would the wages of factory maintenance personnel usually be classified?

A.
B.
C.
D.

Blooms Level: Understand
Difficulty: Medium
Garrison - Chapter 02 #11
Learning Objective: 2
Learning Objective: 6

12. Prime costs consist of:

A.
B.
C.
D.

Blooms Level: Understand
Difficulty: Easy
Garrison - Chapter 02 #12
Learning Objective: 1
Learning Objective: 2

13. What does manufacturing overhead cost consist of?

A.
B.
C.
D.

Blooms Level: Understand
Difficulty: Medium
Garrison - Chapter 02 #13
Learning Objective: 1
Learning Objective: 6

14. Which of the following should **NOT** be included as part of manufacturing overhead at a company that makes office furniture?

A.
B.
C.
D.

Blooms Level: Apply
Difficulty: Medium
Garrison - Chapter 02 #14
Learning Objective: 1

15. Rossiter Company failed to record a credit sale at the end of the year, although the reduction in finished goods inventories was correctly recorded when the goods were shipped to the customer. Which one of the following statements is correct?

A.
B.
C.
D.

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #15
Learning Objective: 3

16. What is the outcome if the cost of goods sold is greater than the cost of goods manufactured?

A.
B.
C.
D.

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #16
Learning Objective: 3
Learning Objective: 4

17. Last month, when 10,000 units of a product were manufactured, the cost per unit was $60. At this level of activity, variable costs were 50% of total unit costs. If 10,500 units are manufactured next month and cost behaviour patterns remain unchanged, how will costs be affected?

A.
B.
C.
D.

The average cost per unit will decrease as activity increases due to the presence of fixed costs. Refer to page 45 of text.

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #17
Learning Objective: 5

18. Which of the following statements regarding variable cost is true?

A.
B.
C.
D.

Blooms Level: Understand
Difficulty: Easy
Garrison - Chapter 02 #18
Learning Objective: 5

19. Within the relevant range, what is the difference between variable costs and fixed costs?

A.
B.
C.
D.

Blooms Level: Understand
Difficulty: Medium
Garrison - Chapter 02 #19
Learning Objective: 5

20. The Zellers store in your home town is one of many Zeller's department stores across the province. Some of the costs associated with the store in your home town last month appear below:

Shoe Department Cost of Sales	$80,000
Other Department Salaries	62,000
Store Managers Salary	14,000
Shoe Department Sales Commissions	8,000
Store Utilities	13,000
Shoe Department Manager's Salary	9,000
Store Lease Cost	11,000
Store Janitorial Costs	11,000
Other Store Costs	98,000

The Shoe Department is one of many departments in the home town store. The direct costs of the Shoe Department total:

A.
B.
C.
D.

Blooms Level: Analyze
Difficulty: Medium
Garrison - Chapter 02 #20
Learning Objective: 6

21. Which of the following best defines an opportunity cost?

A.
B.
C.
D.

Blooms Level: Remember
Difficulty: Easy
Garrison - Chapter 02 #21
Learning Objective: 6

22. To what does the term differential cost refer?

A.
B.
C.
D.

Blooms Level: Understand
Difficulty: Medium
Garrison - Chapter 02 #22
Learning Objective: 6

23. Which of the following costs is often important in decision making, but is omitted from conventional accounting records?

A.
B.
C.
D.

Blooms Level: Understand
Difficulty: Easy
Garrison - Chapter 02 #23
Learning Objective: 6

24. When a decision is made among a number of alternatives, the benefit that is lost by choosing one alternative over another is called what?

A.
B.
C.
D.

Blooms Level: Remember
Difficulty: Easy
Garrison - Chapter 02 #24
Learning Objective: 6

25. What does conversion cost consist of?

A.
B.
C.
D.

Blooms Level: Remember
Difficulty: Easy
Garrison - Chapter 02 #25
Learning Objective: 1
Learning Objective: 6

26. Prime cost consists of direct materials and what?

A.
B.
C.
D.

Blooms Level: Remember
Difficulty: Easy
Garrison - Chapter 02 #26
Learning Objective: 1
Learning Objective: 6

27. Which one of the following costs should NOT be considered a direct cost of serving a particular customer who orders a customized personal computer by phone directly from the manufacturer?

A.
B.
C.
D.

Blooms Level: Apply
Difficulty: Hard
Garrison - Chapter 02 #27
Learning Objective: 6

28. Which one of the following costs should NOT be considered an indirect cost of serving a particular customer at a Dairy Queen fast food outlet?

A.
B.
C.
D.

Blooms Level: Apply
Difficulty: Medium
Garrison - Chapter 02 #28

Learning Objective: 6

29. Green Company's costs for the month of August are as follows:

Direct materials used	$27,000
Direct labour	$34,000
Sales salaries	$14,000
Indirect labour	$10,000
Indirect materials	$15,000
General corporate administrative cost	$12,000
Taxes on manufacturing facility	$2,000
Rent on factory	$17,000

The beginning work-in-process inventory is $16,000 and the ending work-in-process inventory is $9,000. What is the cost of goods manufactured for the month?

A.
B.
C.
D.

DM + DL + MOH + WIP B.I. - WIP E.I.
27,000 + 34,000 + 10,000 + 15,000 + 2,000 + 17,000 + 16,000 - 9,000

Blooms Level: Apply
Difficulty: Medium
Garrison - Chapter 02 #29
Learning Objective: 4

30. A manufacturing company prepays its insurance coverage for a three-year period. The premium for the three years is $2,700 and is paid at the beginning of the first year. Eighty percent of the premium applies to manufacturing operations and 20% applies to selling and administrative activities. What amounts should be considered product costs and period costs respectively for the first year of coverage?

	Product Costs	Period Costs
A)	$2,700	$0
B)	$2,160	$540
C)	$1,440	$360
D)	$720	$180

A.
B.
C.
D.

$2,700/3 * 80% and 20%

Blooms Level: Analyze
Difficulty: Medium
Garrison - Chapter 02 #30
Learning Objective: 2

31. You have the following data:

Cost of goods sold	$70
Direct labour	$20
Direct materials	$15
Cost of goods manufactured	$80
Work-in-process ending	$10
Finished goods ending	$15
Manufacturing overhead	$30

Which of the following represents the beginning work-in-process inventory?

A.
B.
C.
D.

CGM + EI - Manufacturing Costs = 80 + 10 - (15 + 20 + 30)

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #31

Learning Objective: 4

32. During the month of May, Bennett Manufacturing Company purchases $43,000 of raw materials. The manufacturing overhead totals $27,000 and the total manufacturing costs are $106,000. Assuming a beginning inventory of raw materials of $8,000 and an ending inventory of raw materials of $6,000, what must be the total for direct labour?

A.
B.
C.
D.

DM used = 8,000 + 43,000 - 6,000 = $45,000
DL = 106,000 - 45,000 - 27,000

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #32
Learning Objective: 4

33. You are given the following data for January:

Direct materials	$38,000
Direct labour	$24,000
Manufacturing overhead	$17,000
Beginning work in process inventory	$10,000
Ending work in process inventory	$11,000

Which of the following is the cost of goods manufactured?

A.
B.
C.
D.

38,000 + 24,000 + 17,000 + 10,000 - 11,000

Blooms Level: Apply
Difficulty: Medium
Garrison - Chapter 02 #33
Learning Objective: 4

34. During the month of June, Reardon Company incurs $17,000 of direct labour and $8,500 of manufacturing overhead, and purchases $15,000 of raw materials. Between the beginning and the end of the month, the raw-materials inventory increases by $2,000, the finished goods inventory increases by $1,500, and the work-in-process inventory decreases by $3,000. What is the cost of goods manufactured?

A.
B.
C.
D.

RM Purchased	15,000
- Increase in Inv.	2,000
RM used	13,000
+ DL	17,000
+ OH	8,500
Total Man. Costs	38,500
+ Decrease in Inv.	3,000
C.G.M.	41,500

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #34
Learning Objective: 4

35. Mueller Company reports the following data for the year just ended:

Raw materials used in production	$800,000
Direct labour	$700,000
Total overhead costs	$900,000
Ending work-in-process inventory	$400,000
Cost of goods manufactured	$2,500,000

What was the beginning work-in-process inventory?

A.
B.
C.
D.

C.G.M. + E.I. - Man. Costs
2,500,000 + 400,000 - 800,000 - 700,000 - 900,000 = $500,000

Blooms Level: Analyze
Difficulty: Medium

Garrison - Chapter 02 #35
Learning Objective: 4

36. Williams Company's direct labour cost is 25% of its conversion cost. If the manufacturing overhead cost for the last period is $45,000 and the direct materials cost is $25,000, what is the direct labour cost?

A.
B.
C.
D.

Let x = CC (conversion costs)
CC = DL + OH
x = .25x + 45,000
x = 60,000 Therefore DL 60,000 *.25 = 15,000
Text Reference: page 32

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #36
Learning Objective: 1
Learning Objective: 6

37. The Lyons Company's cost of goods manufactured was $120,000 when its sales were $360,000 and its gross margin was $220,000. If the ending inventory of finished goods was $30,000, what was the beginning inventory of finished goods?

A.
B.
C.
D.

CGS = Sales - gross margin. B.I. = CGS + E.I. - CGM
CGS = 140,000; B.I. = 140,000 + 30,000 - 120,000 = $50,000

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #37
Learning Objective: 3

38. The gross margin for Cushing Company for the first quarter of last year was $325,000 when sales were $700,000. The beginning inventory of finished goods was $60,000, and the ending inventory of finished goods was $85,000. What was the cost of goods manufactured for the first quarter?

A.
B.
C.
D.

CGM = CGS + EI - BI
= (700,000 - 325,000) + 85,000 - 60,000 = $400,000

Blooms Level: Apply
Difficulty: Hard
Garrison - Chapter 02 #38
Learning Objective: 3

39. Last month, a manufacturing company had the following operating results:

Beginning finished goods inventory	$74,000
Ending finished goods inventory	$73,000
Sales	$464,000
Gross margin	$52,000

What was the cost of goods manufactured for the month?

A.
B.
C.
D.

(464,000 - 52,000) + 73,000 - 73,000 = $411,000

Blooms Level: Apply
Difficulty: Hard
Garrison - Chapter 02 #39
Learning Objective: 3

40. The following information was provided by Wilson Company for the year just ended:

Beginning finished goods inventory	$150,750
Ending finished goods inventory	$140,475
Sales	$475,000
Gross margin	$150,000

What was the cost of goods manufactured for the year?

A.
B.
C.
D.

CGM = CGS + EI - BI
(475,000 - 150,000) + 140,475 - 150,750 = $314,725

Blooms Level: Apply
Difficulty: Hard
Garrison - Chapter 02 #40
Learning Objective: 3

41. The following information was provided by Grand Company for the year just ended:

Decrease in finished goods inventory	$4,655
Sales	$500,000
Gross margin	$100,000

What was the cost of goods manufactured for the year?

A.
B.
C.
D.

CGM = CGS - decrease in FG inventory
CGM = 500,000 - 100,000 - 4,655 = $395,345

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #41
Learning Objective: 3

42. The following inventory valuation errors were discovered by Knox Corporation's new controller just after the annual financial statements were published at the end of Year 3.

The Year 3 ending inventory was understated by $17,000.
The Year 2 ending inventory was understated by $61,000.
The Year 1 ending inventory was overstated by $23,000.

The net income for Knox in each of these years was:

	Year 3	Year 2	Year 1
Net income	$168,000	$254,000	$138,000

Assuming there were no income taxes, what was the adjusted net income in each year?

	Year 3	Year 2	Year 1
A)	$212,000	$170,000	$161,000
B)	$124,000	$338,000	$115,000
C)	$90,000	$338,000	$161,000
D)	$124,000	$170,000	$115,000

A.
B.
C.
D.

When BI is overstated Net Income is understated.
When EI is overstated Net Income is overstated.

Year 1	NI = 138,000 -23,000 = $115,000
Year 2	BI is overstated by 23,000, EI understated by 61,000.
	NI = 254,000 + 84,000 = $338,000
Year 3	BI is understated by 61,000, EI understated 17,000
	NI = 168,000 – 61,000 + 17,000 = $124,000

Blooms Level: Evaluate
Difficulty: Hard
Garrison - Chapter 02 #42
Learning Objective: 3

43. Delta Merchandising, Inc., has provided the following information for the year just ended:

Net sales	$128,500
Beginning inventory	$24,000
Purchases	$80,000
Gross margin	$38,550

What was the ending inventory for the company at year-end?

A.
B.
C.
D.

EI = BI + Purchases - CGS
EI = 24,000 + 80,000 - (128,500 - 38,550) = $14,050

Blooms Level: Apply
Difficulty: Hard
Garrison - Chapter 02 #43
Learning Objective: 3

44. The beginning balance of the raw materials inventory account for May was $27,500. The ending balance for May was $28,750, and $128,900 of raw materials were used during the month. What was the cost of the materials purchased during the month?

A.
B.
C.
D.

RM purchased = RM used + EI - BI
= 128,900 + 28,750 - 27,500 = $130,150

Blooms Level: Apply
Difficulty: Medium
Garrison - Chapter 02 #44
Learning Objective: 4

45. Gabel Inc. is a merchandising company. Last month, the company's merchandise purchases totalled $63,000. The company's beginning merchandise inventory was $13,000, and its ending merchandise inventory was $15,000. What was the company's cost of goods sold for the month?

A.
B.
C.
D.

CGS = BI + Purchases - EI = 13,000 + 63,000 - 15,000 = $61,000

Blooms Level: Apply
Difficulty: Easy
Garrison - Chapter 02 #45
Learning Objective: 3

46. Haack Inc. is a merchandising company. Last month, the company's cost of goods sold was $84,000. The company's beginning merchandise inventory was $20,000, and its ending merchandise inventory was $18,000. What was the total amount of the company's merchandise purchases for the month?

A.
B.
C.
D.

84,000 + 18,000 - 20,000 = $82,000

Blooms Level: Apply
Difficulty: Medium
Garrison - Chapter 02 #46
Learning Objective: 3

47. During January, the cost of goods manufactured was $93,000. The beginning finished goods inventory was $16,000, and the ending finished goods inventory was $20,000. What was the cost of goods sold for the month?

A.
B.
C.
D.

16,000 + 93,000 - 20,000 = $89,000

Blooms Level: Apply
Difficulty: Easy
Garrison - Chapter 02 #47
Learning Objective: 3

48. Sally Smith is employed in the production of various electronic products, and she earns $8 per hour. She is paid time-and-a-half for work in excess of 40 hours per week. During a given week, she worked 45 hours and had no idle time. How much of her week's wages would be charged to manufacturing overhead?

A.
B.
C.
D.

5 hours overtime * $8/2 = $20

Blooms Level: Apply
Difficulty: Medium
Garrison - Chapter 02 #48
Learning Objective: 1

49. During the first week of April, Gillian worked a total of 50 hours assembling products and had no idle time. Gillian is paid $15 per hour for regular time, and is paid time-and-a-half for all hours in excess of a 40-hour week. How much of Gillian's wages for the week should be charged to direct labour?

A.
B.
C.
D.

50 hours * $15/hr. = $750

Blooms Level: Analyze
Difficulty: Easy
Garrison - Chapter 02 #49
Learning Objective: 1

50. Robert Smith earns $16 per hour assembling products. For each hour over 40 he works in a week, he is paid time-and-a-half. During a given week, he worked 45 hours and had no idle time. How much of his weekly wages would be charged to the manufacturing overhead account?

A.
B.
C.
D.

5 hours * 16/2 = $40

Blooms Level: Analyze
Difficulty: Medium
Garrison - Chapter 02 #50
Learning Objective: 1

The following data (in thousands of dollars) have been taken from the accounting records of Karling Corporation for the year just ended.

Sales	$990
Raw materials inventory, beginning	$40
Raw materials inventory, ending	$70
Purchases of raw materials	$120
Direct labour	$200
Manufacturing overhead	$230
Administrative expenses	$150
Selling expenses	$140
Work-in-process inventory, beginning	$70
Work-in-process inventory, ending	$50
Finished goods inventory, beginning	$120
Finished goods inventory, ending	$160

Garrison - Chapter 02

51. What was the cost (in thousands of dollars) of the raw materials used in production during the year?

A.
B.
C.
D.

40 + 120 - 70 = 90

Blooms Level: Analyze
Difficulty: Easy
Garrison - Chapter 02 #51
Learning Objective: 4

52. What was the cost of goods manufactured (finished) for the year (in thousands of dollars)?

A.
B.
C.
D.

90 + 200 + 230 + 70 - 50 = 540

Blooms Level: Analyze
Difficulty: Medium
Garrison - Chapter 02 #52
Learning Objective: 4

53. What was the cost of goods sold (in thousands of dollars) for the year?

A.
B.
C.
D.

120 + 540 - 160 = 500

Blooms Level: Analyze
Difficulty: Medium
Garrison - Chapter 02 #53
Learning Objective: 3
Learning Objective: 4

54. What was the net income (in thousands of dollars) for the year?

A.
B.
C.
D.

NI = Sales - CGS - Admin. Expenses - Selling Expenses
= 990 - 500 - 150 - 140 = 200

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #54
Learning Objective: 3
Learning Objective: 4

The following data (in thousands of dollars) have been taken from the accounting records of Karlana Corporation for the year just ended.

Sales	$910
Raw materials inventory, beginning	$80
Raw materials inventory, ending	$20
Purchases of raw materials	$100
Direct labour	$130
Manufacturing overhead	$200
Administrative expenses	$160
Selling expenses	$140
Work-in-process inventory, beginning	$40
Work-in-process inventory, ending	$10
Finished goods inventory, beginning	$130
Finished goods inventory, ending	$150

Garrison - Chapter 02

55. What was the cost of the raw materials used in production (in thousands of dollars) during the year?

A.
B.
C.
D.

RM used = 80 + 100 - 20 = 160

Blooms Level: Apply
Difficulty: Easy
Garrison - Chapter 02 #55
Learning Objective: 4

56. What was the cost of goods manufactured (finished) for the year (in thousands of dollars)?

A.
B.
C.
D.

CGM = DM used + DL + OH + BI WIP - EI WIP
= 160 + 130 + 200 + 40 - 10 = 520

Blooms Level: Analyze
Difficulty: Medium
Garrison - Chapter 02 #56
Learning Objective: 4

57. What was the net income (in thousands of dollars) for the year?

A.
B.
C.
D.

NI = Sales - CGS - Admin. Expenses - Selling expenses
= 910 - (130 + 520 - 150) - 160 - 140 = 110

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #57
Learning Objective: 3
Learning Objective: 4

The following data (in thousands of dollars) have been taken from the accounting records of Karlist Corporation for the just completed year.

Sales	$800
Raw materials inventory, beginning	$60
Raw materials inventory, ending	$70
Purchases of raw materials	$180
Direct labour	$100
Manufacturing overhead	$190
Administrative expenses	$110
Selling expenses	$150
Work-in-process inventory, beginning	$70
Work-in-process inventory, ending	$80
Finished goods inventory, beginning	$120
Finished goods inventory, ending	$160

Garrison - Chapter 02

58. What was the cost of the raw materials used in production (in thousands of dollars) during the year?

A.
B.
C.
D.

60 + 180 - 70 = 170

Blooms Level: Apply
Difficulty: Easy
Garrison - Chapter 02 #58
Learning Objective: 4

59. What was the cost of goods manufactured (finished) for the year (in thousands of dollars)?

A.
B.
C.
D.

CGM = RM used + DL + OH + BI WIP - EI WIP
= 170 + 100 + 190 + 70 - 80 = 450

Blooms Level: Analyze
Difficulty: Medium
Garrison - Chapter 02 #59
Learning Objective: 4

60. What was the cost of goods sold (in thousands of dollars) for the year?

A.
B.
C.
D.

CGS = 120 + 450 - 160 = $410

Blooms Level: Analyze
Difficulty: Medium
Garrison - Chapter 02 #60
Learning Objective: 3
Learning Objective: 4

61. What was the Gross Margin (in thousands of dollars) for the year?

A.
B.
C.
D.

GM = Sales - CGS = 800 - 410

Blooms Level: Analyze
Difficulty: Medium
Garrison - Chapter 02 #61
Learning Objective: 3
Learning Objective: 4

The following data pertain to Harriman Company's operations during July:

	July 1	July 31
Raw materials inventory	0	$5,000
Work-in-process inventory	?	$4,000
Finished goods inventory	$12,000	?

Other data:	
Cost of goods manufactured	$105,000
Raw materials used	$40,000
Manufacturing overhead costs	$20,000
Direct labour costs	$39,000
Gross Margin	$100,000
Sales	$210,000

Garrison - Chapter 02

62. What was the beginning work-in-process inventory?

A.
B.
C.
D.

BI WIP = CGM + EI WIP - RM used - DL - OH
= 105,000 + 4,000 - 40,000 - 39,000 - 20,000 = 10,000

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #62
Learning Objective: 4

63. What was the ending finished goods inventory?

A.
B.
C.
D.

EI = BI + CGM - CGS
= 12,000 + 105,000 - (210,000 - 100,000) = 7,000

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #63
Learning Objective: 3

Bergeron Inc. reported the following data for last year:

Work-in-process inventory, beginning	$100
Work-in-process inventory, ending	$150
Finished goods inventory, beginning	$180
Finished goods inventory, ending	$200
Direct labour cost	$300
Direct materials cost	$500
Manufacturing overhead cost	$400

Garrison - Chapter 02

64. Which of the following is the prime cost?

A.
B.
C.
D.

Prime = DM + DL = 500 + 300 = 800

Blooms Level: Apply
Difficulty: Easy
Garrison - Chapter 02 #64
Learning Objective: 1
Learning Objective: 2

65. Which of the following is the conversion cost?

A.
B.
C.
D.

CC = DL + OH = 300 + 400 = 700

Blooms Level: Apply
Difficulty: Easy
Garrison - Chapter 02 #65
Learning Objective: 1
Learning Objective: 2

66. Which of the following is the cost of goods manufactured?

A.
B.
C.
D.

CGM = DM + DL + OH + BI - EI
= 500 + 300 + 400 + 100 - 150 = $1,150

Blooms Level: Apply
Difficulty: Hard
Garrison - Chapter 02 #66
Learning Objective: 4

Geneva Steel Corporation produces large sheets of heavy gauge steel. The company showed the following amounts relating to its production for the year just completed:

Direct materials used in production	$110,000
Direct labour costs for the year	$55,000
Work in process, beginning	$22,000
Finished goods, beginning	$45,000
Cost of goods available for sale	$288,000
Cost of goods sold	$238,000
Work in process, ending	$16,000

Garrison - Chapter 02

67. What was the balance of the finished goods inventory at the end of the year?

A.
B.
C.
D.

EI = Cost of Goods Available for sale - Cost of Goods Sold
= 288,000 - 238,000 = $50,000

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #67
Learning Objective: 3

68. What was the cost of goods manufactured for the year?

A.
B.
C.
D.

CGM = Cost of Goods Available for sale - Finished Goods B.I.
= 288,000 - 45,000 = $243,000

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #68
Learning Objective: 3
Learning Objective: 4

69. What was the manufacturing overhead cost for the year?

A.
B.
C.
D.

Compute Total Manufacturing Costs = CGM + EI WIP - BI WIP
= 243,000 + 16,000 - 22,000 = $237,000
Then compute manufacturing overhead = Total Man. Costs - DM - DL
Manufacturing overhead = 237,000 - 110,000 - 55,000 = $72,000

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #69
Learning Objective: 3
Learning Objective: 4

Boardman Company reported the following data for the month of January:

Inventories:	1/1	1/31
Raw materials	$32,000	$31,000
Work in process	$18,000	$12,000
Finished goods	$30,000	$35,000

Additional information:	
Sales revenue	$210,000
Direct labour costs	$40,000
Manufacturing overhead costs	$70,000
Selling expenses	$25,000
Administrative expenses	$35,000

Garrison - Chapter 02

70. If raw materials costing $35,000 were purchased during January, what were the total manufacturing costs for the month?

A.
B.
C.
D.

TMC = DM used + DL + MOH
= (32,000 + 35,000 - 31,000) + 40,000 + 70,000 = $146,000

Blooms Level: Apply
Difficulty: Medium
Garrison - Chapter 02 #70
Learning Objective: 4

71. Assuming that cost of goods sold for January was $124,000, what was the net income for January?

A.
B.
C.
D.

NI = S - CGS - Selling Exp. - Admin. Exp.
= 210,000 - 124,000 - 25,000 - 35,000

Blooms Level: Apply
Difficulty: Medium
Garrison - Chapter 02 #71
Learning Objective: 3

72. Which of the following is Boardman Company's total conversion cost for January?

A.
B.
C.
D.

CC = DL + OH = 40,000 + 70,000 = $110,000

Blooms Level: Apply
Difficulty: Easy
Garrison - Chapter 02 #72
Learning Objective: 2

73. Assuming that cost of goods sold for Boardman Company for January was $140,000, what was the cost of goods manufactured for the month?

A.
B.
C.
D.

140,000 + 35,000 - 30,000 = $145,000

Blooms Level: Analyze
Difficulty: Medium
Garrison - Chapter 02 #73
Learning Objective: 3

At a sales volume of 32,000 units, CD Company's total fixed costs are $64,000 and total variable costs are $60,000. The relevant range is 30,000 to 55,000 units.

Garrison - Chapter 02

74. If CD Company sells 43,000 units, what is the total expected cost?

A.
B.
C.
D.

VC/unit = $60,000/32,000 units = $1.875/unit
Total Cost = VC + FC
= 43,000 * 1.875 + 64,000 = $144,625

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #74
Learning Objective: 5

75. If CD Company sells 50,000 units, what is the total expected cost per unit (rounded to the nearest cent)?

A.
B.
C.
D.

VC/unit = 60,000/32/000 = $1.875/unit
TC = VC + FC = 50,000 * 1.875 + 64,000 = $157,750
Expected Cost/unit = 157,750/50,000 = 3.155 = $3.16/unit

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #75
Learning Objective: 5

76. All costs incurred in a merchandising firm are considered to be period costs.

FALSE

Blooms Level: Understand
Difficulty: Easy
Garrison - Chapter 02 #76
Learning Objective: 2

77. In a manufacturing firm, depreciation is always considered a product cost for external financial reporting purposes.

FALSE

Blooms Level: Understand
Difficulty: Medium
Garrison - Chapter 02 #77
Learning Objective: 2

78. In external financial reports, factory utilities costs may be included in an asset account on the balance sheet at the end of the period.

TRUE

Blooms Level: Understand
Difficulty: Medium
Garrison - Chapter 02 #78
Learning Objective: 1

79. Advertising costs are considered product costs for external financial reports since they are incurred in order to promote specific products.

FALSE

Blooms Level: Understand
Difficulty: Medium
Garrison - Chapter 02 #79
Learning Objective: 2

80. Property taxes and insurance premiums paid on a factory building are examples of manufacturing overhead.

TRUE

Blooms Level: Remember
Difficulty: Easy
Garrison - Chapter 02 #80
Learning Objective: 1

81. Manufacturing overhead combined with direct materials is known as conversion cost.

FALSE

Blooms Level: Remember
Difficulty: Easy
Garrison - Chapter 02 #81
Learning Objective: 1
Learning Objective: 6

82. If the ending inventory of finished goods is understated, net income will be overstated.

FALSE

Blooms Level: Understand
Difficulty: Medium
Garrison - Chapter 02 #82
Learning Objective: 3

83. In a manufacturing company, goods available for sale equals the sum of the cost of goods manufactured and the beginning finished goods inventory.

TRUE

Blooms Level: Understand
Difficulty: Medium
Garrison - Chapter 02 #83
Learning Objective: 3

84. Variable costs are costs whose per unit costs vary as the activity level rises and falls.

FALSE

Blooms Level: Remember
Difficulty: Easy

Garrison - Chapter 02 #84
Learning Objective: 5

85. On a per unit basis, a fixed cost varies inversely with the level of activity.

TRUE

Blooms Level: Remember
Difficulty: Easy
Garrison - Chapter 02 #85
Learning Objective: 5

86. The following would typically be considered indirect costs of manufacturing a particular Boeing 747 to be delivered to Singapore Airlines: electricity to run production equipment, the factory manager's salary, and the cost of the General Electric jet engines installed on the aircraft.

FALSE

Blooms Level: Apply
Difficulty: Easy
Garrison - Chapter 02 #86
Learning Objective: 6

87. The following costs should be considered direct costs of providing delivery room services to a particular mother and her baby: the costs of drugs administered in the operating room, the attending physician's fees, and a portion of the liability insurance carried by the hospital to cover the delivery room.

FALSE

Blooms Level: Apply
Difficulty: Medium
Garrison - Chapter 02 #87
Learning Objective: 6

88. The following costs should be considered by a law firm to be indirect costs of defending a particular client in court: rent on the law firm's offices, the law firm's receptionist's wages, the costs of heating the law firm's offices, and the depreciation on the personal computer in the office of the attorney who has been assigned the client.

TRUE

Blooms Level: Apply
Difficulty: Hard
Garrison - Chapter 02 #88
Learning Objective: 6

89. A cost that differs from one month to another is known as a differential cost.

FALSE

Blooms Level: Remember
Difficulty: Easy
Garrison - Chapter 02 #89
Learning Objective: 7

90. Some companies classify labour fringe benefits for direct labour workers as part of the direct labour cost and some classify these costs as manufacturing overhead.

TRUE

Blooms Level: Remember
Difficulty: Easy
Garrison - Chapter 02 #90
Learning Objective: 1

91. Stony Electronics Corporation manufactures a portable radio designed for mounting on the wall of the bathroom. The following list represents some of the different types of costs incurred in the manufacture of these radios:

1) The plant manager's salary.
2) The cost of heating the plant.
3) The cost of heating executive offices.
4) The cost of printed circuit boards used in the radios.
5) Salaries and commissions of company salespersons.
6) Depreciation on office equipment used in the executive offices.
7) Depreciation on production equipment used in the plant.
8) Wages of janitorial personnel who clean the plant.
9) The cost of insurance on the plant building.
10) The cost of electricity to light the plant.
11) The cost of electricity to power plant equipment.
12) The cost of maintaining and repairing equipment in the plant.
13) The cost of printing promotional materials for trade shows.
14) The cost of solder used in assembling the radios.
15) The cost of telephone service for the executive offices.

Required:

Classify each of the items above as product (inventoriable) cost or period (noninventoriable) costs for the purpose of preparing external financial statements.

1) Product.
2) Product.
3) Period.
4) Product.
5) Period.
6) Period.
7) Product.
8) Product.
9) Product.
10) Product.

11) Product.
12) Product.
13) Period.
14) Product.
15) Period.

Blooms Level: Understand
Difficulty: Easy
Garrison - Chapter 02 #91
Learning Objective: 2

92. Bill Pope has developed a new device that is so exciting he is considering quitting his job in order to produce and market it on a large-scale basis. Bill will rent a garage for $300 per month for production purposes. Utilities will cost $40 per month. Bill has already taken an industrial design course at the local community college to help prepare for this venture. The course cost $300. Bill will rent production equipment at a monthly cost of $800. He estimates the material cost per unit will be $5, and the labour cost will be $3. He will hire workers and spend his time promoting the product. To do this, he will quit his job, which pays $3,000 per month. Advertising and promotion will cost $900 per month.

Required:

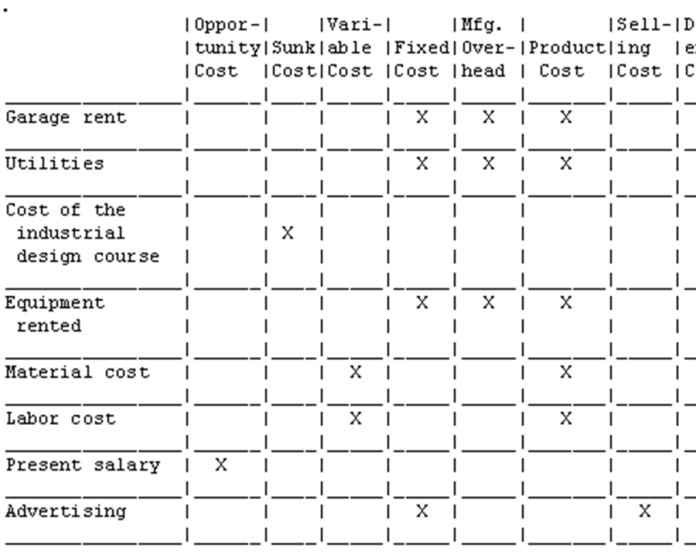
Complete the chart below by placing an "X" under each heading that helps to identify the cost involved. You can place an "X" under more than one heading for a single cost: for example, a cost may be a sunk cost, an overhead cost, and a product cost; you would place an "X" under each of these headings opposite the cost.

*** Between the alternatives of going into business to make the device or not going into business to make the device**. **See column heading "Differential Cost"**.

	Oppor-tunity Cost	Sunk Cost	Vari-able Cost	Fixed Cost	Mfg. Over-head	Product Cost	Sell-ing Cost	D e C
Garage rent								
Utilities								
Cost of the industrial design course								
Equipment rented								
Material cost								
Labor cost								
Present salary								
Advertising								

* Between the alternatives of going into business to make the device or not going into business to

make the device.



	Opportunity Cost	Sunk Cost	Variable Cost	Fixed Cost	Mfg. Overhead	Product Cost	Selling Cost	De C
Garage rent				X	X	X		
Utilities				X	X	X		
Cost of the industrial design course		X						
Equipment rented				X	X	X		
Material cost			X			X		
Labor cost			X			X		
Present salary	X							
Advertising				X			X	

Blooms Level: Apply
Difficulty: Medium
Garrison - Chapter 02 #92
Learning Objective: 4

93.

Logan Products, a small manufacturer, has submitted the items below concerning last year's operations. The president's secretary, trying to be helpful, has alphabetized the list.

Administrative salaries	$2,400
Advertising expense	$1,200
Depreciation—factory building	$800
Depreciation—factory equipment	$1,600
Depreciation—office equipment	$180
Direct labour cost	$21,900
Raw materials inventory, beginning	$2,100
Raw materials inventory, ending	$3,200
Finished goods inventory, beginning	$46,980
Finished goods inventory, ending	$44,410
General liability insurance expense	$240
Indirect labour cost	$11,800
Insurance on factory	$1,400
Purchases of raw materials	$14,600
Repairs and maintenance of factory	$900
Sales salaries	$2,000
Taxes on factory	$450
Travel and entertainment expense	$1,410
Work-in-process inventory, beginning	$1,670
Work-in-process inventory, ending	$1,110

Required:

a.) Prepare a schedule of cost of goods manufactured in good form for the year.
b.) Determine the cost of goods sold for the year.

a.)

LOGAN COMPANY
Schedule of Cost of Goods Manufactured

Raw materials used:		
Beginning inventory	$ 2,100	
Purchases	14,600	
Available	16,700	
Less ending inventory	3,200	$
Direct labor		
Manufacturing overhead:		
Depreciation -- factory building	800	
Depreciation -- factory equipment	1,600	
Indirect labor cost	11,800	
Insurance on factory	1,400	
Repairs and maintenance	900	
Taxes on factory	450	
Total manufacturing cost		
Add work in process inventory, beginning		
Less work in process inventory, ending		
Cost of goods manufactured		$
		=

b.)

Finished goods inventory, beginning	$46,980
Cost of goods manufactured (above)	52,910
Available for sale	99,890
Less finished goods inventory, ending	44,410
Cost of goods sold	$55,480

Blooms Level: Apply
Difficulty: Hard
Garrison - Chapter 02 #93
Learning Objective: 3
Learning Objective: 4

94.

Laco Company acquired its factory building about 20 years ago. For a number of years, the company has rented out a small, unused part of the building. The renter's lease will expire soon. Rather than renewing the lease, Laco Company is considering using the space itself to manufacture a new product. Under this option, the unused space will continue to be depreciated on a straight-line basis, as in past years.

Direct materials and direct labour cost for the new product is $50 per unit. In order to store finished units of the new product, the company will rent a small warehouse nearby. The rental cost is $2,000 per month. It will cost the company an additional $4,000 each month to advertise the new product. A new production supervisor, hired to oversee production of the new product, will be paid $3,000 per month. The company will pay a sales commission of $10 for each unit of product that is sold.

Required:

Complete the chart below by placing an "X" under each column heading that helps to identify the costs listed to the left. You can place an "X" under more than one heading for a single cost: for example, a cost may be a product cost, an opportunity cost, and a sunk cost; you would place an "X" under each of these headings on the answer sheet opposite the cost.

	Oppor-tunity Cost	Sunk Cost	Vari-able Cost	Fixed Cost	Product Cost	Selling & Admin Cost	Di en Co
Rent on unused factory space							
Depreciation on the factory space							
Direct material and direct labor							
Rental cost of the small warehouse							
Advertising cost							
Production super-visor's salary							
Sales commissions							

***Between the alternatives of (1) renting the space out again or (2) using the space to produce the new product. See column heading "Differential Cost".**

	Opportunity Cost	Sunk Cost	Variable Cost	Fixed Cost	Product Cost	Selling & Admin Cost	Differential Cost
Rent on unused factory space	X						
Depreciation on the factory space		X		X	X		
Direct material and direct labor			X		X		
Rental cost of the small warehouse				X		X	
Advertising cost				X		X	
Production supervisor's salary				X	X		
Sales commissions			X			X	

Blooms Level: Analyze
Difficulty: Medium
Garrison - Chapter 02 #94
Learning Objective: 2
Learning Objective: 7

95. The accounts for a manufacturing company for an accounting period are listed below. Find the unknown amounts indicated by question marks.

Sales	$39,000
Cost of goods sold	?
Purchases of direct materials	$11,000
Direct labour	$5,000
Finished goods inventory, beginning	$5,000
Work in process, beginning	$800
Work in process, ending	$3,000
Gross margin	$11,700
Finished goods inventory, ending	?
Accounts payable, beginning	$4,000
Accounts payable, ending	$2,800
Direct materials inventory, beginning	$1,000
Direct materials inventory, ending	$3,000
Indirect labour	$2,000
Indirect materials used	$4,000
Utilities expense, factory	$3,000
Depreciation on factory equipment	$7,000

Cost of goods sold = $39,000 - $11,700 = $27,300.
Direct materials used = $1,000 + $11,000 - $3,000 = $9,000.
Cost of goods manufactured = $9,000 + $5,000 + ($2,000 + $4,000 + $3,000 + $7,000) + $800 - $3,000 = $27,800.
Finished goods inventory, ending = $5,000 + $27,800 - $27,300 = $5,500.

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #95
Learning Objective: 3
Learning Objective: 4

96. Use the following information to determine the gross margin for Pacific States Manufacturing for the year just ended (all amounts are in thousands of dollars):

Sales	$31,800
Purchases of direct materials	$7,000
Direct labour	$5,000
Work-in-process inventory, 1/1	$800
Work-in-process inventory, 12/31	$3,000
Finished goods inventory, 1/1	$4,000
Finished goods inventory, 12/31	$5,300
Accounts payable, 1/1	$1,700
Accounts payable, 12/31	$1,500
Direct materials inventory, 1/1	$6,000
Direct materials inventory, 12/31	$1,000
Indirect labour	$600
Indirect materials used	$500
Utilities factory	$1,900
Depreciation on factory equipment	$3,500

Direct materials used = $6,000 + $7,000 - $1,000 = $12,000.
Cost of goods manufactured = $12,000 + $5,000 + ($600 + $500 + $1,900 + $3,500) + $800 - $3,000 = $21,300.
Cost of goods sold = $4,000 + $21,300 - $5,300 = $20,000.
Gross margin = $31,800 - $20,000 = $11,800.

Blooms Level: Apply
Difficulty: Hard
Garrison - Chapter 02 #96
Learning Objective: 3
Learning Objective: 4

97. The following information is from Marchant Manufacturing Co. for September:

Direct materials used in production	$95,000
Direct labour	$67,000
Total manufacturing cost	$234,000
Raw materials inventory, Sept. 1	$24,000
Work-in-process inventory, Sept. 1	$6,000
Finished goods inventory, Sept. 1	$101,000
Purchases of raw materials	$102,000
Cost of goods manufactured	$233,000
Administrative expense	$41,000
Selling expense	$56,000
Sales	$344,000
Gross margin	$127,000
Net income	$30,000

Required:

(a.) Compute the cost of goods sold.
(b.) Compute the balance in finished goods inventory at September 30.
(c.) Compute the balance in work-in-process inventory at September 30.
(d.) Compute the balance in raw materials inventory at September 30.
(e.) Compute the total manufacturing overhead.

(Hint: The easiest method of solving this problem is to sketch out the income statement and the schedule of cost of goods manufactured, enter the given amounts, and then enter the unknowns as plug figures.)

MARCHANT MANUFACTURING
Schedule of Cost of Goods Manufactured

Direct materials used:	
Inventory, Sept. 1	$ 24,000
Purchases	102,000
	126,000
Inventory, Sept. 30 (d) – plug	31,000
Direct materials used – given	95,000
Direct labor	67,000
Manufacturing overhead (e) – plug	72,000
Total manufacturing cost – given	234,000
Inventory of work in process, Sept 1	6,000
	240,000
Inventory of work in process, Sept 30 (c) – plug	7,000
Cost of goods manufactured – given	$233,000

MARCHANT MANUFACTURING
Income Statement

Sales		$34
Cost of goods sold:		
Finished goods, Sept 1	$101,000	
Cost of goods manufactured – above	233,000	
Available for sale		33
Finished goods, Sept 30 (b) – plug		11
Cost of goods sold (a) – plug		21
Gross margin – given		12
Operating expenses:		
Administrative expenses	41,000	
Selling expenses	56,000	9
Net income – given		$ 3

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #97
Learning Objective: 3
Learning Objective: 4

98. The following data (in thousands of dollars) have been taken from the accounting records of Larsen Corporation for the year just ended:

Sales	$860
Purchases of raw materials	$150
Direct labour	$110
Manufacturing overhead	$210
Administrative expenses	$130
Selling expenses	$180
Raw materials inventory, beginning	$40
Raw materials inventory, ending	$80
Work-in-process inventory, beginning	$20
Work-in-process inventory, ending	$80
Finished goods inventory, beginning	$80
Finished goods inventory, ending	$150

Required:

(a.) Prepare a schedule of cost of goods manufactured in good form.
(b.) Compute the cost of goods sold.
(c.) Using data from your answers above as needed, prepare an income statement in good form.

(a.) Schedule of cost of goods manufactured

Direct materials:		
Raw materials inventory, beginning	$40	
Add: Purchases of raw materials	150	
Raw materials available for use	$190	
Deduct: Raw materials inventory, ending	80	
Raw materials used in production		$1
Direct labour		1
Manufacturing overhead		2
Total manufacturing cost		$4
Add: Work-in-process inventory, beginning		
		$4
Deduct: Work-in-process inventory, ending		
Cost of goods manufactured		**$3**

(b.) Computation of cost of goods sold

Finished goods inventory, beginning	$80
Add: Cost of goods manufactured	$370
Goods available for sale	$450
Deduct: Finished goods inventory, ending	$150
Cost of goods sold	$300

(c.) Income statement

Sales		$860
Deduct: Cost of goods sold		300
Gross margin		$560
Operating Expenses:		
Administrative expenses	$130	
Selling expenses	$180	210
Net income		$250

Blooms Level: Apply
Difficulty: Medium
Garrison - Chapter 02 #98
Learning Objective: 3
Learning Objective: 4

99. The following data (in thousands of dollars) have been taken from the accounting records of Larner Corporation for the year just completed:

Sales	$870
Purchases of raw materials	$110
Direct labour	$130
Manufacturing overhead	$200
Administrative expenses	$160
Selling expenses	$140
Raw materials inventory, beginning	$30
Raw materials inventory, ending	$60
Work-in-process inventory, beginning	$50
Work-in-process inventory, ending	$10
Finished goods inventory, beginning	$150
Finished goods inventory, ending	$140

Required:

(a.) Prepare a schedule of cost of goods manufactured in good form.
(b.) Compute the cost of goods sold.
(c.) Using data from your answers above as needed, prepare an income statement in good form.

(a.) Schedule of cost of goods manufactured

Direct materials:		
Raw materials inventory, beginning	$30	
Add: Purchases of raw materials	110	
Raw materials available for use	$140	
Deduct: Raw materials inventory, ending	60	
Raw materials used in production		$
Direct labour		1
Manufacturing overhead		2
Total manufacturing cost		$4
Add: Work-in-process inventory, beginning		
		$4
Deduct: Work-in-process inventory, ending		
Cost of goods manufactured		$4

(b.) Computation of cost of goods sold

Finished goods inventory, beginning	$150
Add: Cost of goods manufactured	$450
Goods available for sale	$600
Deduct: Finished goods inventory, ending	$140
Cost of goods sold	$460

(c.) Income statement

Sales		$870
Deduct: Cost of goods sold		460
Gross margin		$410
Operating Expenses:		
Administrative expenses	$160	
Deduct: Selling expenses	140	200
Net income		$110

Blooms Level: Apply
Difficulty: Medium
Garrison - Chapter 02 #99
Learning Objective: 3
Learning Objective: 4

100. The following data (in thousands of dollars) have been taken from the accounting records of Larmont Corporation for the year just completed:

Sales	$990
Purchases of raw materials*	$100
Direct labour	$240
Indirect labour	$100
Indirect Material	$10
Other Factory Overhead	$100
Administrative expenses	$100
Selling expenses	$140
Raw materials inventory, beginning*	$20
Raw materials inventory, ending*	$80
Work-in-process inventory, beginning	$50
Work-in-process inventory, ending	$30
Finished goods inventory, beginning	$160
Finished goods inventory, ending	$150

*Raw Materials consist of both direct and indirect materials.

Required:

(a.) Prepare a schedule of cost of goods manufactured in good form.
(b.) Compute the cost of goods sold.
(c.) Using data from your answers above as needed, prepare an income statement in good form.

(a.) Schedule of cost of goods manufactured

Note: For calculation of Direct Materials used you must remember to take out the portion that is indirect material.

Direct materials:		
Raw materials inventory, beginning	$20	
Add: Purchases of raw materials	100	
Raw materials available for use	$120	
Deduct: Raw materials inventory, ending	80	
Raw materials used in production	$40	
Less: Indirect Material	10	
Direct Material Used		$
Direct labour		2
Manufacturing overhead:		
Indirect Labour	$100	
Indirect Material	10	
Other Manufacturing Overhead	100	
Total Manufacturing Overhead		2
Total manufacturing cost		$4
Add: Work-in-process inventory, beginning		
		$5
Deduct: Work-in-process inventory, ending		
Cost of goods manufactured		$5

(b.) Computation of cost of goods sold

Finished goods inventory, beginning	$160
Add: Cost of goods manufactured	$500
Goods available for sale	$660
Deduct: Finished goods inventory, ending	$150
Cost of goods sold	$510

(c.) Income statement

Sales		$990
Deduct: Cost of goods sold		510
Gross margin		$480
Operating Expenses:		
Administrative expenses	$100	
Selling expenses	$140	240
Net income		$240

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #100
Learning Objective: 3
Learning Objective: 4

101. The following costs relate to one month's activity in Martin Company:

Indirect materials	$300
Rent on factory building	$500
Maintenance of equipment	$50
Direct material used	$1,200
Utilities on factory	$250
Direct labour	$1,500
Selling expense	$500
Administrative expense	$300
Work-in-process inventory, beginning	$600
Work-in-process inventory, ending	$800
Finished goods inventory, beginning	$500
Finished goods inventory, ending	$250

Required:

(a.) Prepare a schedule of cost of goods manufactured in good form.
(b.) Determine the cost of goods sold.

(a.) Direct materials		$1,200
Direct labor		1,500
Manufacturing overhead:		
Indirect materials	$300	
Rent	500	
Maintenance	50	
Utilities	250	1,100
Total manufacturing costs		3,800
Add: WIP, beginning		600
		4,400
Deduct: WIP, ending		800
Cost of goods manufactured		$3,600
(b.) Finished goods, beginning		$ 500
Add: Cost of goods manufactured		3,600
Goods available for sale		4,100
Finished goods, ending		250
Cost of goods sold		$3,850

Blooms Level: Apply
Difficulty: Medium
Garrison - Chapter 02 #101
Learning Objective: 3
Learning Objective: 4

102. Brooke Foster is employed by Wong Laboratories, Inc., and is directly involved in preparing and packaging the company's leading sleep aid, RestWell. Brooke's basic wage rate is $15 per hour, and she is paid time-and-a-half for any work in excess of 40 hours per week. Additionally, Wong Laboratories provides a fringe benefit package that costs the company $5 for each hour of employee time (regular or overtime). During a recent week, Brooke worked 49 hours but was idle for 3 hours due to materials shortages.

Required:

(a.) Assume that Wong Laboratories treats all fringe benefits as part of manufacturing overhead. Compute Brooke's total wages and fringe benefits for the week and indicate how much of her wages and fringe benefits for the week would be allocated to direct labour and how much would be allocated to manufacturing overhead.
(b.) Assume that Wong Laboratories treats the part of fringe benefits related to direct labour as a component of direct labour cost. Compute Brooke's total wages and fringe benefits for the week and indicate how much of her wages and fringe benefits would be allocated to direct labour and how much would be allocated to manufacturing overhead.

(a.)

Regular time:	40 hours x $15	$ 600.00
Overtime:	9 hours x $22.50	202.50
Fringe benefits:	49 hours x $5	245.00
Total wages and fringe benefits		$ 1,047.50
Allocation of wages and fringe benefits:		
Direct labour:	46 hrs. x $15	$ 690.00
Manufacturing overhead:		
Idle time:	3 hrs. x $15	45.00
Overtime premium:	9 hrs. x $7.50	67.50
Fringe benefit:	49 hrs. x $5	245.00
Total wages and fringe benefits		$ 1,047.50

(b.) Total wages and fringe benefits would be $1,047.50 as shown in (a.) above.
Allocation of wages and fringe benefits:

Direct labour:		
Wage cost:	46 hrs. x $15	$ 690.00
Fringe benefit:	46 hrs. x $5	230.00
Total direct labour		$ 920.00
Manufacturing overhead:		
Idle time:	3 hrs. x $15	$ 45.00
Overtime premium:	9 x $7.50	67.50
Fringe benefits: .	3 hrs. x $5	15.00
Total manufacturing overhead		$ 127.50
Total wages and fringe benefits		$ 1,047.50

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #102
Learning Objective: 1

103.

Fred Adams is employed by the Cedar Manufacturing Company on their assembly line. Fred is paid $15 per hour for regular time, and time-and-a-half for all work in excess of 40 hours per week. During the two weeks of the pay period just completed, Fred reported the following:

Week 1:	
Idle time due to machine breakdowns	3 hours
Idle time due to material shortages	2 hours
Overtime	None
Week 2:	
Idle time	None
Overtime	9 hours

Required:

Compute Fred's wages for each week and allocate Fred's wages for each week between direct labour cost and manufacturing overhead.

Week 1:
Fred's wages equal 40 hours x $15 per hour, or $600.
Fred's wages would be allocated between direct labour and manufacturing overhead as follows:

Direct labour cost: 35 hours x $15	$525.00
Manufacturing overhead: 5 hours x $15	75.00
Total	$600.00

Week 2:

Fred's wages equal:	
40 hours x $15 per hour	$600.00
9 hours x $22.50 per hour	202.50
Total wages for Week 2	$802.50

Fred's wages would be allocated between direct labour and manufacturing overhead as follows:

Direct labour cost: 49 hours x $15 per hour	$735.00
Manufacturing overhead: 9 hours x $7.50	67.50
Total	$802.50

Blooms Level: Analyze
Difficulty: Medium
Garrison - Chapter 02 #103
Learning Objective: 1

104. The following inventory and cost data for the just completed year are taken from the accounting records of Sankar Company:

Inventories	
Increase in raw materials	$4,000
Increase in work in process	30,000
Decrease in finished goods	90,000
Costs incurred	
Advertising expense	$200,000
Direct labour cost	180,000
Purchases of raw materials	264,000
Rent, factory building	60,000
Indirect factory labour	112,600
Sales commissions	70,000
Utilities, factory	18,000
Maintenance, factory equipment	48,000
Supplies, factory	1,400
Depreciation, office equipment	16,000
Depreciation, factory equipment	80,000

Required:

(a.) Calculate the cost of goods manufactured.
(b.) Calculate the cost of goods sold

(a.)

Direct material used:		
Purchases of raw materials	$264,000	
Deduct: Increase in raw materials	4,000	$260,000
Direct labour cost		180,000
Manufacturing overhead cost incurred:		
Rent, factory building	$60,000	
Indirect factory labour	112,600	
Utilities, factory	18,000	
Maintenance, factory equipment	48,000	
Supplies, factory	1,400	
Depreciation, factory equipment	80,000	320,000
Total manufacturing cost added		$760,000
Deduct: Increase in work in process inventory		30,000
Cost of goods manufactured		$730,000

(b.)

Cost of goods manufactured	$730,000
Add: Decrease in finished goods inventory	90,000
Cost of goods sold	$820,000

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #104
Learning Objective: 3
Learning Objective: 4

105. The following selected account balances for the year ended December 31 are provided for Amita Company:

Purchases of raw materials	$260,000
Direct labour	65,000
Maintenance, factory	74,000
Selling and administrative salaries	179,000
Depreciation, factory equipment	110,000
Cleaning supplies	6,000
Sales commissions	350,000
Utilities, factory building	52,000
Rent, factory	90,000
Depreciation, sales equipment	80,000
Insurance, factory equipment	8,000
Advertising expense	300,000

In addition, you have the following information about inventories during the year:

Increase in raw materials	$10,000	
Decrease in work in process	$15,000	
Beginning finished goods	$30,000	(1,000 units)
Ending finished goods	$?	(3,400 units)
Equivalent units produced	$?	(27,600 unit

Assume the company uses FIFO.

Required:

(a.) Calculate the cost of the 27,600 equivalent units that were produced during the year.
(b.) Calculate the cost of the ending finished goods inventory.
(c.) Calculate the cost of goods sold.

(a.) This is the same as calculating the cost of goods manufactured during the year.

Direct material used:		
Purchases of raw materials	$260,000	
Add: Decrease in raw materials	10,000	$270,000
Direct labour cost		65,000
Manufacturing overhead cost incurred:		
Maintenance, factory	$74,000	
Depreciation, factory equipment	110,000	
Cleaning supplies, factory	6,000	
Utilities, factory	52,000	
Rent, factory building	90,000	
Insurance, factory equipment	8,000	340,000
Total manufacturing cost added		$675,000
Add: Increase in work in process inventory		15,000
Cost of goods manufactured		$690,000

(b.) Because the company uses FIFO, the entire 3,400 units in ending finished goods inventory are from the 27,600 equivalent units produced during the year. The average manufacturing cost per unit is $25 per unit, that is, $690,000/27,600. The cost of the ending finished goods inventory is $85,000, that is, 3,400 x $25.

(c.)

Cost of goods manufactured	$690,000	
Deduct: Increase in finished goods inventory	55,000	(N
Cost of goods sold	$635,000	(N
Note 1: $85,000 - $30,000		
Note 2:		
Units sold = 25,200 (1,000 + 27,600 – 3,400)		
Cost: 1,000 from beginning finished goods inventory	$30,000	
24,200 from units completed during the year:		
24,200 x $25	605,000	
Total	$635,000	

Blooms Level: Analyze
Difficulty: Hard
Garrison - Chapter 02 #105
Learning Objective: 3
Learning Objective: 4

106.

Mary Tappin, an assistant Vice President at Galaxy Toys, was disturbed to find on her desk a memo from her boss, Gary Resnick, to the controller of the company. The memo appears below:

Galaxy Toys Internal Memo

Sept 15

To: Harry Wilson, Controller
Fm: Gary Resnick, Executive Vice President

As you know, we won't start recording many sales until October when stores start accepting shipments from us for the Christmas season. Meanwhile, we are producing flat-out and are building up our finished goods inventories so that we will be ready to ship next month. Unfortunately, we are in a bind right now since it looks like the net income for the quarter ending on Sept 30 is going to be pretty awful. This may get us in trouble with the bank since they always review the quarterly financial reports and may call in our loan if they don't like what they see. Is there any possibility that we could change the classification of some of our period costs to product costs--such as the rent on the finished goods warehouse? Please let me know as soon as possible. The President is pushing for results.

Mary didn't know what to do about the memo. It wasn't intended for her, but its contents were alarming.

Required:

a. Why has Gary Resnick suggested reclassifying some period costs as product costs?
b. Why do you think Mary was alarmed about the memo?

a. Gary Resnick has suggested reclassifying some period costs as product costs since the company is building up large finished goods inventories in anticipation of the Christmas selling season. Product costs are inventoried and flow through to the income statement only when products are sold. Period expenses, in contrast, flow directly to

the income statement. Since most of the finished goods inventories will be held over to the next quarter, reclassifying period costs as product costs will effectively defer recognition of expenses until next quarter and therefore will improve the current quarter's net operating income.

b. Mary Tappin is probably alarmed by both the economic situation the company finds itself in and by the apparent willingness of top management to bend the rules. Improperly reclassifying costs is an indication that top management does not feel like it has to play by the rules or be honest in its dealings with the bank. With such loose ethical standards, Mary may wonder what other things they are doing that are unethical and/or illegal.

Blooms Level: Evaluate
Difficulty: Hard
Garrison - Chapter 02 #106
Learning Objective: 2
Learning Objective: 3

107. For the majority of manufacturing companies, the distinction between period costs and product costs is essential because of its effect on net income for a period. Failure to make the distinction can affect the cost of goods manufactured and cost of goods sold.

Required:

Would the need to make the distinction between product costs and period costs still be essential if a manufacturing company were to adopt the just-in-time technique in the lean thinking model? Explain.

The need for the distinction would not be essential in terms of its impact on net income. There will literally be no inventories of any kind (raw materials, work-in-process, and finished goods). Cost of goods manufactured will equal all the manufacturing costs incurred (nothing to be held back as product costs or assets in either raw materials inventory or work-in-process inventory). Cost of goods sold will also equal cost of goods manufactured (again because nothing will be held back as product cost in finished goods inventory). All manufacturing costs will be released to the income statement and therefore, in essence, treated as period costs.

Blooms Level: Evaluate
Difficulty: Hard
Garrison - Chapter 02 #107
Learning Objective: 2
Learning Objective: 3

108. Manufacturing overhead is one of the three elements of manufacturing costs. Unlike direct materials and direct labour costs, assigning manufacturing overhead cost to products can be a very difficult task.

Required:

Do you agree with this aspect of manufacturing overhead? Why or why not?

The response is an emphatic yes (note: this response may not be so obvious to many students at this stage of the course). Manufacturing overhead costs are indirect in the sense that they cannot be conveniently traced to particular products. Some of these costs are consumed in very small amounts and therefore tracing is not cost-effective. Others may be common costs because they are consumed jointly by several products. An example is the straight-line depreciation cost of factory equipment used to manufacture multiple products. It is almost impossible to trace such cost to individual products.

Manufacturing overhead costs are, therefore, assigned to products only by using some allocation base, such as some aspects of direct labour (for example, direct labour hours and direct labour cost). Choosing an appropriate allocation is not easy since there are usually several competing ones. Overhead application is covered in more detail in chapter 3. It should be noted that recent advances in technology and managerial accounting techniques are making it possible to conveniently (and economically) trace some of the so-called overhead costs to products. Some of these advances (for example, activity-based costing and bar coding) will be covered in later topics.

Blooms Level: Create
Difficulty: Hard
Garrison - Chapter 02 #108
Learning Objective: 1

109. Assume, as discussed in the chapter, actual manufacturing costs (that is, direct material used, direct labour, and manufacturing overhead) are charged to products in calculating the cost of goods manufactured.

Required:

As a manager, explain some of the potential problems such a system may give you.

One major potential problem is making decisions which cannot wait for actual manufacturing costs to be determined later. Typical decisions of this type include pricing and bidding on contracts. Actual manufacturing cost data are not very useful for such decisions because they are not timely.
A second major potential problem is unique to actual manufacturing overhead costs data: some of the costs tend to fluctuate from season to season, for example, heating costs. In such cases, actual manufacturing overhead costs charged to the same product will vary accordingly from season to season.
Another major potential problem unique to charging actual manufacturing overhead cost to products is the fact that the cost per unit allocated to each product may vary with activity levels such as units of production. Some of manufacturing overhead costs are fixed in total and therefore the average cost per unit that is allocated to particular products will change depending on the units produced.
In practice, companies do not allocate actual manufacturing overhead to products. Instead, they use an allocation rate set at the beginning of the period (based on estimated costs and activity levels) to charge manufacturing overhead costs to products. This technique will be introduced in Chapter 3. Subsequent chapters will introduce even more refinements where only pre-set estimates for both the cost and the quantity of all inputs (including direct material and direct labour) are used.

Blooms Level: Create
Blooms Level: Evaluate
Difficulty: Hard
Garrison - Chapter 02 #109

Chapter 02 Cost Terms, Concepts, and Classifications
Summary