

**True / False Questions**

1. A marketing consulting firm would most likely use process costing.

True False

2. When job order costing is used, costs are accumulated on a job cost sheet.

True False

3. Process costing averages the total cost of the process over the number of units produced.

True False

4. Source documents are used to assign all manufacturing costs to jobs.

True False

5. A materials requisition form is used to authorize the purchase of direct materials.

True False

6. A job cost sheet will record the direct materials and direct labor used by the job but not the manufacturing overhead applied.

True False

7. A predetermined overhead rate is calculated by dividing estimated total manufacturing overhead cost by estimated total cost driver.

True False

8. Indirect materials are recorded directly on the job cost sheet.

True False

9. When manufacturing overhead is applied to a job, a credit is made to the Work in Process account.

True False

10. The total manufacturing cost for a job is based on the amount of applied overhead using the predetermined overhead rate.

True False

11. If there is a debit balance in the Manufacturing Overhead account at the end of the period, overhead was underapplied.

True False

12. The most common method for disposing of the balance in Manufacturing Overhead is to make a direct adjustment to Cost of Goods Sold.

True False

13. To eliminate underapplied overhead at the end of the year, Manufacturing Overhead would be debited and Cost of Goods Sold would be credited.

True False

14. The total amount of cost assigned to jobs that were completed during the year is the cost of goods sold.

True False

15. In a service firm, the cost associated with time that employees spend on training, paperwork, and supervision is considered part of manufacturing overhead.

True False

### Multiple Choice Questions

16. Which of the following types of firms would most likely use process costing?

- A. Superior Auto Body & Repair
- B. Crammond Custom Cabinets
- C. Sunshine Soft Drinks
- D. Jackson & Taylor Tax Service

17. Which of the following types of firms would most likely use job order costing?

- A. Happy-Oh Cereal Company
- B. Huey, Lewey & Dewie, Attorneys
- C. SoooSweet Beverage
- D. C-5 Cement Company

18. Which of the following is a characteristic of a manufacturing environment that would use job order costing?

- A. Standardized production process
- B. Continuous manufacturing
- C. Homogenous products
- D. Differentiated products

19. Which of the following statements is correct?

- A. Companies must choose to use either job order costing or process costing; there is no overlap between the two systems.
- B. Companies always use job order costing unless it is prohibitively expensive.
- C. Companies always use process costing unless it is prohibitively expensive.
- D. Companies often provide products and services that have both common and unique characteristics, so they may use a blend of job order and process costing.

20. The cost of materials used on a specific job is first captured on which source document?

- A. Cost driver sheet
- B. Materials requisition form
- C. Labor time ticket
- D. Process cost sheet

21. The source document that captures how much time a worker has spent on various jobs during the period is a:

- A. cost driver sheet.
- B. materials requisition form.
- C. labor time ticket.
- D. job cost sheet.

22. All the costs assigned to an individual job are summarized on a:
- A. cost driver sheet.
  - B. job cost sheet.
  - C. materials requisition form.
  - D. labor time ticket.
23. A predetermined overhead rate is calculated by dividing:
- A. actual manufacturing overhead cost by estimated total cost driver.
  - B. estimated total cost driver by estimated manufacturing overhead cost.
  - C. estimated manufacturing overhead cost by actual total cost driver.
  - D. estimated manufacturing overhead cost by estimated total cost driver.
24. Manufacturing overhead is applied to each job using which formula?
- A. Predetermined overhead rate  $\times$  actual value of the cost driver for the job
  - B. Predetermined overhead rate  $\times$  estimated value of the cost driver for the job
  - C. Actual overhead rate  $\times$  estimated value of the cost driver for the job
  - D. Predetermined overhead rate/actual value of the cost driver for the job
25. Manufacturing overhead was estimated to be \$400,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$415,000, actual labor hours were 21,000. The predetermined manufacturing overhead rate per direct labor hour would be:
- A. \$20.00.
  - B. \$0.05.
  - C. \$20.75.
  - D. \$19.05.

26. Manufacturing overhead was estimated to be \$400,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$415,000, actual labor hours were 21,000. The amount of manufacturing overhead applied to production would be:

- A. \$400,000.
- B. \$415,000.
- C. \$420,000.
- D. \$435,750.

27. Manufacturing overhead was estimated to be \$200,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$215,000, and actual labor hours were 21,000. The predetermined overhead rate per direct labor hour would be:

- A. \$10.00.
- B. \$1.05.
- C. \$10.75.
- D. \$10.24.

28. Manufacturing overhead was estimated to be \$200,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$215,000, and actual labor hours were 21,000. The amount of manufacturing overhead applied to production would be:

- A. \$200,000.
- B. \$215,000.
- C. \$210,000.
- D. \$225,750.

29. Manufacturing overhead was estimated to be \$500,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$450,000, and actual direct labor hours were 19,000. The predetermined overhead rate per direct labor hour would be:

- A. \$22.50.
- B. \$25.00.
- C. \$23.68.
- D. \$26.32.

30. Manufacturing overhead was estimated to be \$500,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$450,000, and actual direct labor hours were 19,000. The amount of manufacturing overhead applied to production would be:

- A. \$500,000.
- B. \$450,000.
- C. \$427,500.
- D. \$475,000.

31. Kilt Company had the following information for the year:

Direct materials used	\$110,000
Direct labor incurred (5,000 hours)	\$150,000
Actual manufacturing overhead incurred	\$166,000

Kilt Company used a predetermined overhead rate of \$42.00 per direct labor hour for the year and estimated that direct labor hours would total 5,500 hours. Assume the only inventory balance is an ending Work in Process balance of \$17,000. How much overhead was applied during the year?

- A. \$231,000
- B. \$150,000
- C. \$166,000
- D. \$210,000

32. Sawyer Company had the following information for the year:

Direct materials used	\$190,000
Direct labor incurred (7,000 hours)	\$245,000
Actual manufacturing overhead incurred	\$273,000

Sawyer Company used a predetermined overhead rate using estimated overhead of \$320,000 and 8,000 estimated direct labor hours. Assume the only inventory balance is an ending Finished Goods balance of \$9,000. How much overhead was applied during the year?

- A. \$245,000
- B. \$273,000
- C. \$280,000
- D. \$320,000

33. Jackson Company had the following information for the year:

Direct materials used	\$295,000
Direct labor incurred (9,000 hours)	\$245,000
Actual manufacturing overhead incurred	\$343,000

Jackson Company used a predetermined overhead rate using estimated overhead of \$320,000 and 8,000 estimated direct labor hours. Assume the only inventory balance is an ending Finished Goods balance of \$19,000. How much overhead was applied during the year?

- A. \$245,000
  - B. \$343,000
  - C. \$360,000
  - D. \$320,000
34. Which of the following represents the cost of materials purchased but not yet issued to production?
- A. Raw Materials Inventory
  - B. Work in Process Inventory
  - C. Finished Goods Inventory
  - D. Cost of Goods Sold
35. Which of the following represents the accumulated costs of incomplete jobs?
- A. Raw Materials Inventory
  - B. Work in Process Inventory
  - C. Finished Goods Inventory
  - D. Cost of Goods Sold

36. Which of the following represents the cost of jobs completed but not yet sold?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Cost of Goods Sold

37. Which of the following represents the cost of the jobs sold during the period?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Cost of Goods Sold

38. When manufacturing overhead is applied to production, which of the following accounts is credited?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Manufacturing Overhead

39. When materials are purchased, which of the following accounts is debited?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Cost of Goods Sold

40. When direct materials are used in production, which of the following accounts is debited?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Cost of Goods Sold

41. When direct materials are used in production (as noted by a materials requisition form), which of the following accounts is credited?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Cost of Goods Sold

42. When units are completed, the cost associated with the job is credited to which account?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Cost of Goods Sold

43. When units are sold, the cost associated with the units is credited to which account?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Cost of Goods Sold

44. When units are completed, the cost associated with the job is debited to which account?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Cost of Goods Sold

45. When units are sold, the cost associated with the units is debited to which account?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Cost of Goods Sold

46. When materials are placed into production:

- A. Raw Materials Inventory is debited if the materials are traced directly to the job.
- B. Work in Process Inventory is debited if the materials are traced directly to the job.
- C. Manufacturing Overhead is debited if the materials are traced directly to the job.
- D. Raw Materials Inventory is credited only if the materials are traced directly to the job, otherwise manufacturing overhead is credited.

47. If materials being placed into production are not traced to a specific job, debit:

- A. Raw Materials Inventory.
- B. Work in Process Inventory.
- C. Manufacturing Overhead.
- D. Cost of Goods Sold.

48. In recording the purchase of materials that are not traced to any specific job, which of the following is correct?
- A. Raw Materials Inventory would be debited.
  - B. Work in Process Inventory would be debited.
  - C. Manufacturing Overhead would be debited.
  - D. Manufacturing Overhead would be credited.
49. Which of the following would be used to record the labor cost that is traceable to a specific job?
- A. Raw Materials Inventory would be debited.
  - B. Work in Process Inventory would be debited.
  - C. Manufacturing Overhead would be debited.
  - D. Manufacturing Overhead would be credited.
50. Which of the following would be used to record the labor cost that is not traceable to a specific job?
- A. Raw Materials Inventory would be debited.
  - B. Work in Process Inventory would be debited.
  - C. Manufacturing Overhead would be debited.
  - D. Manufacturing Overhead would be credited.
51. Which of the following would be used to record the usage of indirect manufacturing resources?
- A. Raw Materials Inventory would be debited.
  - B. Work in Process Inventory would be debited.
  - C. Manufacturing Overhead would be debited.
  - D. Manufacturing Overhead would be credited.

52. Which of the following would be used to record the depreciation of manufacturing equipment?

- A. Raw Materials Inventory would be debited.
- B. Work in Process Inventory would be debited.
- C. Manufacturing Overhead would be debited.
- D. Manufacturing Overhead would be credited.

53. Which of the following would be used to record the property taxes on a factory building?

- A. Raw Materials Inventory would be debited.
- B. Work in Process Inventory would be debited.
- C. Manufacturing Overhead would be debited.
- D. Manufacturing Overhead would be credited.

54. Which of the following would be used to record the factory supervisor's salary?

- A. Raw Materials Inventory would be debited.
- B. Work in Process Inventory would be debited.
- C. Manufacturing Overhead would be debited.
- D. Manufacturing Overhead would be credited.

55. Which of the following would be used to apply manufacturing overhead to production for the period?

- A. Raw Materials Inventory would be debited.
- B. Work in Process Inventory would be debited.
- C. Manufacturing Overhead would be debited.
- D. Work in Process Inventory would be credited.

56. Which of the following would be used to apply manufacturing overhead to production for the period?
- A. Credit to Raw Materials Inventory.
  - B. Credit to Work in Process Inventory.
  - C. Debit to Manufacturing Overhead.
  - D. Credit to Manufacturing Overhead.
57. Which of the following would be used to transfer the cost of completed goods during the period to the Finished Goods account?
- A. Credit to Raw Materials Inventory.
  - B. Credit to Work in Process Inventory.
  - C. Debit to Manufacturing Overhead.
  - D. Credit to Manufacturing Overhead.
58. If a company uses a predetermined overhead rate, which of the following statements is correct?
- A. Manufacturing Overhead will be debited for estimated overhead.
  - B. Manufacturing Overhead will be credited for estimated overhead.
  - C. Manufacturing Overhead will be debited for actual overhead.
  - D. Manufacturing Overhead will be credited for actual overhead.
59. Which of the following accounts is not affected by applied manufacturing overhead?
- A. Raw Materials Inventory
  - B. Work in Process Inventory
  - C. Finished Goods Inventory
  - D. Cost of Goods Sold

60. Manufacturing overhead was estimated to be \$400,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$415,000, and actual labor hours were 21,000. The amount debited to the Manufacturing Overhead account would be:

- A. \$400,000.
- B. \$415,000.
- C. \$420,000.
- D. \$435,750.

61. Manufacturing overhead was estimated to be \$400,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$415,000, and actual labor hours were 21,000. The amount credited to the Manufacturing Overhead account would be:

- A. \$400,000.
- B. \$415,000.
- C. \$420,000.
- D. \$435,750.

62. Manufacturing overhead was estimated to be \$200,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$215,000, and actual labor hours were 21,000. The amount debited to the Manufacturing Overhead account would be:

- A. \$200,000.
- B. \$215,000.
- C. \$210,000.
- D. \$225,750.

63. Manufacturing overhead was estimated to be \$200,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$215,000, and actual labor hours were 21,000. The amount credited to the Manufacturing Overhead account would be:

- A. \$200,000.
- B. \$215,000.
- C. \$210,000.
- D. \$225,750.

64. Overhead was estimated to be \$250,000 for the year along with 20,000 direct labor hours. Actual overhead was \$225,000, and actual direct labor hours were 19,000. The amount debited to the manufacturing overhead account would be:

- A. \$250,000.
- B. \$225,000.
- C. \$213,750.
- D. \$237,500.

65. Manufacturing overhead was estimated to be \$250,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$225,000, and actual direct labor hours were 19,000. The amount credited to the Manufacturing Overhead account would be:

- A. \$250,000.
- B. \$225,000.
- C. \$213,750.
- D. \$237,500.

66. Overhead costs are overapplied if the amount applied to Work in Process is:
- A. greater than estimated overhead.
  - B. less than estimated overhead.
  - C. greater than actual overhead incurred.
  - D. less than actual overhead incurred.
67. Overhead costs are underapplied if the amount applied to Work in Process is:
- A. greater than estimated overhead.
  - B. less than estimated overhead.
  - C. greater than actual overhead incurred.
  - D. less than actual overhead incurred.
68. Manufacturing overhead was estimated to be \$400,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$415,000, and actual labor hours were 21,000. Which of the following would be correct?
- A. Overhead is underapplied by \$15,000.
  - B. Overhead is underapplied by \$5,000.
  - C. Overhead is overapplied by \$5,000.
  - D. Overhead is overapplied by \$15,000.
69. Manufacturing overhead was estimated to be \$200,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$215,000, and actual labor hours were 21,000. Which of the following would be correct?
- A. Overhead is underapplied by \$15,000.
  - B. Overhead is underapplied by \$5,000.
  - C. Overhead is overapplied by \$5,000.
  - D. Overhead is overapplied by \$15,000.

70. Manufacturing overhead was estimated to be \$250,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$225,000, and actual direct labor hours were 19,000. Which of the following would be correct?

- A. Overhead is underapplied by \$25,000.
- B. Overhead is underapplied by \$12,500.
- C. Overhead is overapplied by \$12,500.
- D. Overhead is overapplied by \$25,000.

71. The most common method for disposing of over or underapplied overhead is to:

- A. recalculate the overhead rate for the period.
- B. recalculate the overhead rate for the next period.
- C. make a direct adjustment to Work in Process Inventory.
- D. make a direct adjustment to Cost of Goods Sold.

72. When disposed of, overapplied manufacturing overhead will:

- A. increase Cost of Goods Sold.
- B. increase Finished Goods.
- C. decrease Cost of Goods Sold.
- D. decrease Finished Goods.

73. When disposed of, underapplied manufacturing overhead will:

- A. increase Cost of Goods Sold.
- B. increase Finished Goods.
- C. decrease Cost of Goods Sold.
- D. decrease Finished Goods.

74. Underapplied overhead means:

- A. too little overhead was applied to raw materials.
- B. actual overhead is greater than estimated overhead.
- C. finished goods will need to be credited.
- D. there is a debit balance remaining in the overhead account.

75. Manufacturing overhead was estimated to be \$400,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$415,000, and actual labor hours were 21,000. To dispose of the balance in the Manufacturing Overhead account, which of the following would be correct?

- A. Cost of Goods Sold would be credited for \$15,000.
- B. Cost of Goods Sold would be credited for \$5,000.
- C. Cost of Goods Sold would be debited for \$5,000.
- D. Cost of Goods Sold would be debited for \$15,000.

76. Manufacturing overhead was estimated to be \$400,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$415,000, and actual labor hours were 21,000. To dispose of the balance in the Manufacturing Overhead account, which of the following would be correct?

- A. Manufacturing Overhead would be credited for \$5,000.
- B. Manufacturing Overhead would be credited for \$20,000.
- C. Manufacturing Overhead would be debited for \$5,000.
- D. Manufacturing Overhead would be debited for \$20,000.

77. Manufacturing overhead was estimated to be \$200,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$215,000, and actual labor hours were 21,000. To dispose of the balance in the Manufacturing Overhead account, which of the following would be correct?
- A. Cost of Goods Sold would be credited for \$15,000.
  - B. Cost of Goods Sold would be credited for \$5,000.
  - C. Cost of Goods Sold would be debited for \$5,000.
  - D. Cost of Goods Sold would be debited for \$15,000.
78. Manufacturing overhead was estimated to be \$200,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$215,000, and actual labor hours were 21,000. To dispose of the balance in the Manufacturing Overhead account, which of the following would be correct?
- A. Manufacturing Overhead would be credited for \$5,000.
  - B. Manufacturing Overhead would be credited for \$15,000.
  - C. Manufacturing Overhead would be debited for \$5,000.
  - D. Manufacturing Overhead would be debited for \$15,000.
79. Manufacturing overhead was estimated to be \$250,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$225,000, and actual direct labor hours were 19,000. To dispose of the balance in the Manufacturing Overhead account, which of the following would be correct?
- A. Cost of Goods Sold would be credited for \$25,000.
  - B. Cost of Goods Sold would be credited for \$12,500.
  - C. Cost of Goods Sold would be debited for \$12,500.
  - D. Cost of Goods Sold would be debited for \$25,000.

80. Manufacturing overhead was estimated to be \$250,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$225,000, and actual direct labor hours were 19,000. To dispose of the balance in the Manufacturing Overhead account, which of the following would be correct?

- A. Manufacturing Overhead would be credited for \$12,500.
- B. Manufacturing Overhead would be credited for \$25,000.
- C. Manufacturing Overhead would be debited for \$12,500.
- D. Manufacturing Overhead would be debited for \$25,000.

81. Cost of goods manufactured is the amount of cost transferred:

- A. out of Finished Goods Inventory and into Cost of Goods Sold.
- B. out of Finished Goods Inventory and into Work in Process Inventory.
- C. out of Work in Process Inventory and into Manufacturing Overhead.
- D. out of Work in Process Inventory and into Finished Goods Inventory.

82. Cost of goods completed is the same as:

- A. Cost of Goods Sold.
- B. Work in Process Inventory.
- C. Cost of Goods Manufactured.
- D. Finished Goods Inventory.

83. The Cost of Goods Manufactured Report includes all of the following except:

- A. direct materials used.
- B. direct labor.
- C. actual manufacturing overhead.
- D. applied manufacturing overhead.

84. The current manufacturing costs include \_\_\_\_\_ direct labor, \_\_\_\_\_ direct materials, and \_\_\_\_\_ manufacturing overhead.

- A. actual; actual; applied
- B. actual; actual; actual
- C. estimated; actual; applied
- D. estimated; estimated; applied

85. Cost of goods sold is the amount of cost transferred:

- A. out of Finished Goods Inventory and into Cost of Goods Sold.
- B. out of Work in Process Inventory and into Cost of Goods Sold.
- C. out of Work in Process Inventory and into Manufacturing Overhead.
- D. out of Work in Process Inventory and into Finished Goods Inventory.

86. Ragtime Company had the following information for the year:

Direct materials used	\$110,000
Direct labor incurred (5,000 hours)	\$150,000
Actual manufacturing overhead incurred	\$166,000

Ragtime Company used a predetermined overhead rate of \$35 per direct labor hour for the year. Assume the only inventory balance is an ending Work in Process Inventory balance of \$17,000. What was cost of goods manufactured?

- A. \$260,000
- B. \$426,000
- C. \$435,000
- D. \$418,000

87. Ragtime Company had the following information for the year:

Direct materials used	\$110,000
Direct labor incurred (5,000 hours)	\$150,000
Actual manufacturing overhead incurred	\$166,000

Ragtime Company used a predetermined overhead rate of \$35 per direct labor hour for the year. Assume the only inventory balance is an ending Work in Process Inventory balance of \$17,000. What was adjusted cost of goods sold?

- A. \$435,000
- B. \$426,000
- C. \$418,000
- D. \$409,000

88. Sawyer Company had the following information for the year:

Direct materials used	\$190,000
Direct labor incurred (7,000 hours)	\$245,000
Actual manufacturing overhead incurred	\$273,000

Sawyer Company used a predetermined overhead rate using estimated overhead of \$320,000 and 8,000 estimated direct labor hours. Assume the only inventory balance is an ending Finished Goods Inventory balance of \$9,000. What was cost of goods manufactured?

- A. \$715,000
- B. \$708,000
- C. \$755,000
- D. \$706,000

89. Sawyer Company had the following information for the year:

Direct materials used	\$190,000
Direct labor incurred (7,000 hours)	\$245,000
Actual manufacturing overhead incurred	\$273,000

Sawyer Company used a predetermined overhead rate using estimated overhead of \$320,000 and 8,000 estimated direct labor hours. Assume the only inventory balance is an ending Finished Goods Inventory balance of \$9,000. What was adjusted cost of goods sold?

- A. \$715,000
- B. \$708,000
- C. \$706,000
- D. \$699,000

90. Jenkins Company had the following information for the year:

Direct materials used	\$295,000
Direct labor incurred (9,000 hours)	\$245,000
Actual manufacturing overhead incurred	\$343,000

Jenkins Company used a predetermined overhead rate using estimated overhead of \$320,000 and 8,000 estimated direct labor hours. Assume the only inventory balance is an ending Finished Goods Inventory balance of \$19,000. What was cost of goods manufactured?

- A. \$841,000
- B. \$860,000
- C. \$883,000
- D. \$900,000

91. Jenkins Company had the following information for the year:

Direct materials used	\$295,000
Direct labor incurred (9,000 hours)	\$245,000
Actual manufacturing overhead incurred	\$343,000

Jenkins Company used a predetermined overhead rate using estimated overhead of \$320,000 and 8000 estimated direct labor hours. Assume the only inventory balance is an ending Finished Goods Inventory balance of \$19,000. What was adjusted cost of goods sold?

- A. \$900,000
- B. \$883,000
- C. \$881,000
- D. \$864,000

92. McGown Corp. has the following information:

	<b>Beginning Inventory (1/1)</b>	<b>Ending Inventory (12/31)</b>
Raw Materials Inventory	\$20,000	\$30,000
Work in Process Inventory	\$15,000	\$18,000
Finished Goods Inventory	\$30,000	\$20,000

Additional information for the year is as follows:

Raw materials purchases	\$100,000
Direct labor	\$75,000
Manufacturing overhead applied	\$80,000
Indirect materials	\$0

Compute the direct materials used in production.

- A. \$20,000
- B. \$30,000
- C. \$110,000
- D. \$90,000

93. McGown Corp. has the following information:

	<b>Beginning Inventory (1/1)</b>	<b>Ending Inventory (12/31)</b>
Raw Materials Inventory	\$20,000	\$30,000
Work in Process Inventory	\$15,000	\$18,000
Finished Goods Inventory	\$30,000	\$20,000

Additional information for the year is as follows:

Raw materials purchases	\$100,000
Direct labor	\$75,000
Manufacturing overhead applied	\$80,000
Indirect materials	\$0

Compute the current manufacturing costs.

- A. \$245,000
- B. \$255,000
- C. \$65,000
- D. \$68,000

94. McGown Corp. has the following information:

	<b>Beginning Inventory (1/1)</b>	<b>Ending Inventory (12/31)</b>
Raw Materials Inventory	\$20,000	\$30,000
Work in Process Inventory	\$15,000	\$18,000
Finished Goods Inventory	\$30,000	\$20,000

Additional information for the year is as follows:

Raw materials purchases	\$100,000
Direct labor	\$75,000
Manufacturing overhead applied	\$80,000
Indirect materials	\$0

Compute the cost of goods manufactured.

- A. \$248,000
- B. \$242,000
- C. \$265,000
- D. \$235,000

95. McGown Corp. has the following information:

	<b>Beginning Inventory (1/1)</b>	<b>Ending Inventory (12/31)</b>
Raw Materials Inventory	\$20,000	\$30,000
Work in Process Inventory	\$15,000	\$18,000
Finished Goods Inventory	\$30,000	\$20,000

Additional information for the year is as follows:

Raw materials purchases	\$100,000
Direct labor	\$75,000
Manufacturing overhead applied	\$80,000
Indirect materials	\$0

Compute the unadjusted cost of goods sold.

- A. \$133,000
- B. \$242,000
- C. \$252,000
- D. \$255,000

96. Santos Inc. had the following information for the preceding year:

	<b>Beginning Inventory (1/1)</b>	<b>Ending Inventory (12/31)</b>
Raw Materials Inventory	\$40,000	\$30,000
Work in Process Inventory	\$35,000	??
Finished Goods Inventory	\$30,000	??

Additional information for the year is as follows:

Direct materials used	\$200,000
Direct labor	\$150,000
Manufacturing overhead applied	\$160,000
Cost of goods manufactured	\$525,000
Cost of goods sold	\$544,000

What was the ending Work in Process Inventory balance on 12/31?

- A. \$20,000
- B. \$11,000
- C. \$50,000
- D. \$54,000

97. Santos Inc. had the following information for the preceding year:

	<b>Beginning Inventory (1/1)</b>	<b>Ending Inventory (12/31)</b>
Raw Materials Inventory	\$40,000	\$30,000
Work in Process Inventory	\$35,000	??
Finished Goods Inventory	\$30,000	??

Additional information for the year is as follows:

Direct materials used	\$200,000
Direct labor	\$150,000
Manufacturing overhead applied	\$160,000
Cost of goods manufactured	\$525,000
Unadjusted cost of goods sold	\$544,000

What was the ending Finished Goods Inventory balance on 12/31?

- A. \$20,000
- B. \$11,000
- C. \$50,000
- D. \$54,000

98. Mendez Inc. had the following information for the preceding year:

	<b>Beginning Inventory (1/1)</b>	<b>Ending Inventory (12/31)</b>
Work in Process Inventory	??	\$35,000
Finished Goods Inventory	??	\$30,000

Additional information for the year is as follows:

Direct materials used	\$200,000
Direct labor	\$150,000
Manufacturing overhead applied	\$160,000
Cost of goods manufactured	\$525,000
Cost of goods sold	\$544,000

What was the beginning Work in Process Inventory balance on 1/1?

- A. \$49,000
- B. \$65,000
- C. \$50,000
- D. \$69,000

99. Mendez Inc. had the following information for the preceding year:

	<b>Beginning Inventory (1/1)</b>	<b>Ending Inventory (12/31)</b>
Work in Process Inventory	??	\$35,000
Finished Goods Inventory	??	\$30,000

Additional information for the year is as follows:

Direct materials used	\$200,000
Direct labor	\$150,000
Manufacturing overhead applied	\$160,000
Cost of goods manufactured	\$525,000
Unadjusted cost of goods sold	\$544,000

What was the beginning Finished Goods Inventory balance on 1/1?

- A. \$49,000
- B. \$65,000
- C. \$50,000
- D. \$69,000

100. Job order costing systems for companies that compete in, for example, the green building arena should reflect:

- A. only costs in dollars.
- B. only sustainability-related metrics.
- C. both costs of materials in dollars and sustainability-related metrics.
- D. neither costs of materials in dollars nor sustainability-related metrics.

101. To incorporate sustainability into the Cost of Goods Manufactured report, include information on all of the following **except**:

- A. the cost of direct materials used compared to standard (non-sustainable) materials.
- B. indirect labor rates.
- C. source information for direct materials used.
- D. sustainability benchmarking information for peer companies.

102. Which of the following is incorrect regarding service firms?

- A. Each client or account is equivalent to a process in a process costing firm.
- B. The accounting system will track the time and resources spent serving a specific client or account.
- C. Managers of service firms need cost information to price their services, to budget and control costs, and to determine the profitability of different types of clients.
- D. The primary driver used to assign costs is billable hours.

103. Service firms:

- A. tend to use a lot of direct materials in addition to billable hours.
- B. tend to incur few indirect costs that cannot be traced to specific clients or accounts.
- C. assign indirect costs to individual clients or accounts based on an allocation base such as billable hours.
- D. use process costing to assign costs to individual clients or accounts.

104. Optimum Finance Inc. provides budget, savings, and investment services to clients who want a stress-free financial lifestyle. The company customizes a program for each client based on their individual goals that includes budget recommendations, investment counseling, and savings techniques. The company uses a job order cost system that keeps track of the cost of the amount of time financial consultants spend with each client.

Optimum applies all indirect operating costs (e.g., rent, utilities, and management salaries) as a percentage of the consultant's labor cost. During the most recent year, the firm estimated that it would pay \$500,000 to its consultants and incur indirect operating costs of \$750,000. Actual consultant labor costs were \$537,500 and actual indirect operating costs were \$725,000. What is the predetermined overhead rate that Optimum will use for the current year?

- A. \$1.50 per dollar of consultant labor cost
- B. \$1.35 per dollar of consultant labor cost
- C. \$0.67 per dollar of consultant labor cost
- D. \$1.45 per dollar of consultant labor cost

105. Optimum Finance Inc. provides budget, savings, and investment services to clients who want a stress-free financial lifestyle. The company customizes a program for each client based on their individual goals that includes budget recommendations, investment counseling, and savings techniques. The company uses a job order cost system that keeps track of the cost of the amount of time financial consultants spend with each client.

Optimum applies all indirect operating costs (e.g., rent, utilities, and management salaries) as a percentage of the consultant's labor cost. During the most recent year, the firm estimated that it would pay \$500,000 to its consultants and incur indirect operating costs of \$750,000. Actual consultant labor costs were \$537,500 and actual indirect operating costs were \$725,000. During the year, Optimum provided 64 hours of consulting services to Robert Howard for which Optimum pays an average of \$18 per hour. What is the total cost of providing services to Robert?

- A. \$2,707
- B. \$2,822
- C. \$1,924
- D. \$2,880

106. Optimum Finance Inc. provides budget, savings, and investment services to clients who want a stress-free financial lifestyle. The company customizes a program for each client based on their individual goals that includes budget recommendations, investment counseling, and savings techniques. The company uses a job order cost system that keeps track of the cost of the amount of time financial consultants spend with each client.

Optimum applies all indirect operating costs (e.g., rent, utilities, and management salaries) as a percentage of the consultant's labor cost. During the most recent year, the firm estimated that it would pay \$500,000 to its consultants and incur indirect operating costs of \$750,000. Actual consultant labor costs were \$537,500 and actual indirect operating costs were \$725,000. During the year, Optimum provided 42 hours of consulting services to Joan Clair for which Optimum pays an average of \$20 per hour. What is the total cost of providing services to Joan?

- A. \$2,100
- B. \$1,974
- C. \$2,058
- D. \$1,403

## Essay Questions

107. Deer Lake Inc. uses a job order costing system with manufacturing overhead applied to products at a rate of 150% of direct labor cost. Treating each case independently, find the missing amounts for a through l:

	Case #1	Case #2	Case #3
Direct materials used	\$20,000	e.	\$10,000
Direct labor	\$25,000	f.	i.
Manufacturing overhead applied	a.	\$45,000	j.
Total manufacturing costs	b.	\$95,000	\$35,000
Beginning Work in Process	\$10,000	g.	\$6,000
Ending Work in process	\$8,000	\$10,000	k.
Cost of goods manufactured	c.	\$93,000	\$36,000
Beginning Finished Goods	\$12,000	\$12,000	l.
Ending Finished Goods	\$15,500	h.	\$4,000
Cost of goods sold (unadjusted)	d.	\$91,000	\$37,000

108. Barone Inc. uses a job order costing system with manufacturing overhead applied to products at a rate of 100% of direct labor cost. Treating each case independently, find the missing amounts for a through l:

	Case #1	Case #2	Case #3
Direct materials used	\$20,000	e.	\$10,000
Direct labor	\$20,000	f.	i.
Manufacturing overhead applied	a.	\$30,000	j.
Total manufacturing costs	b.	\$80,000	\$30,000
Beginning Work in Process	\$10,000	g.	\$4,000
Ending Work in process	\$12,000	\$5,000	k.
Cost of goods manufactured	c.	\$79,000	\$28,000
Beginning Finished Goods	\$12,000	\$15,000	l.
Ending Finished Goods	\$9,000	h.	\$15,000
Cost of goods sold (unadjusted)	d.	\$81,000	\$26,000

109. Miller Park Inc. uses a job order costing system with manufacturing overhead applied to products at a rate of 80% of direct labor cost. Treating each case independently, find the missing amounts for a through l:

	Case #1	Case #2	Case #3
Direct materials used	\$20,000	e.	\$20,000
Direct labor	\$25,000	\$20,000	i.
Manufacturing overhead applied	a.	f.	j.
Total manufacturing costs	b.	\$46,000	\$38,000
Beginning Work in Process	\$9,000	g.	\$6,000
Ending Work in process	\$7,000	\$6,000	\$3,000
Cost of goods manufactured	c.	\$45,000	k.
Beginning Finished Goods	\$13,000	\$8,000	l.
Ending Finished Goods	\$14,000	h.	\$8,000
Cost of goods sold (unadjusted)	d.	\$48,000	\$43,000

110. Nashville Inc. uses a job order costing system with manufacturing overhead applied to products at a rate of 200% of direct labor cost. Treating each case independently, find the missing amounts for a through l:

	Case #1	Case #2	Case #3
Direct materials used	a.	e.	\$20,000
Direct labor	\$20,000	f.	\$30,000
Manufacturing overhead applied	b.	\$45,000	i.
Total manufacturing costs	\$70,000	\$90,000	j.
Beginning Work in Process	c.	g.	\$15,000
Ending Work in process	\$10,000	\$3,000	\$17,000
Cost of goods manufactured	\$67,000	\$94,000	k.
Beginning Finished Goods	\$12,000	\$14,000	l.
Ending Finished Goods	d.	\$12,000	\$15,000
Cost of goods sold (unadjusted)	\$63,000	h.	\$113,000

111. Green Cabinets is a custom cabinet builder. They recently completed a set of kitchen cabinets (Job #1478), as summarized below:

Job Number: #1478							
Date started: 4/07/20x5							
Date completed: 4/22/20x5							
Description: Cherry kitchen cabinets							
					<b>Applied</b>		
<b>Direct Materials</b>		<b>Direct Labor</b>			<b>Manufacturing Overhead</b>		
Req #	Amount	Ticket	Hours	Amount	Hours	Rate	Amount
385	\$300	128	16	\$288			
391	225	130	23	426			
395	150	133	12	264			
401	<u>215</u>		<u>    </u>	<u>    </u>			
Total	\$890	Total	51	\$978			
<b>Cost Summary</b>							
	Direct Material Cost				\$890		
	Direct Labor Cost				978		
	Applied Manufacturing Overhead				<u>    </u>		
	Total Cost						

Green Cabinets applies overhead to jobs at a rate of \$12 per direct labor hour.

- a. How much overhead would be applied to Job #1478?
- b. What is the total cost of Job #1478?

112. Russo Cabinets is a custom cabinet builder. They recently completed a set of kitchen cabinets (Job #1887), as summarized below:

Job Number: #1887							
Date started: 4/17/20x5							
Date completed: 4/29/20x5							
Description: Pecan kitchen cabinets							
					<b>Applied</b>		
<b>Direct Materials</b>		<b>Direct Labor</b>			<b>Manufacturing Overhead</b>		
Req #	Amount	Ticket	Hours	Amount	Hours	Rate	Amount
385	\$400	128	18	\$396			
391	325	130	29	696			
395	250	133	15	390			
401	415						
Total	\$1,390	Total	62	\$1,482			
Cost Summary							
Direct Material Cost					\$1,390		
Direct Labor Cost					1,482		
Applied Manufacturing Overhead							
Total Cost							

Russo applies overhead to jobs at a rate of \$18 per direct labor hour.

- a. How much overhead would be applied to Job #1887?
- b. What is the total cost of Job #1887?

113. Geller Cabinets is a custom cabinet builder. They recently completed a set of kitchen cabinets (Job #12478), as summarized below:

Job Number: #12478							
Date started: 8/05/20x5							
Date completed: 8/25/20x5							
Description: Butternut kitchen cabinets							
					<b>Applied</b>		
<b>Direct Materials</b>		<b>Direct Labor</b>			<b>Manufacturing Overhead</b>		
Req #	Amount	Ticket	Hours	Amount	Hours	Rate	Amount
385	\$400	128	16	\$256			
391	324	130	23	390			
395	196	133	12	186			
401	<u>455</u>	141	<u>15</u>	<u>330</u>			
Total	\$1,375	Total	66	\$1,162			
<b>Cost Summary</b>							
	Direct Material Cost				\$1,375		
	Direct Labor Cost				1,162		
	Applied Manufacturing Overhead						
	Total Cost						

Geller applies overhead to jobs at a rate of \$15 per direct labor hour.

- a. How much overhead would be applied to Job #12478?
- b. What is the total cost of Job #12478?

114. Belton Custom Kitchens is a custom cabinet builder. They recently completed a set of kitchen cabinets (Job #3097), as summarized below:

Job Number: #3097							
Date started: 11/10/20x5							
Date completed: 11/27/20x5							
Description: Oak kitchen cabinets							
					<b>Applied</b>		
<b>Direct Materials</b>		<b>Direct Labor</b>			<b>Manufacturing Overhead</b>		
Req #	Amount	Ticket	Hours	Amount	Hours	Rate	Amount
1385	\$300	2128	18	\$396			
1391	225	2130	27	621			
1395	150	2133	14	308			
1401	<u>215</u>	2144	<u>18</u>	<u>414</u>			
Total	\$890	Total	77	\$1,739			
<b>Cost Summary</b>							
Direct Material Cost					\$890		
Direct Labor Cost					1,739		
Applied Manufacturing Overhead							
Total Cost							

Belton applies overhead to jobs at a rate of \$17 per direct labor hour.

- a. How much overhead would be applied to Job #3097?
- b. What is the total cost of Job #3097?

115. Koebel Corp. uses a job order costing system with manufacturing overhead applied to products on the basis of direct labor hours. For the upcoming year, Koebel Corp. estimated total manufacturing overhead cost at \$500,000 and total direct labor hours of 50,000. Koebel Corp. started the year with no beginning balances in either Work in Process Inventory or Finished Goods Inventory. During the year, actual manufacturing overhead incurred was \$512,500 and 49,000 direct labor hours were used.

- a. Calculate the predetermined overhead rate.
- b. Calculate how much manufacturing overhead will be applied to production.
- c. Is overhead over or underapplied? By how much?
- d. What account should be adjusted for over or underapplied overhead? Should the balance be increased or decreased?

116. Cadburn Corp. uses a job order costing system with manufacturing overhead applied to products on the basis of direct labor hours. For the upcoming year, Cadburn Corp. estimated total manufacturing overhead cost at \$250,000 and total direct labor hours of 50,000. During the year actual manufacturing overhead incurred was \$262,500 and 51,000 direct labor hours were used.

- a. Calculate the predetermined overhead rate.
- b. Calculate how much manufacturing overhead will be applied to production.
- c. Is overhead over- or underapplied? By how much?
- d. What account should be adjusted for over- or underapplied overhead? Should the balance be increased or decreased?

117. Chloe Corp. uses a job order costing system with manufacturing overhead applied to products on the basis of direct labor hours. For the upcoming year, Chloe Corp. estimated total manufacturing overhead cost at \$480,000 and total direct labor hours of 40,000. During the year actual manufacturing overhead incurred was \$462,500 and 41,000 direct labor hours were used.

- a. Calculate the predetermined overhead rate.
- b. Calculate how much manufacturing overhead will be applied to production.
- c. Is overhead over- or underapplied? By how much?
- d. What account should be adjusted for over- or underapplied overhead? Should the balance be increased or decreased?

118. Blueberry Corp. uses a job order costing system with manufacturing overhead applied to products on the basis of machine hours. For the upcoming year, Blueberry Corp. estimated total manufacturing overhead cost at \$270,000 and total machine hours of 45,000. During the year actual manufacturing overhead incurred was \$258,750 and 46,600 machine hours were used.

- a. Calculate the predetermined overhead rate.
- b. Calculate how much manufacturing overhead will be applied to production.
- c. Is overhead over- or underapplied? By how much?
- d. What account should be adjusted for over- or underapplied overhead? Should the balance be increased or decreased?

119. Curtis Inc. uses a job order costing system. Manufacturing overhead is applied on the basis of direct labor cost. Total manufacturing overhead was estimated to be \$75,000 for the year; direct labor was estimated to total \$150,000.

	1/1	12/31
Raw Materials Inventory	\$10,000	\$13,000
Work in Process Inventory	\$22,000	\$19,000
Finished Goods Inventory	\$34,000	\$41,000

The following transactions have occurred during the year.

Raw materials purchases	\$100,000
Direct materials used	\$91,000
Direct labor	\$145,000
Indirect materials used	\$6,000
Indirect labor	\$15,000
Factory equipment depreciation	\$24,000
Factory rent	\$18,000
Factory utilities	\$7,500
Other factory costs	\$6,500

- Calculate the predetermined overhead rate.
- Calculate cost of goods manufactured.
- Calculate the over- or underapplied overhead.
- Calculate adjusted cost of goods sold.

120. Kayla Inc. uses a job order costing system. Manufacturing overhead is applied on the basis of direct labor cost. Total manufacturing overhead was estimated to be \$150,000 for the year; direct labor was estimated to total \$300,000.

	1/1	12/31
Raw Materials Inventory	\$20,000	\$26,000
Work in Process Inventory	\$44,000	\$38,000
Finished Goods Inventory	\$68,000	\$82,000

The following transactions have occurred during the year.

Raw materials purchases	\$200,000
Direct materials used	\$182,000
Direct labor	\$290,000
Indirect materials used	\$12,000
Indirect labor	\$30,000
Factory equipment depreciation	\$48,000
Factory rent	\$36,000
Factory utilities	\$15,000
Other factory costs	\$13,000

- Calculate the predetermined overhead rate.
- Calculate cost of goods manufactured.
- Calculate the over- or underapplied overhead.
- Calculate adjusted cost of goods sold.

121. Cadbury Company uses a job order costing system. Manufacturing overhead is applied on the basis of direct labor cost. Total manufacturing overhead was estimated to be \$120,000 for the year; direct labor was estimated to total \$150,000.

	1/1	12/31
Raw Materials Inventory	\$13,000	\$10,000
Work in Process Inventory	\$19,000	\$22,000
Finished Goods Inventory	\$41,000	\$32,000

The following transactions have occurred during the year.

Raw materials purchases	\$100,000
Direct materials used	\$91,000
Direct labor	\$125,000
Indirect materials used	\$12,000
Indirect labor	\$18,000
Factory equipment depreciation	\$28,000
Factory rent	\$22,000
Factory utilities	\$9,500
Other factory costs	\$8,500

- Calculate the predetermined overhead rate.
- Calculate cost of goods manufactured.
- Calculate the over- or underapplied overhead.
- Calculate adjusted cost of goods sold.

122. Ecola Company uses a job order costing system. Manufacturing overhead is applied on the basis of direct labor cost. Total manufacturing overhead was estimated to be \$120,000 for the year; direct labor was estimated to total \$150,000.

	1/1	12/31
Raw Materials Inventory	\$13,000	\$10,000
Work in Process Inventory	\$29,000	\$22,000
Finished Goods Inventory	\$41,000	\$32,000

The following transactions have occurred during the year.

Raw materials purchases	\$100,000
Direct materials used	\$87,000
Direct labor	\$135,000
Indirect materials used	\$16,000
Indirect labor	\$19,000
Factory equipment depreciation	\$28,000
Factory rent	\$15,000
Factory utilities	\$11,500
Other factory costs	\$8,500

- Calculate the predetermined overhead rate.
- Calculate cost of goods manufactured.
- Calculate the over or under-applied overhead.
- Calculate adjusted cost of goods sold.

123. Josie Inc. has provided the following information for 20x5:

- a. Purchased raw materials on account for \$120,000.
- b. Issued \$115,000 in raw materials to production (\$22,000 were not traceable to specific jobs).
- c. Incurred \$115,000 in direct labor costs (14,375 hours) and \$62,500 in supervision costs (paid in cash).
- d. Incurred the following additional manufacturing overhead costs: factory lease \$24,000 (paid in cash); depreciation on equipment \$20,000; custodial supplies \$7,500 (paid in cash).
- e. Incurred the following nonmanufacturing costs, both paid in cash: advertising \$75,000; sales commissions \$88,000.
- f. Applied manufacturing overhead to jobs in process at a rate of \$10 per direct labor hour.
- g. Completed jobs costing a total of \$345,000.
- h. Sold jobs for \$425,000 on account. The cost of the jobs was \$342,000.
- i. Closed the Manufacturing Overhead account balance.

Prepare the journal entries to record these transactions.

124. Frontier Inc. has provided the following information for 20x5:

- a. Purchased raw materials on account for \$240,000.
- b. Issued \$230,000 in raw materials to production (\$32,000 were not traceable to specific jobs).
- c. Incurred \$242,000 in direct labor costs (24,120 hours) and \$92,500 in supervision costs (paid in cash).
- d. Incurred the following additional manufacturing overhead costs: factory utilities \$24,000 (paid in cash); depreciation on equipment \$45,000; indirect supplies \$17,500 (paid in cash).
- e. Incurred the following nonmanufacturing costs, both paid in cash: advertising \$75,000; sales salaries \$88,000.
- f. Applied manufacturing overhead to jobs in process at a rate of \$9 per direct labor hour.
- g. Completed jobs costing a total of \$644,000.
- h. Sold jobs for \$856,000 on account. The cost of the jobs was \$642,000.
- i. Closed the manufacturing overhead account balance.

Prepare the journal entries to record these transactions.

125. Northwest Inc. has provided the following information for 20x5:

- a. Purchased raw materials on account for \$150,000.
- b. Issued \$130,000 in raw materials to production (\$34,000 were not traceable to specific jobs).
- c. Incurred \$144,000 in direct labor costs (14,120 hours) and \$62,500 in supervision costs (paid in cash).
- d. Incurred the following additional manufacturing overhead costs: factory lease \$36,000 (paid in cash); depreciation on equipment \$30,000; indirect supplies \$13,500 (paid in cash).
- e. Incurred the following nonmanufacturing costs, both paid in cash: advertising \$45,000; sales commissions \$48,000.
- f. Applied manufacturing overhead to jobs in process at a rate of \$13 per direct labor hour.
- g. Completed jobs costing a total of \$415,000.
- h. Sold jobs for \$625,000 on account. The cost of the jobs was \$412,000.
- i. Closed the Manufacturing Overhead account balance.

Prepare the journal entries to record these transactions.

126. Shellenback Inc. has provided the following information for 20x5:

- a. Purchased raw materials on account for \$200,000.
- b. Issued \$185,000 in raw materials to production (\$12,000 were not traceable to specific jobs).
- c. Incurred \$155,000 in direct labor costs (14,750 hours), \$52,500 in supervision costs (paid in cash).
- d. Incurred the following additional manufacturing overhead costs: factory lease \$22,000 (paid in cash); depreciation on equipment \$26,000; factory utilities \$13,500 (paid in cash).
- e. Incurred the following nonmanufacturing costs, both paid in cash: advertising \$55,000; sales commissions \$58,000.
- f. Applied manufacturing overhead to jobs in process at a rate of \$9 per direct labor hour.
- g. Completed jobs costing a total of \$457,000.
- h. Sold jobs for \$735,000 on account. The cost of the jobs was \$441,000.
- i. Closed the manufacturing overhead account balance.

Prepare the journal entries to record these transactions.

127. Highview Corp. applies manufacturing overhead to production at 125% of direct labor cost. During 20x5, manufacturing overhead of \$100,000 was applied to production; actual manufacturing overhead was \$109,000. Beginning Work in Process Inventory was \$15,000 and beginning Finished Goods Inventory was \$35,000. Work in Process Inventory increased by 10% during the year and Finished Goods Inventory decreased by 20% during the year. Sales for 20x5 were \$450,000, yielding a \$130,000 gross profit.

Complete the following schedule:

Direct materials used in production	
Direct labor	
Manufacturing overhead applied	
Current manufacturing costs	
Beginning Work in Process Inventory	
Ending Work in Process Inventory	
Cost of goods manufactured	
Beginning Finished Goods Inventory	
Ending Finished Goods Inventory	
Unadjusted Cost of Goods Sold	
Overhead adjustment	
Adjusted Cost of Goods Sold	

128. Oscar Corp. applies manufacturing overhead to production at 150% of direct labor cost. During 20x5, manufacturing overhead of \$180,000 was applied to production; actual manufacturing overhead was \$199,000. Beginning Work in Process Inventory was \$20,000 and ending Work in Process Inventory was \$24,000. Beginning Finished Goods Inventory was \$42,000, ending Finished Goods Inventory was \$39,000. Sales for 20x5 were \$580,000, yielding a \$117,000 gross profit.

Complete the following schedule:

Direct materials used in production	
Direct labor	
Manufacturing overhead applied	
Current manufacturing costs	
Beginning Work in Process Inventory	
Ending Work in Process Inventory	
Cost of goods manufactured	
Beginning Finished Goods Inventory	
Ending Finished Goods Inventory	
Unadjusted Cost of Goods Sold	
Overhead adjustment	
Adjusted Cost of Goods Sold	

129. Superior Corp. applies manufacturing overhead to production at 75% of direct labor cost. During 20x5, manufacturing overhead of \$150,000 was applied to production; actual manufacturing overhead was \$156,000. Ending Work in Process Inventory was \$22,000 and ending Finished Goods Inventory was \$36,000. Work in Process Inventory increased by 10% during the year and Finished Goods Inventory increased by 20% during the year. Unadjusted Cost of Goods Sold was \$575,000.

Complete the following schedule:

Direct materials used in production	
Direct labor	
Manufacturing overhead applied	
Current manufacturing costs	
Beginning Work in Process Inventory	
Ending Work in Process Inventory	
Cost of goods manufactured	
Beginning Finished Goods Inventory	
Ending Finished Goods Inventory	
Unadjusted Cost of Goods Sold	
Overhead adjustment	
Adjusted Cost of Goods Sold	

130. Christine Corp. applies manufacturing overhead to production at 80% of direct labor cost. During 20x5, manufacturing overhead of \$200,000 was applied to production; actual manufacturing overhead was \$189,000. Beginning Work in Process Inventory was \$25,000, and beginning Finished Goods Inventory was \$45,000. Work in Process Inventory decreased by 20% during the year and Finished Goods Inventory decreased by 10% during the year. Adjusted Cost of Goods Sold was \$623,500 for 20x5.

Complete the following schedule:

Direct materials used in production	
Direct labor	
Manufacturing overhead applied	
Current manufacturing costs	
Beginning Work in Process Inventory	
Ending Work in Process Inventory	
Cost of goods manufactured	
Beginning Finished Goods Inventory	
Ending Finished Goods Inventory	
Unadjusted Cost of Goods Sold	
Overhead adjustment	
Adjusted Cost of Goods Sold	

131. Pinnacle Consulting employs two CPAs, each having a different area of specialization. Judy specializes in tax consulting and Steve specializes in management consulting. Pinnacle expects to incur total overhead costs of \$519,750 during the year and applies overhead based on annual salary costs. Judy is a senior partner, her annual salary is \$225,000, and she is expected to bill 2,000 hours during the year. Steve is a senior associate, his annual salary is \$121,500, and he is expected to bill 1,800 hours during the year.

- a. Calculate the predetermined overhead rate.
- b. Assuming that the hourly billing rate should be set to cover the total cost of services plus a 20% markup, compute the hourly billing rates for Judy and Steve.

132. Ace Architects employs two architects, each having a different area of specialization. Caitlin specializes in industrial commercial construction and Zachary specializes in residential construction. Ace expects to incur total overhead costs of \$779,625 during the year and applies overhead based on annual salary costs. Caitlin is a senior partner, her annual salary is \$168,750, and she is expected to bill 2,000 hours during the year. Zachary is a senior associate, his annual salary is \$91,125, and he is expected to bill 1,800 hours during the year.

- a. Calculate the predetermined overhead rate.
- b. Assuming that the hourly billing rate should be set to cover the total cost of services plus a 20% markup, compute the hourly billing rates for Caitlin and Zachary.

## Chapter 02 Job Order Costing Answer Key

### True / False Questions

1. A marketing consulting firm would most likely use process costing.

**FALSE**

A marketing consulting firm is more likely to use job order costing, which is used by companies that offer customized or unique products or services.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-01 Describe the key differences between job order costing and process costing.*

*Topic: Process costing*

2. When job order costing is used, costs are accumulated on a job cost sheet.

**TRUE**

A job cost sheet is used for each unique job, project, or customer under a job order costing system.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-02 Describe the source documents used to track direct materials and direct labor costs to the job cost sheet.*

*Topic: Manufacturing cost categories*

3. Process costing averages the total cost of the process over the number of units produced.

**TRUE**

Process costing breaks the production process down into its basic steps, or processes, and then averages the total cost of the process over the number of units produced.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-01 Describe the key differences between job order costing and process costing.*

*Topic: Process costing*

4. Source documents are used to assign all manufacturing costs to jobs.

**FALSE**

Direct materials and direct labor are assigned to jobs using source documents such as a materials requisition form and a labor time ticket. However, manufacturing overhead is applied using a predetermined overhead rate.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-02 Describe the source documents used to track direct materials and direct labor costs to the job cost sheet.*

*Topic: Manufacturing cost categories*

5. A materials requisition form is used to authorize the purchase of direct materials.

**FALSE**

A materials requisition form is used to control the physical flow of materials out of inventory and into production and to record the cost of raw materials in the accounting system.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-02 Describe the source documents used to track direct materials and direct labor costs to the job cost sheet.*

*Topic: Materials requisition form*

6. A job cost sheet will record the direct materials and direct labor used by the job but not the manufacturing overhead applied.

**FALSE**

A job cost sheet summarizes all of the costs incurred on a specific job, not just direct materials and direct labor.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-02 Describe the source documents used to track direct materials and direct labor costs to the job cost sheet.*

*Topic: Job cost sheet*

7. A predetermined overhead rate is calculated by dividing estimated total manufacturing overhead cost by estimated total cost driver.

**TRUE**

A predetermined overhead rate is calculated by dividing estimated total manufacturing overhead cost by estimated total cost driver.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Topic: Predetermined overhead rates*

8. Indirect materials are recorded directly on the job cost sheet.

**FALSE**

Indirect materials are not recorded directly to the job cost sheet or Work in Process Inventory. Rather, these indirect costs are accumulated in the Manufacturing Overhead account and will be assigned to the product using the predetermined overhead rate.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record the purchase and issue of materials*

9. When manufacturing overhead is applied to a job, a credit is made to the Work in Process account.

**FALSE**

Applied manufacturing overhead is debited (not credited) to Work in Process inventory. The credit is to the Manufacturing Overhead account.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record applied manufacturing overhead*

10. The total manufacturing cost for a job is based on the amount of applied overhead using the predetermined overhead rate.

**TRUE**

The total manufacturing cost is based on the amount of overhead applied using the predetermined overhead rate.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Transfer costs to finished goods inventory and cost of goods sold*

11. If there is a debit balance in the Manufacturing Overhead account at the end of the period, overhead was underapplied.

**TRUE**

If there is a debit balance in the Manufacturing Overhead account at the end of the period, the actual overhead is greater than applied overhead; therefore, overhead was underapplied.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Calculate overapplied and underapplied manufacturing overhead*

12. The most common method for disposing of the balance in Manufacturing Overhead is to make a direct adjustment to Cost of Goods Sold.

**TRUE**

The most common method for disposing of the balance in Manufacturing Overhead is to make a direct adjustment to Cost of Goods Sold. Doing so makes sense as long as most of the jobs worked on during the period were completed and sold.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

13. To eliminate underapplied overhead at the end of the year, Manufacturing Overhead would be debited and Cost of Goods Sold would be credited.

**FALSE**

If manufacturing overhead is underapplied during the year, Manufacturing Overhead will need to be credited to bring the account balance to zero, while Cost of Goods Sold would be debited.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

14. The total amount of cost assigned to jobs that were completed during the year is the cost of goods sold.

**FALSE**

The total amount of cost assigned to jobs that were completed during the year is the cost of goods manufactured, not the cost of goods sold.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

15. In a service firm, the cost associated with time that employees spend on training, paperwork, and supervision is considered part of manufacturing overhead.

**TRUE**

Service firms incur many indirect costs that cannot be traced to specific clients or accounts. Examples include the non-billable time that employees spend on training, paperwork, and supervision. These indirect costs are treated just like manufacturing overhead in a factory.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-07 Apply job order costing to a service setting.*

*Topic: Job order costing in a service firm*

## Multiple Choice Questions

16. Which of the following types of firms would most likely use process costing?

- A. Superior Auto Body & Repair
- B. Crammond Custom Cabinets
- C.** Sunshine Soft Drinks
- D. Jackson & Taylor Tax Service

Process costing is used by companies that make or complete standardized or homogeneous products or services, such as a soft drink company.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-01 Describe the key differences between job order costing and process costing.*

17. Which of the following types of firms would most likely use job order costing?

- A. Happy-Oh Cereal Company
- B. Huey, Lewey & Dewie, Attorneys**
- C. SoooSweet Beverage
- D. C-5 Cement Company

Job order costing is used in companies that offer customized or unique products or services, such as a law firm.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-01 Describe the key differences between job order costing and process costing.*

*Topic: Job order costing*

18. Which of the following is a characteristic of a manufacturing environment that would use job order costing?

- A. Standardized production process
- B. Continuous manufacturing
- C. Homogenous products
- D. Differentiated products**

Job order costing is used in companies that offer customized or unique products or services.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-01 Describe the key differences between job order costing and process costing.*

*Topic: Job order costing*

19. Which of the following statements is correct?

- A. Companies must choose to use either job order costing or process costing; there is no overlap between the two systems.
- B. Companies always use job order costing unless it is prohibitively expensive.
- C. Companies always use process costing unless it is prohibitively expensive.
- D.** Companies often provide products and services that have both common and unique characteristics, so they may use a blend of job order and process costing.

Some companies use a hybrid approach called "operations costing," which is a blend of process costing (for the common processes) and job order costing (for the unique components).

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-01 Describe the key differences between job order costing and process costing.*

*Topic: Job order costing*

20. The cost of materials used on a specific job is first captured on which source document?

- A. Cost driver sheet
- B.** Materials requisition form
- C. Labor time ticket
- D. Process cost sheet

The materials requisition form lists the quantity and cost of the direct materials used on a specific job.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-02 Describe the source documents used to track direct materials and direct labor costs to the job cost sheet.*

*Topic: Materials requisition form*

21. The source document that captures how much time a worker has spent on various jobs during the period is a:
- A. cost driver sheet.
  - B. materials requisition form.
  - C. labor time ticket.**
  - D. job cost sheet.

A direct labor time ticket shows how much time a worker has spent on various jobs each week, as well as the cost of that time.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-02 Describe the source documents used to track direct materials and direct labor costs to the job cost sheet.*

*Topic: Direct labor time tickets*

22. All the costs assigned to an individual job are summarized on a:
- A. cost driver sheet.
  - B. job cost sheet.**
  - C. materials requisition form.
  - D. labor time ticket.

The job cost sheet is a document that summarizes all of the costs incurred on a specific job.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-02 Describe the source documents used to track direct materials and direct labor costs to the job cost sheet.*

*Topic: Job cost sheet*

23. A predetermined overhead rate is calculated by dividing:
- A. actual manufacturing overhead cost by estimated total cost driver.
  - B. estimated total cost driver by estimated manufacturing overhead cost.
  - C. estimated manufacturing overhead cost by actual total cost driver.
  - D.** estimated manufacturing overhead cost by estimated total cost driver.

The formula to calculate the predetermined overhead rate is estimated total manufacturing overhead cost divided by estimated total cost driver.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Topic: Predetermined overhead rates*

24. Manufacturing overhead is applied to each job using which formula?
- A.** Predetermined overhead rate × actual value of the cost driver for the job
  - B. Predetermined overhead rate × estimated value of the cost driver for the job
  - C. Actual overhead rate × estimated value of the cost driver for the job
  - D. Predetermined overhead rate/actual value of the cost driver for the job

Apply manufacturing overhead to each job by multiplying the predetermined overhead rate by the actual value of the cost driver for the job.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Topic: Predetermined overhead rates*

25. Manufacturing overhead was estimated to be \$400,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$415,000, actual labor hours were 21,000. The predetermined manufacturing overhead rate per direct labor hour would be:

- A. \$20.00.
- B. \$0.05.
- C. \$20.75.
- D. \$19.05.

$\$400,000/20,000 = \$20.00$  Divide total estimated manufacturing overhead by the estimated total cost driver for the year to calculate the predetermined manufacturing overhead rate.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Topic: Predetermined overhead rates*

26. Manufacturing overhead was estimated to be \$400,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$415,000, actual labor hours were 21,000. The amount of manufacturing overhead applied to production would be:
- A. \$400,000.
  - B. \$415,000.
  - C. \$420,000.**
  - D. \$435,750.

Calculate the predetermined overhead rate of \$20.00 per direct labor hour by dividing total estimated manufacturing overhead by the estimated total cost driver for the year. ( $\$400,000/20,000 = \$20.00$ ) Apply manufacturing overhead at the predetermined rate, multiplied by the actual direct labor hours. ( $\$20.00 \times 21,000 = \$420,000$ )

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Topic: Predetermined overhead rates*

27. Manufacturing overhead was estimated to be \$200,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$215,000, and actual labor hours were 21,000. The predetermined overhead rate per direct labor hour would be:
- A. \$10.00.**
  - B. \$1.05.
  - C. \$10.75.
  - D. \$10.24.

$\$200,000/20,000 = \$10.00$  Divide total estimated manufacturing overhead by the estimated total cost driver for the year to calculate the predetermined manufacturing overhead rate.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Topic: Predetermined overhead rates*

28. Manufacturing overhead was estimated to be \$200,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$215,000, and actual labor hours were 21,000. The amount of manufacturing overhead applied to production would be:

- A. \$200,000.
- B. \$215,000.
- C. \$210,000.**
- D. \$225,750.

Calculate the predetermined overhead rate of \$10.00 by dividing total estimated manufacturing overhead by the estimated total cost driver for the year. ( $\$200,000/20,000 = \$10.00$ ) Multiply the predetermined manufacturing overhead rate (\$10.00) to the actual number of direct labor hours (21,000) to calculate applied manufacturing overhead. ( $\$10.00 \times 21,000 = \$210,000$ )

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Topic: Predetermined overhead rates*

29. Manufacturing overhead was estimated to be \$500,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$450,000, and actual direct labor hours were 19,000. The predetermined overhead rate per direct labor hour would be:
- A. \$22.50.
  - B. \$25.00.**
  - C. \$23.68.
  - D. \$26.32.

$\$500,000/20,000 = \$25.00$  Divide total estimated manufacturing overhead by the estimated total cost driver for the year to calculate the predetermined manufacturing overhead rate.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Topic: Predetermined overhead rates*

30. Manufacturing overhead was estimated to be \$500,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$450,000, and actual direct labor hours were 19,000. The amount of manufacturing overhead applied to production would be:
- A. \$500,000.
  - B. \$450,000.
  - C. \$427,500.
  - D. \$475,000.**

Calculate the predetermined overhead rate of \$25.00 by dividing total estimated manufacturing overhead by the estimated total cost driver for the year. ( $\$500,000/20,000 = \$25.00$ ) Multiply the predetermined manufacturing overhead rate (\$25.00) to the actual number of direct labor hours (19,000) to calculate applied manufacturing overhead. ( $\$25.00 \times 19,000 = \$475,000$ )

*AACSB: Analytical Thinking*

AICPA: FN Measurement  
Accessibility: Keyboard Navigation  
Blooms: Apply  
Difficulty: 2 Medium

Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.  
Topic: Predetermined overhead rates

31. Kilt Company had the following information for the year:

Direct materials used	\$110,000
Direct labor incurred (5,000 hours)	\$150,000
Actual manufacturing overhead incurred	\$166,000

Kilt Company used a predetermined overhead rate of \$42.00 per direct labor hour for the year and estimated that direct labor hours would total 5,500 hours. Assume the only inventory balance is an ending Work in Process balance of \$17,000. How much overhead was applied during the year?

- A. \$231,000
- B. \$150,000
- C. \$166,000
- D. \$210,000**

$\$42.00 \times 5,000 = \$210,000$  Multiply the predetermined overhead rate (\$42.00) times the actual number of direct labor hours incurred (5,000).

AACSB: Analytical Thinking  
AICPA: FN Measurement  
Accessibility: Keyboard Navigation  
Blooms: Apply  
Difficulty: 2 Medium

Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.  
Topic: Predetermined overhead rates

32. Sawyer Company had the following information for the year:

Direct materials used	\$190,000
Direct labor incurred (7,000 hours)	\$245,000
Actual manufacturing overhead incurred	\$273,000

Sawyer Company used a predetermined overhead rate using estimated overhead of \$320,000 and 8,000 estimated direct labor hours. Assume the only inventory balance is an ending Finished Goods balance of \$9,000. How much overhead was applied during the year?

- A. \$245,000
- B. \$273,000
- C. \$280,000**
- D. \$320,000

Calculate predetermined overhead rate of \$40.00 by dividing total estimated overhead by total estimated direct labor hours. ( $\$320,000/8,000 = \$40.00$ ) Multiply the predetermined manufacturing overhead rate (\$40.00) by the actual number of direct labor hours incurred (7,000) to calculate applied overhead. ( $\$40.00 \times 7,000 = \$280,000$ )

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Topic: Predetermined overhead rates*

33. Jackson Company had the following information for the year:

Direct materials used	\$295,000
Direct labor incurred (9,000 hours)	\$245,000
Actual manufacturing overhead incurred	\$343,000

Jackson Company used a predetermined overhead rate using estimated overhead of \$320,000 and 8,000 estimated direct labor hours. Assume the only inventory balance is an ending Finished Goods balance of \$19,000. How much overhead was applied during the year?

- A. \$245,000
- B. \$343,000
- C. \$360,000**
- D. \$320,000

Calculate the predetermined overhead rate of \$40.00 by dividing estimated total manufacturing overhead by the estimated total cost driver. ( $\$320,000/8,000 = \$40.00$ ) Multiply the predetermined manufacturing overhead rate of \$40.00 by the actual number of direct labor hours (9,000) to calculate applied manufacturing overhead. ( $\$40.00 \times 9,000 = \$360,000$ )

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Topic: Predetermined overhead rates*

34. Which of the following represents the cost of materials purchased but not yet issued to production?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Cost of Goods Sold

Raw Materials Inventory represents the cost of materials purchased from suppliers but not yet used in production.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record the flow of costs in job order costing*

35. Which of the following represents the accumulated costs of incomplete jobs?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Cost of Goods Sold

Work in Process Inventory represents the total cost of jobs that are still in process or incomplete.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record the flow of costs in job order costing*

36. Which of the following represents the cost of jobs completed but not yet sold?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory**
- D. Cost of Goods Sold

Once goods are finished, their costs are transferred out of Work in Process Inventory and into Finished Goods Inventory where they remain until they are sold.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record the flow of costs in job order costing*

37. Which of the following represents the cost of the jobs sold during the period?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Cost of Goods Sold**

Once a job is sold, its total cost is transferred out of Finished Goods Inventory and into Cost of Goods Sold.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record the flow of costs in job order costing*

38. When manufacturing overhead is applied to production, which of the following accounts is credited?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Manufacturing Overhead

When manufacturing overhead is applied to production, Work in Process Inventory is debited and the Manufacturing Overhead account is credited.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record the flow of costs in job order costing*

39. When materials are purchased, which of the following accounts is debited?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Cost of Goods Sold

When materials are purchased, they are initially recorded in Raw Materials Inventory with a debit to the account.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record the purchase and issue of materials*

40. When direct materials are used in production, which of the following accounts is debited?

- A. Raw Materials Inventory
- B. Work in Process Inventory**
- C. Finished Goods Inventory
- D. Cost of Goods Sold

When direct materials are used in production, the cost is transferred from Raw Materials Inventory (with a credit) to Work in Process Inventory (with a debit).

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record the purchase and issue of materials*

41. When direct materials are used in production (as noted by a materials requisition form), which of the following accounts is credited?

- A. Raw Materials Inventory**
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Cost of Goods Sold

When direct materials are used in production, the cost is transferred from Raw Materials Inventory (with a credit) to Work in Process Inventory (with a debit).

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record the purchase and issue of materials*

42. When units are completed, the cost associated with the job is credited to which account?

- A. Raw Materials Inventory
- B. Work in Process Inventory**
- C. Finished Goods Inventory
- D. Cost of Goods Sold

When a job is completed, its cost is transferred from Work in Process Inventory (with a credit) to Finished Goods Inventory (with a debit).

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Transfer costs to finished goods inventory and cost of goods sold*

43. When units are sold, the cost associated with the units is credited to which account?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory**
- D. Cost of Goods Sold

When units are sold, their cost is transferred from Finished Goods Inventory (with a credit) to Cost of Goods Sold (with a debit).

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Transfer costs to finished goods inventory and cost of goods sold*

44. When units are completed, the cost associated with the job is debited to which account?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory**
- D. Cost of Goods Sold

When a job is completed, its cost is transferred from Work in Process Inventory (with a credit) to Finished Goods Inventory (with a debit).

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Transfer costs to finished goods inventory and cost of goods sold*

45. When units are sold, the cost associated with the units is debited to which account?

- A. Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Cost of Goods Sold**

When units are sold, their cost is transferred from Finished Goods Inventory (with a credit) to Cost of Goods Sold (with a debit).

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Transfer costs to finished goods inventory and cost of goods sold*

46. When materials are placed into production:
- A. Raw Materials Inventory is debited if the materials are traced directly to the job.
  - B.** Work in Process Inventory is debited if the materials are traced directly to the job.
  - C. Manufacturing Overhead is debited if the materials are traced directly to the job.
  - D. Raw Materials Inventory is credited only if the materials are traced directly to the job, otherwise manufacturing overhead is credited.

When direct materials are placed into production, the cost is transferred from Raw Materials Inventory (with a credit) to Work in Process Inventory (with a debit).

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record the purchase and issue of materials*

47. If materials being placed into production are not traced to a specific job, debit:
- A. Raw Materials Inventory.
  - B. Work in Process Inventory.
  - C.** Manufacturing Overhead.
  - D. Cost of Goods Sold.

When indirect materials are placed into production, the cost is transferred from Raw Materials Inventory (with a credit) to Manufacturing Overhead (with a debit).

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record actual manufacturing overhead*

48. In recording the purchase of materials that are not traced to any specific job, which of the following is correct?

- A. Raw Materials Inventory would be debited.
- B. Work in Process Inventory would be debited.
- C. Manufacturing Overhead would be debited.
- D. Manufacturing Overhead would be credited.

When indirect materials are purchased, the cost is recorded with a debit to raw materials inventory regardless of whether the materials are considered direct or indirect.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record the purchase and issue of materials*

49. Which of the following would be used to record the labor cost that is traceable to a specific job?

- A. Raw Materials Inventory would be debited.
- B. Work in Process Inventory would be debited.
- C. Manufacturing Overhead would be debited.
- D. Manufacturing Overhead would be credited.

As direct labor costs are incurred, they are recorded with a debit to Work in Process Inventory.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record labor costs*

50. Which of the following would be used to record the labor cost that is not traceable to a specific job?

- A. Raw Materials Inventory would be debited.
- B. Work in Process Inventory would be debited.
- C. Manufacturing Overhead would be debited.**
- D. Manufacturing Overhead would be credited.

Actual indirect labor costs are accumulated on the debit side of the Manufacturing Overhead account.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record labor costs*

51. Which of the following would be used to record the usage of indirect manufacturing resources?

- A. Raw Materials Inventory would be debited.
- B. Work in Process Inventory would be debited.
- C. Manufacturing Overhead would be debited.**
- D. Manufacturing Overhead would be credited.

All actual indirect manufacturing costs are accumulated in the Manufacturing Overhead account on the debit side of the account. The raw materials account would be credited.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record actual manufacturing overhead*

52. Which of the following would be used to record the depreciation of manufacturing equipment?

- A. Raw Materials Inventory would be debited.
- B. Work in Process Inventory would be debited.
- C. Manufacturing Overhead would be debited.**
- D. Manufacturing Overhead would be credited.

Actual indirect manufacturing costs, including depreciation of manufacturing equipment, are accumulated in the Manufacturing Overhead account on the debit side of the account.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record actual manufacturing overhead*

53. Which of the following would be used to record the property taxes on a factory building?

- A. Raw Materials Inventory would be debited.
- B. Work in Process Inventory would be debited.
- C. Manufacturing Overhead would be debited.**
- D. Manufacturing Overhead would be credited.

Actual indirect manufacturing costs, including property taxes on a factory, are accumulated in the Manufacturing Overhead account on the debit side of the account.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record actual manufacturing overhead*

54. Which of the following would be used to record the factory supervisor's salary?

- A. Raw Materials Inventory would be debited.
- B. Work in Process Inventory would be debited.
- C.** Manufacturing Overhead would be debited.
- D. Manufacturing Overhead would be credited.

Actual indirect manufacturing costs, including the factory supervisor's salary, are accumulated in the Manufacturing Overhead account on the debit side of the account.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record actual manufacturing overhead*

55. Which of the following would be used to apply manufacturing overhead to production for the period?

- A. Raw Materials Inventory would be debited.
- B.** Work in Process Inventory would be debited.
- C. Manufacturing Overhead would be debited.
- D. Work in Process Inventory would be credited.

When manufacturing overhead is applied to production, Work in Process Inventory is debited and the Manufacturing Overhead account is credited.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record applied manufacturing overhead*

56. Which of the following would be used to apply manufacturing overhead to production for the period?

- A. Credit to Raw Materials Inventory.
- B. Credit to Work in Process Inventory.
- C. Debit to Manufacturing Overhead.
- D.** Credit to Manufacturing Overhead.

When manufacturing overhead is applied to production, Work in Process Inventory is debited and the Manufacturing Overhead account is credited.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record applied manufacturing overhead*

57. Which of the following would be used to transfer the cost of completed goods during the period to the Finished Goods account?

- A. Credit to Raw Materials Inventory.
- B.** Credit to Work in Process Inventory.
- C. Debit to Manufacturing Overhead.
- D. Credit to Manufacturing Overhead.

When a job is completed, its total manufacturing cost is transferred out of Work in Process Inventory with a credit and into Finished Goods Inventory with a debit.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Transfer costs to finished goods inventory and cost of goods sold*

58. If a company uses a predetermined overhead rate, which of the following statements is correct?

- A. Manufacturing Overhead will be debited for estimated overhead.
- B. Manufacturing Overhead will be credited for estimated overhead.
- C.** Manufacturing Overhead will be debited for actual overhead.
- D. Manufacturing Overhead will be credited for actual overhead.

Actual manufacturing overhead costs are accumulated on the debit side of the Manufacturing Overhead account.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record actual manufacturing overhea*

59. Which of the following accounts is not affected by applied manufacturing overhead?

- A.** Raw Materials Inventory
- B. Work in Process Inventory
- C. Finished Goods Inventory
- D. Cost of Goods Sold

Manufacturing Overhead is applied to Work in Process inventory; the cost moves to Finished Goods when goods are completed, and Cost of Goods Sold when they are sold. The raw materials account is not affected.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record applied manufacturing overhead*

60. Manufacturing overhead was estimated to be \$400,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$415,000, and actual labor hours were 21,000. The amount debited to the Manufacturing Overhead account would be:
- A. \$400,000.
  - B. \$415,000.**
  - C. \$420,000.
  - D. \$435,750.

Actual manufacturing overhead costs are debited to the Manufacturing Overhead account.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record actual manufacturing overhead*

61. Manufacturing overhead was estimated to be \$400,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$415,000, and actual labor hours were 21,000. The amount credited to the Manufacturing Overhead account would be:
- A. \$400,000.
  - B. \$415,000.
  - C. \$420,000.**
  - D. \$435,750.

The applied overhead would be credited to the Manufacturing Overhead account. First, calculate the predetermined overhead rate by dividing estimated total manufacturing overhead by estimated total direct labor hours. ( $\$400,000/20,000 = \$20.00$ ) Then calculate the applied manufacturing overhead by multiplying the predetermined overhead rate by the actual number of direct labor hours. ( $\$20.00 \times 21,000 = \$420,000$ ) Credit the amount to Manufacturing Overhead.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record applied manufacturing overhead*

62. Manufacturing overhead was estimated to be \$200,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$215,000, and actual labor hours were 21,000. The amount debited to the Manufacturing Overhead account would be:
- A. \$200,000.
  - B. \$215,000.**
  - C. \$210,000.
  - D. \$225,750.

Actual manufacturing overhead costs of \$215,000 are accumulated on the debit side of the Manufacturing Overhead account.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record actual manufacturing overhead*

63. Manufacturing overhead was estimated to be \$200,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$215,000, and actual labor hours were 21,000. The amount credited to the Manufacturing Overhead account would be:
- A. \$200,000.
  - B. \$215,000.
  - C. \$210,000.**
  - D. \$225,750.

The applied overhead would be credited to the Manufacturing Overhead account. First, calculate the predetermined overhead rate by dividing estimated total manufacturing overhead by estimated total direct labor hours. ( $\$200,000/20,000 = \$10.00$ ) Then apply manufacturing overhead by multiplying the predetermined overhead rate by the actual number of direct labor hours. ( $\$10.00 \times 21,000 = \$210,000$ ) Credit the amount to Manufacturing Overhead.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*  
*Accessibility: Keyboard Navigation*  
*Blooms: Apply*  
*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*  
*Topic: Record applied manufacturing overhead*

64. Overhead was estimated to be \$250,000 for the year along with 20,000 direct labor hours. Actual overhead was \$225,000, and actual direct labor hours were 19,000. The amount debited to the manufacturing overhead account would be:

- A. \$250,000.
- B. \$225,000.**
- C. \$213,750.
- D. \$237,500.

Actual manufacturing overhead costs of \$225,000 are debited to the Manufacturing Overhead account.

*AACSB: Analytical Thinking*  
*AICPA: FN Measurement*  
*Accessibility: Keyboard Navigation*  
*Blooms: Apply*  
*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*  
*Topic: Record actual manufacturing overhead*

65. Manufacturing overhead was estimated to be \$250,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$225,000, and actual direct labor hours were 19,000. The amount credited to the Manufacturing Overhead account would be:
- A. \$250,000.
  - B. \$225,000.
  - C. \$213,750.
  - D.** \$237,500.

The applied overhead would be credited to the Manufacturing Overhead account. First, calculate the predetermined overhead rate by dividing total estimated manufacturing overhead by total estimated direct labor hours. ( $\$250,000/20,000 = \$12.50$ ) Then apply manufacturing overhead by multiplying the predetermined overhead rate by the actual direct labor hours. ( $\$12.50 \times 19,000 = \$237,500$ ) Credit the amount to Manufacturing Overhead.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Topic: Record applied manufacturing overhead*

66. Overhead costs are overapplied if the amount applied to Work in Process is:
- A. greater than estimated overhead.
  - B. less than estimated overhead.
  - C.** greater than actual overhead incurred.
  - D. less than actual overhead incurred.

Overhead cost is overapplied if the amount applied is more than the actual overhead cost.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Calculate overapplied and underapplied manufacturing overhead*

67. Overhead costs are underapplied if the amount applied to Work in Process is:

- A. greater than estimated overhead.
- B. less than estimated overhead.
- C. greater than actual overhead incurred.
- D. less than actual overhead incurred.

Overhead cost is underapplied if the amount applied is less than the actual overhead cost.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Calculate overapplied and underapplied manufacturing overhead*

68. Manufacturing overhead was estimated to be \$400,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$415,000, and actual labor hours were 21,000. Which of the following would be correct?
- A. Overhead is underapplied by \$15,000.
  - B. Overhead is underapplied by \$5,000.
  - C.** Overhead is overapplied by \$5,000.
  - D. Overhead is overapplied by \$15,000.

Calculate the predetermined overhead rate by dividing the estimated total manufacturing overhead by the estimated total direct labor hours. ( $\$400,000/20,000 = \$20.00$ ) Apply manufacturing overhead by multiplying the predetermined rate by the actual total direct labor hours. ( $\$20.00 \times 21,000 = \$420,000$ ) Since the applied overhead (\$420,000) on the credit side of the manufacturing overhead account is greater than the actual overhead (\$415,000) on the debit side of the manufacturing overhead account, the \$5,000 credit balance represents overapplied overhead.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Calculate overapplied and underapplied manufacturing overhead*

69. Manufacturing overhead was estimated to be \$200,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$215,000, and actual labor hours were 21,000. Which of the following would be correct?
- A. Overhead is underapplied by \$15,000.
  - B. Overhead is underapplied by \$5,000.**
  - C. Overhead is overapplied by \$5,000.
  - D. Overhead is overapplied by \$15,000.

Calculate the predetermined overhead rate by dividing the estimated total manufacturing overhead by the estimated total direct labor hours. ( $\$200,000/20,000 = \$10.00$ ) Apply manufacturing overhead by multiplying the predetermined rate by the actual total direct labor hours. ( $\$10.00 \times 21,000 = \$210,000$ ) Since the applied overhead (\$210,000) on the credit side of the manufacturing account is less than the actual overhead (\$215,000) on the debit side of the manufacturing overhead account, the overhead debit balance represents underapplied overhead.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Calculate overapplied and underapplied manufacturing overhead*

70. Manufacturing overhead was estimated to be \$250,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$225,000, and actual direct labor hours were 19,000. Which of the following would be correct?

- A. Overhead is underapplied by \$25,000.
- B. Overhead is underapplied by \$12,500.
- C.** Overhead is overapplied by \$12,500.
- D. Overhead is overapplied by \$25,000.

Calculate the predetermined overhead rate by dividing total estimated manufacturing overhead costs by total estimated direct labor costs. ( $\$250,000/20,000 = \$12.50$ ) Apply manufacturing overhead by multiplying the predetermined overhead rate by the actual number of direct labor hours. ( $\$12.50 \times 19,000 = \$237,500$ ) Since the applied overhead (\$237,500) on the credit side of the manufacturing overhead account is greater than the actual overhead (\$225,000) on the debit side of the manufacturing overhead account, the \$12,500 credit balance represents overapplied overhead.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Calculate overapplied and underapplied manufacturing overhead*

71. The most common method for disposing of over or underapplied overhead is to:

- A. recalculate the overhead rate for the period.
- B. recalculate the overhead rate for the next period.
- C. make a direct adjustment to Work in Process Inventory.
- D.** make a direct adjustment to Cost of Goods Sold.

The most common method for disposing of the balance in Manufacturing Overhead is to make a direct adjustment to Cost of Goods Sold.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*  
*Accessibility: Keyboard Navigation*  
*Blooms: Understand*  
*Difficulty: 2 Medium*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*  
*Topic: Dispose of overapplied or underapplied manufacturing overhead*

72. When disposed of, overapplied manufacturing overhead will:

- A. increase Cost of Goods Sold.
- B. increase Finished Goods.
- C. decrease Cost of Goods Sold.**
- D. decrease Finished Goods.

If manufacturing overhead is overapplied, Cost of Goods sold should be adjusted downward since too much overhead was charged to the goods during the period.

*AACSB: Analytical Thinking*  
*AICPA: FN Measurement*  
*Accessibility: Keyboard Navigation*  
*Blooms: Analyze*  
*Difficulty: 3 Hard*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*  
*Topic: Dispose of overapplied or underapplied manufacturing overhead*

73. When disposed of, underapplied manufacturing overhead will:

- A. increase Cost of Goods Sold.**
- B. increase Finished Goods.
- C. decrease Cost of Goods Sold.
- D. decrease Finished Goods.

If manufacturing overhead is underapplied, Cost of Goods sold should be adjusted upward since not enough overhead was charged to the goods during the period.

*AACSB: Analytical Thinking*  
*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

74. Underapplied overhead means:

- A. too little overhead was applied to raw materials.
- B. actual overhead is greater than estimated overhead.
- C. finished goods will need to be credited.
- D.** there is a debit balance remaining in the overhead account.

If overhead is underapplied, there is a debit balance in the overhead account.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

75. Manufacturing overhead was estimated to be \$400,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$415,000, and actual labor hours were 21,000. To dispose of the balance in the Manufacturing Overhead account, which of the following would be correct?
- A. Cost of Goods Sold would be credited for \$15,000.
  - B. Cost of Goods Sold would be credited for \$5,000.**
  - C. Cost of Goods Sold would be debited for \$5,000.
  - D. Cost of Goods Sold would be debited for \$15,000.

Calculate the predetermined overhead rate by dividing total estimated manufacturing overhead by total estimated direct labor hours. ( $\$400,000/20,000 = \$20.00$ ) Apply manufacturing overhead by multiplying the predetermined overhead rate by the actual number of direct labor hours. ( $\$20.00 \times 21,000 = \$420,000$ ) The amount of overhead applied (\$420,000) on the credit side of the manufacturing overhead account exceeded the actual overhead costs (\$415,000) on the debit side of the manufacturing overhead account, so the overhead was overapplied with a credit balance of \$5,000. ( $\$420,000 - \$415,000 = \$5,000$ ) The most common way of correcting this is with a direct charge, in this case a debit to the manufacturing overhead account to close it out and an offsetting credit to cost of goods sold.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

76. Manufacturing overhead was estimated to be \$400,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$415,000, and actual labor hours were 21,000. To dispose of the balance in the Manufacturing Overhead account, which of the following would be correct?
- A. Manufacturing Overhead would be credited for \$5,000.
  - B. Manufacturing Overhead would be credited for \$20,000.
  - C. Manufacturing Overhead would be debited for \$5,000.**
  - D. Manufacturing Overhead would be debited for \$20,000.

Calculate the predetermined overhead rate by dividing the total estimated manufacturing overhead by the estimated direct labor hours. ( $\$400,000/20,000 = \$20.00$ ) Apply manufacturing overhead by multiplying the predetermined overhead rate by the actual number of direct labor hours. ( $\$20.00 \times 21,000 = \$420,000$ ) The amount of overhead applied (\$420,000) on the credit side of the manufacturing overhead account exceeds the actual overhead costs (\$415,000) on the debit side of the manufacturing overhead account, so the overhead was overapplied. ( $\$420,000 - \$415,000 = \$5,000$ ). The overhead account has a credit balance of \$5,000. This amount is debited to Manufacturing Overhead and would also be credited to Cost of Goods Sold.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

77. Manufacturing overhead was estimated to be \$200,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$215,000, and actual labor hours were 21,000. To dispose of the balance in the Manufacturing Overhead account, which of the following would be correct?
- A. Cost of Goods Sold would be credited for \$15,000.
  - B. Cost of Goods Sold would be credited for \$5,000.
  - C. Cost of Goods Sold would be debited for \$5,000.
  - D. Cost of Goods Sold would be debited for \$15,000.

Calculate the predetermined overhead rate by dividing total estimated manufacturing overhead by estimated direct labor hours. ( $\$200,000/20,000 = \$10.00$ ) Apply manufacturing overhead by multiplying the predetermined rate by the actual number of direct labor hours. ( $\$10.00 \times 21,000 = \$210,000$ ) Since applied overhead (\$210,000) on the credit side of the manufacturing overhead account is less than actual overhead (\$215,000) on the debit side of the manufacturing overhead account, the overhead is underapplied. ( $\$215,000 - \$210,000 = \$5,000$ ) That is, it has a debit balance. Correct this with a credit to manufacturing overhead and a debit to Cost of Goods Sold.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

78. Manufacturing overhead was estimated to be \$200,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$215,000, and actual labor hours were 21,000. To dispose of the balance in the Manufacturing Overhead account, which of the following would be correct?

- A. Manufacturing Overhead would be credited for \$5,000.
- B. Manufacturing Overhead would be credited for \$15,000.
- C. Manufacturing Overhead would be debited for \$5,000.
- D. Manufacturing Overhead would be debited for \$15,000.

Calculate the predetermined overhead rate by dividing the estimated total manufacturing overhead by the estimated direct labor hours. ( $\$200,000/20,000 = \$10.00$ ) Apply manufacturing overhead by multiplying the predetermined overhead rate by the actual direct labor hours. ( $\$10.00 \times 21,000 = \$210,000$ ) Since applied overhead (\$210,000) on the credit side of the manufacturing overhead account is less than actual overhead (\$215,000) on the debit side of the manufacturing overhead account, overhead is underapplied. ( $\$215,000 - \$210,000 = \$5,000$ ) which means it has a debit balance. To correct this, credit the \$5,000 to Manufacturing Overhead and debit cost of goods sold.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

79. Manufacturing overhead was estimated to be \$250,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$225,000, and actual direct labor hours were 19,000. To dispose of the balance in the Manufacturing Overhead account, which of the following would be correct?

- A. Cost of Goods Sold would be credited for \$25,000.
- B.** Cost of Goods Sold would be credited for \$12,500.
- C. Cost of Goods Sold would be debited for \$12,500.
- D. Cost of Goods Sold would be debited for \$25,000.

Calculate the predetermined overhead rate by dividing total estimated manufacturing overhead by estimated direct labor hours. ( $\$250,000/20,000 = \$12.50$ ) Apply manufacturing overhead by multiplying the predetermined overhead rate by the actual direct labor hours. ( $\$12.50 \times 19,000 = \$237,500$ ). Since applied overhead (\$237,500) on the credit side of the manufacturing overhead account is greater than actual overhead (\$225,000) on the debit side of the manufacturing overhead account, overhead is overapplied. ( $\$237,500 - \$225,000 = \$12,500$ ) with a credit balance. Correct this with a debit to manufacturing overhead and a credit to Cost of Goods Sold for \$12,500.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

80. Manufacturing overhead was estimated to be \$250,000 for the year along with 20,000 direct labor hours. Actual manufacturing overhead was \$225,000, and actual direct labor hours were 19,000. To dispose of the balance in the Manufacturing Overhead account, which of the following would be correct?

- A. Manufacturing Overhead would be credited for \$12,500.
- B. Manufacturing Overhead would be credited for \$25,000.
- C. Manufacturing Overhead would be debited for \$12,500.
- D. Manufacturing Overhead would be debited for \$25,000.

Calculate the predetermined overhead rate by dividing total estimated manufacturing overhead by estimated direct labor hours. ( $\$250,000/20,000 = \$12.50$ ) Apply manufacturing overhead by multiplying the predetermined overhead rate by the actual number of direct labor hours. ( $\$12.50 \times 19,000 = \$237,500$ ) Since applied overhead (\$237,500) on the credit side of the manufacturing overhead account is greater than actual overhead (\$225,000) on the debit side of the manufacturing overhead account, the balance is a credit of \$12,500 and the overhead is overapplied. ( $\$237,500 - \$225,000 = \$12,500$ ) Correct this with a debit to Manufacturing Overhead. The offsetting credit would be to cost of goods sold.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

81. Cost of goods manufactured is the amount of cost transferred:

- A. out of Finished Goods Inventory and into Cost of Goods Sold.
- B. out of Finished Goods Inventory and into Work in Process Inventory.
- C. out of Work in Process Inventory and into Manufacturing Overhead.
- D. out of Work in Process Inventory and into Finished Goods Inventory.

The total cost that is transferred out of Work in Process Inventory and into Finished Goods Inventory is called the cost of goods manufactured.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

82. Cost of goods completed is the same as:

- A. Cost of Goods Sold.
- B. Work in Process Inventory.
- C. Cost of Goods Manufactured.
- D. Finished Goods Inventory.

Cost of goods completed, also called cost of goods manufactured, represents the cost of all jobs completed during the period.

*AACSB: Analytical Thinking*

*AICPA: BB Critical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

83. The Cost of Goods Manufactured Report includes all of the following except:

- A. direct materials used.
- B. direct labor.
- C.** actual manufacturing overhead.
- D. applied manufacturing overhead.

The Cost of Goods Manufactured report includes applied (not actual) manufacturing overhead.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

84. The current manufacturing costs include \_\_\_\_\_ direct labor, \_\_\_\_\_ direct materials, and \_\_\_\_\_ manufacturing overhead.

- A.** actual; actual; applied
- B. actual; actual; actual
- C. estimated; actual; applied
- D. estimated; estimated; applied

Current manufacturing costs include actual direct labor, actual direct materials, and applied (not actual) manufacturing overhead.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

85. Cost of goods sold is the amount of cost transferred:

- A. out of Finished Goods Inventory and into Cost of Goods Sold.
- B. out of Work in Process Inventory and into Cost of Goods Sold.
- C. out of Work in Process Inventory and into Manufacturing Overhead.
- D. out of Work in Process Inventory and into Finished Goods Inventory.

When goods are sold, their cost is transferred out of Finished Goods Inventory and into Cost of Goods Sold.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

86. Ragtime Company had the following information for the year:

Direct materials used	\$110,000
Direct labor incurred (5,000 hours)	\$150,000
Actual manufacturing overhead incurred	\$166,000

Ragtime Company used a predetermined overhead rate of \$35 per direct labor hour for the year. Assume the only inventory balance is an ending Work in Process Inventory balance of \$17,000. What was cost of goods manufactured?

- A. \$260,000
- B. \$426,000
- C. \$435,000
- D. \$418,000**

Cost of goods manufactured is the sum of direct materials, direct labor, and applied (not actual) manufacturing overhead, plus the beginning Work in Process balance, less the ending Work in Process balance. Applied manufacturing overhead is calculated by multiplying the predetermined overhead rate by the number of direct labor hours. ( $\$35 \times 5,000 = \$175,000$ ) Thus, cost of goods manufactured is \$418,000, calculated as:  $\$110,000 + \$150,000 + \$175,000 + \$0 - \$17,000 = \$418,000$ .

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

87. Ragtime Company had the following information for the year:

Direct materials used	\$110,000
Direct labor incurred (5,000 hours)	\$150,000
Actual manufacturing overhead incurred	\$166,000

Ragtime Company used a predetermined overhead rate of \$35 per direct labor hour for the year. Assume the only inventory balance is an ending Work in Process Inventory balance of \$17,000. What was adjusted cost of goods sold?

- A. \$435,000
- B. \$426,000
- C. \$418,000
- D. \$409,000**

Calculate applied manufacturing overhead =  $\$35 \times 5,000 = \$175,000$ . Calculate cost of goods manufactured =  $\$110,000 + \$150,000 + \$175,000 + \$0 - \$17,000 = \$418,000$ . Calculate overhead balance. Overapplied overhead =  $\$175,000 \text{ Applied} - \$166,000 \text{ actual} = \$9,000$  overapplied. Unadjusted cost of goods sold =  $\$0 + \$418,000 - \$0 = \$418,000$ . Adjusted cost of goods sold =  $\$418,000 - \$9,000 \text{ credit to cost of goods sold} = \$409,000$ .

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Calculate overapplied and underapplied manufacturing overhead*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

*Topic: Prepare the cost of goods manufactured report*

88. Sawyer Company had the following information for the year:

Direct materials used	\$190,000
Direct labor incurred (7,000 hours)	\$245,000
Actual manufacturing overhead incurred	\$273,000

Sawyer Company used a predetermined overhead rate using estimated overhead of \$320,000 and 8,000 estimated direct labor hours. Assume the only inventory balance is an ending Finished Goods Inventory balance of \$9,000. What was cost of goods manufactured?

- A. \$715,000
- B. \$708,000
- C. \$755,000
- D. \$706,000

The predetermined overhead rate was \$40. ( $\$320,000/8,000 = \$40$ ) Applied manufacturing overhead is \$280,000. ( $\$40 \times 7,000 = \$280,000$ ) (Note that applied manufacturing overhead is calculated by multiplying the predetermined overhead rate by the actual number of direct labor hours, not the estimated number.) Cost of goods manufactured =  $\$190,000 + \$245,000 + \$280,000 + \$0 - \$0 = \$715,000$ .

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

89. Sawyer Company had the following information for the year:

Direct materials used	\$190,000
Direct labor incurred (7,000 hours)	\$245,000
Actual manufacturing overhead incurred	\$273,000

Sawyer Company used a predetermined overhead rate using estimated overhead of \$320,000 and 8,000 estimated direct labor hours. Assume the only inventory balance is an ending Finished Goods Inventory balance of \$9,000. What was adjusted cost of goods sold?

- A. \$715,000
- B. \$708,000
- C. \$706,000
- D. \$699,000**

The predetermined overhead rate is \$40. ( $\$320,000/8,000 = \$40$ ) Applied manufacturing overhead =  $\$40 \times 7,000 = \$280,000$ . Cost of goods manufactured =  $\$190,000 + \$245,000 + \$280,000 + \$0 - \$0 = \$715,000$ . Overapplied overhead =  $\$280,000 - \$273,000 = \$7,000$ . Unadjusted cost of goods sold =  $\$0 + \$715,000 - \$9,000 = \$706,000$ . Adjusted cost of goods sold =  $\$706,000 - \$7,000 = \$699,000$ .

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Calculate overapplied and underapplied manufacturing overhead*

*Topic: Prepare the cost of goods manufactured report*

90. Jenkins Company had the following information for the year:

Direct materials used	\$295,000
Direct labor incurred (9,000 hours)	\$245,000
Actual manufacturing overhead incurred	\$343,000

Jenkins Company used a predetermined overhead rate using estimated overhead of \$320,000 and 8,000 estimated direct labor hours. Assume the only inventory balance is an ending Finished Goods Inventory balance of \$19,000. What was cost of goods manufactured?

- A. \$841,000
- B. \$860,000
- C. \$883,000
- D. \$900,000**

Predetermined overhead rate =  $\$320,000 / 8,000 = \$40$ . Applied manufacturing overhead =  $\$40 \times 9,000 = \$360,000$ . Cost of goods manufactured =  $\$295,000 + \$245,000 + \$360,000 + \$0 - \$0 = \$900,000$ .

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

91. Jenkins Company had the following information for the year:

Direct materials used	\$295,000
Direct labor incurred (9,000 hours)	\$245,000
Actual manufacturing overhead incurred	\$343,000

Jenkins Company used a predetermined overhead rate using estimated overhead of \$320,000 and 8000 estimated direct labor hours. Assume the only inventory balance is an ending Finished Goods Inventory balance of \$19,000. What was adjusted cost of goods sold?

- A. \$900,000
- B. \$883,000
- C. \$881,000
- D. \$864,000**

Predetermined overhead rate =  $\$320,000 / 8,000 = \$40$ . Applied manufacturing overhead =  $\$40 \times 9,000 = \$360,000$ . Cost of goods manufactured =  $\$295,000 + \$245,000 + \$360,000 + \$0 - \$0 = \$900,000$ . Unadjusted cost of goods sold =  $\$0 + \$900,000 - \$19,000 = \$881,000$ . Overapplied overhead =  $\$360,000 - \$343,000 = \$17,000$ . Adjusted cost of goods sold =  $\$881,000 - \$17,000 = \$864,000$ .

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

*Topic: Prepare the cost of goods manufactured report*

92. McGown Corp. has the following information:

	<b>Beginning Inventory (1/1)</b>	<b>Ending Inventory (12/31)</b>
Raw Materials Inventory	\$20,000	\$30,000
Work in Process Inventory	\$15,000	\$18,000
Finished Goods Inventory	\$30,000	\$20,000

Additional information for the year is as follows:

Raw materials purchases	\$100,000
Direct labor	\$75,000
Manufacturing overhead applied	\$80,000
Indirect materials	\$0

Compute the direct materials used in production.

- A. \$20,000
- B. \$30,000
- C. \$110,000
- D.** \$90,000

Calculate direct materials used by adding raw materials purchased to beginning inventory and subtracting indirect materials and ending raw materials inventory. Direct materials used =  
 $\$20,000 + \$100,000 - \$0 - \$30,000 = \$90,000$ .

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

93. McGown Corp. has the following information:

	Beginning Inventory (1/1)	Ending Inventory (12/31)
Raw Materials Inventory	\$20,000	\$30,000
Work in Process Inventory	\$15,000	\$18,000
Finished Goods Inventory	\$30,000	\$20,000

Additional information for the year is as follows:

Raw materials purchases	\$100,000
Direct labor	\$75,000
Manufacturing overhead applied	\$80,000
Indirect materials	\$0

Compute the current manufacturing costs.

- A. \$245,000
- B. \$255,000
- C. \$65,000
- D. \$68,000

Direct materials used = \$20,000 + \$100,000 - \$0 - \$30,000 = \$90,000. Current manufacturing costs = \$90,000 + \$75,000 + \$80,000 = \$245,000.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

94. McGown Corp. has the following information:

	Beginning Inventory (1/1)	Ending Inventory (12/31)
Raw Materials Inventory	\$20,000	\$30,000
Work in Process Inventory	\$15,000	\$18,000
Finished Goods Inventory	\$30,000	\$20,000

Additional information for the year is as follows:

Raw materials purchases	\$100,000
Direct labor	\$75,000
Manufacturing overhead applied	\$80,000
Indirect materials	\$0

Compute the cost of goods manufactured.

- A. \$248,000
- B. \$242,000**
- C. \$265,000
- D. \$235,000

Direct materials used = \$20,000 + \$100,000 - \$0 - \$30,000 = \$90,000. Current manufacturing costs = \$90,000 + \$75,000 + \$80,000 = \$245,000. Cost of goods manufactured = \$15,000 + \$245,000 - \$18,000 = \$242,000.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

95. McGown Corp. has the following information:

	Beginning Inventory (1/1)	Ending Inventory (12/31)
Raw Materials Inventory	\$20,000	\$30,000
Work in Process Inventory	\$15,000	\$18,000
Finished Goods Inventory	\$30,000	\$20,000

Additional information for the year is as follows:

Raw materials purchases	\$100,000
Direct labor	\$75,000
Manufacturing overhead applied	\$80,000
Indirect materials	\$0

Compute the unadjusted cost of goods sold.

- A. \$133,000
- B. \$242,000
- C. \$252,000**
- D. \$255,000

Direct materials used = \$20,000 + \$100,000 - \$0 - \$30,000 = \$90,000. Current manufacturing costs = \$90,000 + \$75,000 + \$80,000 = \$245,000. Cost of goods manufactured = \$15,000 + \$245,000 - \$18,000 = \$242,000. Cost of goods sold = \$30,000 + \$242,000 - \$20,000 = \$252,000.

AACSB: Analytical Thinking

AICPA: FN Measurement

Accessibility: Keyboard Navigation

Blooms: Apply

96. Santos Inc. had the following information for the preceding year:

	Beginning Inventory (1/1)	Ending Inventory (12/31)
Raw Materials Inventory	\$40,000	\$30,000
Work in Process Inventory	\$35,000	??
Finished Goods Inventory	\$30,000	??

Additional information for the year is as follows:

Direct materials used	\$200,000
Direct labor	\$150,000
Manufacturing overhead applied	\$160,000
Cost of goods manufactured	\$525,000
Cost of goods sold	\$544,000

What was the ending Work in Process Inventory balance on 12/31?

- A. \$20,000
- B. \$11,000
- C. \$50,000
- D. \$54,000

Current manufacturing costs = \$200,000 + \$150,000 + \$160,000 = \$510,000. Cost of goods manufactured = 525,000 = \$35,000 + \$510,000 - ending Work in Process Inventory, so ending Work in Process Inventory = \$35,000 + \$510,000 - \$525,000 = \$20,000.

Accessibility: Keyboard Navigation

Blooms: Analyze

Difficulty: 3 Hard

Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.

Topic: Prepare the cost of goods manufactured report

97. Santos Inc. had the following information for the preceding year:

	Beginning Inventory (1/1)	Ending Inventory (12/31)
Raw Materials Inventory	\$40,000	\$30,000
Work in Process Inventory	\$35,000	??
Finished Goods Inventory	\$30,000	??

Additional information for the year is as follows:

Direct materials used	\$200,000
Direct labor	\$150,000
Manufacturing overhead applied	\$160,000
Cost of goods manufactured	\$525,000
Unadjusted cost of goods sold	\$544,000

What was the ending Finished Goods Inventory balance on 12/31?

- A. \$20,000
- B. \$11,000**
- C. \$50,000
- D. \$54,000

$\$544,000 = \$30,000 + \$525,000 - \text{ending Finished Goods Inventory}$ . Ending Finished Goods Inventory =  $\$30,000 + \$525,000 - \$544,000 = \$11,000$ .

AACSB: Analytical Thinking

98. Mendez Inc. had the following information for the preceding year:

	Beginning Inventory (1/1)	Ending Inventory (12/31)
Work in Process Inventory	??	\$35,000
Finished Goods Inventory	??	\$30,000

Additional information for the year is as follows:

Direct materials used	\$200,000
Direct labor	\$150,000
Manufacturing overhead applied	\$160,000
Cost of goods manufactured	\$525,000
Cost of goods sold	\$544,000

What was the beginning Work in Process Inventory balance on 1/1?

- A. \$49,000
- B. \$65,000
- C. \$50,000**
- D. \$69,000

Current manufacturing costs = \$200,000 + \$150,000 + \$160,000 = \$510,000. Cost of goods manufactured = \$525,000 = Beginning Work in Process Inventory + \$510,000 - \$35,000, so ending Work in Process Inventory = \$525,000 + \$35,000 - \$510,000 = \$50,000.

99. Mendez Inc. had the following information for the preceding year:

	Beginning Inventory (1/1)	Ending Inventory (12/31)
Work in Process Inventory	??	\$35,000
Finished Goods Inventory	??	\$30,000

Additional information for the year is as follows:

Direct materials used	\$200,000
Direct labor	\$150,000
Manufacturing overhead applied	\$160,000
Cost of goods manufactured	\$525,000
Unadjusted cost of goods sold	\$544,000

What was the beginning Finished Goods Inventory balance on 1/1?

- A. \$49,000
- B. \$65,000
- C. \$50,000
- D. \$69,000

$\$544,000 = \text{Beginning Finished Goods Inventory} + \$525,000 - \$30,000$ . Beginning Finished Goods Inventory =  $\$544,000 + \$30,000 - \$525,000 = \$49,000$ .

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

100. Job order costing systems for companies that compete in, for example, the green building arena should reflect:

- A. only costs in dollars.
- B. only sustainability-related metrics.
- C.** both costs of materials in dollars and sustainability-related metrics.
- D. neither costs of materials in dollars nor sustainability-related metrics.

The job order costing system for a company that competes in the green building arena, for example, should not only include information about the cost and quantity of materials used on the job, but also whether the materials meet the company's sustainability standards in terms of how and where they were sourced and whether they are "environmentally friendly."

*AACSB: Ethics*

*AICPA: BB Resource Management*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

101. To incorporate sustainability into the Cost of Goods Manufactured report, include information on all of the following **except**:

- A. the cost of direct materials used compared to standard (non-sustainable) materials.
- B.** indirect labor rates.
- C. source information for direct materials used.
- D. sustainability benchmarking information for peer companies.

Individual companies with a focus on sustainability calculate the rates most appropriate to their businesses and industries. Cost, quantity, and source of direct materials would all be relevant to include in the Cost of Goods Manufactured report, as would benchmark information from peer companies. Indirect labor rates are not particularly applicable to sustainability.

*AACSB: Ethics*

*AICPA: BB Resource Management*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

102. Which of the following is incorrect regarding service firms?

- A.** Each client or account is equivalent to a process in a process costing firm.
- B. The accounting system will track the time and resources spent serving a specific client or account.
- C. Managers of service firms need cost information to price their services, to budget and control costs, and to determine the profitability of different types of clients.
- D. The primary driver used to assign costs is billable hours.

In service firms, each client or account is equivalent to a job in a manufacturing (job costing) setting. All the other choices regarding service firms are correct.

*AACSB: Analytical Thinking*

*AICPA: BB Critical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Easy*

*Learning Objective: 02-07 Apply job order costing to a service setting.*

*Topic: Job order costing in a service firm*

103. Service firms:

- A. tend to use a lot of direct materials in addition to billable hours.
- B. tend to incur few indirect costs that cannot be traced to specific clients or accounts.
- C.** assign indirect costs to individual clients or accounts based on an allocation base such as billable hours.
- D. use process costing to assign costs to individual clients or accounts.

Most service firms do not use a lot of direct materials, they tend to incur many indirect costs that cannot be traced to specific clients or accounts, and they use job costing to assign costs to individual clients or accounts. Indirect costs are treated much like manufacturing overhead in a factory and are assigned using an allocation base such as billable hours.

*AACSB: Analytical Thinking*

*AICPA: BB Critical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Medium*

*Learning Objective: 02-07 Apply job order costing to a service setting.*

*Topic: Job order costing in a service firm*

104. Optimum Finance Inc. provides budget, savings, and investment services to clients who want a stress-free financial lifestyle. The company customizes a program for each client based on their individual goals that includes budget recommendations, investment counseling, and savings techniques. The company uses a job order cost system that keeps track of the cost of the amount of time financial consultants spend with each client.

Optimum applies all indirect operating costs (e.g., rent, utilities, and management salaries) as a percentage of the consultant's labor cost. During the most recent year, the firm estimated that it would pay \$500,000 to its consultants and incur indirect operating costs of \$750,000. Actual consultant labor costs were \$537,500 and actual indirect operating costs were \$725,000. What is the predetermined overhead rate that Optimum will use for the current year?

- A.** \$1.50 per dollar of consultant labor cost
- B. \$1.35 per dollar of consultant labor cost
- C. \$0.67 per dollar of consultant labor cost
- D. \$1.45 per dollar of consultant labor cost

The predetermined overhead rate is  $\$750,000/\$500,000 = \$1.50$  per dollar of consultant labor cost.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-07 Apply job order costing to a service setting.*

*Topic: Job order costing in a service firm*

105. Optimum Finance Inc. provides budget, savings, and investment services to clients who want a stress-free financial lifestyle. The company customizes a program for each client based on their individual goals that includes budget recommendations, investment counseling, and savings techniques. The company uses a job order cost system that keeps track of the cost of the amount of time financial consultants spend with each client.

Optimum applies all indirect operating costs (e.g., rent, utilities, and management salaries) as a percentage of the consultant's labor cost. During the most recent year, the firm estimated that it would pay \$500,000 to its consultants and incur indirect operating costs of \$750,000. Actual consultant labor costs were \$537,500 and actual indirect operating costs were \$725,000. During the year, Optimum provided 64 hours of consulting services to Robert Howard for which Optimum pays an average of \$18 per hour. What is the total cost of providing services to Robert?

- A. \$2,707
- B. \$2,822
- C. \$1,924
- D. \$2,880**

The predetermined overhead rate is  $\$750,000/\$500,000 = \$1.50$  per dollar of consultant labor cost. Consultant labor cost for providing services to Robert is \$1,152 ( $64 \times \$18$ ). Overhead is applied at \$1.50 per dollar of consultant labor cost =  $\$1,152 \times \$1.50 = \$1,728$ . Total cost of providing services to Robert =  $\$1,152 + \$1,728 = \$2,880$ .

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-07 Apply job order costing to a service setting.*

*Topic: Job order costing in a service firm*

106. Optimum Finance Inc. provides budget, savings, and investment services to clients who want a stress-free financial lifestyle. The company customizes a program for each client based on their individual goals that includes budget recommendations, investment counseling, and savings techniques. The company uses a job order cost system that keeps track of the cost of the amount of time financial consultants spend with each client.

Optimum applies all indirect operating costs (e.g., rent, utilities, and management salaries) as a percentage of the consultant's labor cost. During the most recent year, the firm estimated that it would pay \$500,000 to its consultants and incur indirect operating costs of \$750,000. Actual consultant labor costs were \$537,500 and actual indirect operating costs were \$725,000. During the year, Optimum provided 42 hours of consulting services to Joan Clair for which Optimum pays an average of \$20 per hour. What is the total cost of providing services to Joan?

- A. \$2,100
- B. \$1,974
- C. \$2,058
- D. \$1,403

The predetermined overhead rate is  $\$750,000/\$500,000 = \$1.50$  per dollar of consultant labor cost. Consultant labor cost for providing services to Joan is \$840 ( $42 \times \$20$ ). Overhead is applied at \$1.50 per dollar of consultant labor cost =  $\$840 \times \$1.50 = \$1,260$ . Total cost of providing services to Joan =  $\$840 + \$1,260 = \$2,100$ .

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Accessibility: Keyboard Navigation*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-07 Apply job order costing to a service setting.*

*Topic: Job order costing in a service firm*

## Essay Questions

107. Deer Lake Inc. uses a job order costing system with manufacturing overhead applied to products at a rate of 150% of direct labor cost. Treating each case independently, find the missing amounts for a through l:

	Case #1	Case #2	Case #3
Direct materials used	\$20,000	e.	\$10,000
Direct labor	\$25,000	f.	i.
Manufacturing overhead applied	a.	\$45,000	j.
Total manufacturing costs	b.	\$95,000	\$35,000
Beginning Work in Process	\$10,000	g.	\$6,000
Ending Work in process	\$8,000	\$10,000	k.
Cost of goods manufactured	c.	\$93,000	\$36,000
Beginning Finished Goods	\$12,000	\$12,000	l.
Ending Finished Goods	\$15,500	h.	\$4,000
Cost of goods sold (unadjusted)	d.	\$91,000	\$37,000

	Case #1	Case #2	Case #3
Direct materials used	\$20,000	e. 20,000	\$10,000
Direct labor	\$25,000	f. 30,000	i. 10,000
Manufacturing overhead applied	a. 37,500	\$45,000	j. 15,000

Total manufacturing costs	b. 82,500	\$95,000	\$35,000
Beginning Work in Process	\$10,000	g. 8,000	\$6,000
Ending Work in process	\$8,000	\$10,000	k. 5,000
Cost of goods manufactured	c. 84,500	\$93,000	\$36,000
Beginning Finished Goods	\$12,000	\$12,000	l. 5,000
Ending Finished Goods	\$15,500	h. 14,000	\$4,000
Cost of goods sold (unadjusted)	d. 81,000	\$91,000	\$37,000

Feedback: Direct materials + Direct labor + Manufacturing overhead applied = Total manufacturing costs. Total manufacturing costs + Beginning WIP - Ending WIP = Cost of goods manufactured. Cost of goods manufactured + Beginning FG - Ending FG = Cost of goods sold (unadjusted). For Case #3, use the unknown variable "X" for direct labor, and 1.5X for overhead. The formula is then:  $X + 1.5X + 10,000 = 35,000$ . Then, solve for X.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

*Topic: Record applied manufacturing overhead*

108. Barone Inc. uses a job order costing system with manufacturing overhead applied to products at a rate of 100% of direct labor cost. Treating each case independently, find the missing amounts for a through l:

	Case #1	Case #2	Case #3
Direct materials used	\$20,000	e.	\$10,000
Direct labor	\$20,000	f.	i.
Manufacturing overhead applied	a.	\$30,000	j.
Total manufacturing costs	b.	\$80,000	\$30,000
Beginning Work in Process	\$10,000	g.	\$4,000
Ending Work in process	\$12,000	\$5,000	k.
Cost of goods manufactured	c.	\$79,000	\$28,000
Beginning Finished Goods	\$12,000	\$15,000	l.
Ending Finished Goods	\$9,000	h.	\$15,000
Cost of goods sold (unadjusted)	d.	\$81,000	\$26,000

	Case #1	Case #2	Case #3
Direct materials used	\$20,000	e. 20,000	\$10,000
Direct labor	\$20,000	f. 30,000	i. 10,000
Manufacturing overhead applied	a. 20,000	\$30,000	j. 10,000

Total manufacturing costs	b. 60,000	\$80,000	\$30,000
Beginning Work in Process	\$10,000	g. 4,000	\$4,000
Ending Work in process	\$12,000	\$5,000	k. 6,000
Cost of goods manufactured	c. 58,000	\$79,000	\$28,000
Beginning Finished Goods	\$12,000	\$15,000	l. 13,000
Ending Finished Goods	\$9,000	h. 13,000	\$15,000
Cost of goods sold (unadjusted)	d. 61,000	\$81,000	\$26,000

Feedback: Direct materials + Direct labor + Manufacturing overhead applied = Total manufacturing costs. Total manufacturing costs + Beginning WIP - Ending WIP = Cost of goods manufactured. Cost of goods manufactured + Beginning FG - Ending FG = Cost of goods sold (unadjusted).

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

*Topic: Record applied manufacturing overhead*

109. Miller Park Inc. uses a job order costing system with manufacturing overhead applied to products at a rate of 80% of direct labor cost. Treating each case independently, find the missing amounts for a through l:

	Case #1	Case #2	Case #3
Direct materials used	\$20,000	e.	\$20,000
Direct labor	\$25,000	\$20,000	i.
Manufacturing overhead applied	a.	f.	j.
Total manufacturing costs	b.	\$46,000	\$38,000
Beginning Work in Process	\$9,000	g.	\$6,000
Ending Work in process	\$7,000	\$6,000	\$3,000
Cost of goods manufactured	c.	\$45,000	k.
Beginning Finished Goods	\$13,000	\$8,000	l.
Ending Finished Goods	\$14,000	h.	\$8,000
Cost of goods sold (unadjusted)	d.	\$48,000	\$43,000

	Case #1	Case #2	Case #3
Direct materials used	\$20,000	e. \$10,000	\$20,000
Direct labor	\$25,000	\$20,000	i. 10,000
Manufacturing overhead applied	a. 20,000	f. \$16,000	j. 8,000

Total manufacturing costs	b. 65,000	\$46,000	\$38,000
Beginning Work in Process	\$9,000	g. \$5,000	\$6,000
Ending Work in process	\$7,000	\$6,000	\$3,000
Cost of goods manufactured	c. 67,000	\$45,000	k. \$41,000
Beginning Finished Goods	\$13,000	\$8,000	l. 10,000
Ending Finished Goods	\$14,000	h. 5,000	\$8,000
Cost of goods sold (unadjusted)	d. 66,000	\$48,000	\$43,000

Feedback: Direct materials + Direct labor + Manufacturing overhead applied = Total manufacturing costs. Total manufacturing costs + Beginning WIP - Ending WIP = Cost of goods manufactured. Cost of goods manufactured + Beginning FG - Ending FG = Cost of goods sold (unadjusted). For Case #3, use the unknown variable "X" for direct labor, and 0.8X for overhead. The formula is then  $X + 0.8X + 20,000 = 38,000$ . Then solve for X.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Analyze*

*Difficulty: 3 Haro*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

*Topic: Record applied manufacturing overhead*

110. Nashville Inc. uses a job order costing system with manufacturing overhead applied to products at a rate of 200% of direct labor cost. Treating each case independently, find the missing amounts for a through l:

	Case #1	Case #2	Case #3
Direct materials used	a.	e.	\$20,000
Direct labor	\$20,000	f.	\$30,000
Manufacturing overhead applied	b.	\$45,000	i.
Total manufacturing costs	\$70,000	\$90,000	j.
Beginning Work in Process	c.	g.	\$15,000
Ending Work in process	\$10,000	\$3,000	\$17,000
Cost of goods manufactured	\$67,000	\$94,000	k.
Beginning Finished Goods	\$12,000	\$14,000	l.
Ending Finished Goods	d.	\$12,000	\$15,000
Cost of goods sold (unadjusted)	\$63,000	h.	\$113,000

	Case #1	Case #2	Case #3
Direct materials used	a. 10,000	e. 22,500	\$20,000
Direct labor	\$20,000	f. 22,500	\$30,000
Manufacturing overhead applied	b. 40,000	\$45,000	i. 60,000

Total manufacturing costs	\$70,000	\$90,000	j. 110,000
Beginning Work in Process	c. 7,000	g. 7,000	\$15,000
Ending Work in process	\$10,000	\$3,000	\$17,000
Cost of goods manufactured	\$67,000	\$94,000	k. 108,000
Beginning Finished Goods	\$12,000	\$14,000	l. 20,000
Ending Finished Goods	d. 16,000	\$12,000	\$15,000
Cost of goods sold (unadjusted)	\$63,000	h. 96,000	\$113,000

Feedback: Direct materials + Direct labor + Manufacturing overhead applied = Total manufacturing costs. Total manufacturing costs + Beginning WIP - Ending WIP = Cost of goods manufactured. Cost of goods manufactured + Beginning FG - Ending FG = Cost of goods sold (unadjusted).

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Prepare the cost of goods manufactured report*

*Topic: Record applied manufacturing overhead*

111. Green Cabinets is a custom cabinet builder. They recently completed a set of kitchen cabinets (Job #1478), as summarized below:

Job Number: #1478							
Date started: 4/07/20x5							
Date completed: 4/22/20x5							
Description: Cherry kitchen cabinets							
					<b>Applied</b>		
<b>Direct Materials</b>		<b>Direct Labor</b>			<b>Manufacturing Overhead</b>		
Req #	Amount	Ticket	Hours	Amount	Hours	Rate	Amount
385	\$300	128	16	\$288			
391	225	130	23	426			
395	150	133	12	264			
401	<u>215</u>		<u>    </u>	<u>    </u>			
Total	\$890	Total	51	\$978			
<b>Cost Summary</b>							
	Direct Material Cost				\$890		
	Direct Labor Cost				978		
	Applied Manufacturing Overhead				<u>    </u>		
	Total Cost						

Green Cabinets applies overhead to jobs at a rate of \$12 per direct labor hour.

- How much overhead would be applied to Job #1478?
- What is the total cost of Job #1478?

- \$612
- \$2,480

Feedback: To apply manufacturing overhead, multiply the predetermined overhead rate (\$12) by the actual value of the allocation base (51 direct labor hours). (51 hours × \$12 per direct

labor hour = \$612) The total cost of the job is the sum of direct materials (\$890), direct labor (\$978), and applied manufacturing overhead (\$612). ( $\$2,480 = \$890 + \$978 + \$612$ )

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-02 Describe the source documents used to track direct materials and direct labor costs to the job cost sheet.*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Job cost sheet*

*Topic: Predetermined overhead rates*

*Topic: Prepare the cost of goods manufactured report*

*Topic: Record applied manufacturing overhead*

112. Russo Cabinets is a custom cabinet builder. They recently completed a set of kitchen cabinets (Job #1887), as summarized below:

Job Number: #1887							
Date started: 4/17/20x5							
Date completed: 4/29/20x5							
Description: Pecan kitchen cabinets							
					<b>Applied</b>		
<b>Direct Materials</b>		<b>Direct Labor</b>			<b>Manufacturing Overhead</b>		
Req #	Amount	Ticket	Hours	Amount	Hours	Rate	Amount
385	\$400	128	18	\$396			
391	325	130	29	696			
395	250	133	15	390			
401	415						
Total	\$1,390	Total	62	\$1,482			
Cost Summary							
	Direct Material Cost			\$1,390			
	Direct Labor Cost			1,482			
	Applied Manufacturing Overhead						
	Total Cost						

Russo applies overhead to jobs at a rate of \$18 per direct labor hour.

- a. How much overhead would be applied to Job #1887?
- b. What is the total cost of Job #1887?

- a. \$1,116
- b. \$3,988

Feedback: To apply manufacturing overhead, multiply the predetermined overhead rate (\$18 per direct labor hour) by the actual value of the allocation base (62 direct labor hours). (62

hours × \$18 per direct labor hour = \$1,116) The total cost of the job is the sum of direct materials (\$1,390), direct labor (\$1,482), and applied manufacturing overhead (\$1,116).  
( $\$3,988 = \$1,390 + \$1,482 + \$1,116$ )

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-02 Describe the source documents used to track direct materials and direct labor costs to the job cost sheet.*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Job cost sheet*

*Topic: Predetermined overhead rates*

*Topic: Prepare the cost of goods manufactured report*

*Topic: Record applied manufacturing overhead*

113. Geller Cabinets is a custom cabinet builder. They recently completed a set of kitchen cabinets (Job #12478), as summarized below:

Job Number: #12478							
Date started: 8/05/20x5							
Date completed: 8/25/20x5							
Description: Butternut kitchen cabinets							
					<b>Applied</b>		
<b>Direct Materials</b>		<b>Direct Labor</b>			<b>Manufacturing Overhead</b>		
<b>Req #</b>	<b>Amount</b>	<b>Ticket</b>	<b>Hours</b>	<b>Amount</b>	<b>Hours</b>	<b>Rate</b>	<b>Amount</b>
385	\$400	128	16	\$256			
391	324	130	23	390			
395	196	133	12	186			
401	<u>455</u>	141	<u>15</u>	<u>330</u>			
Total	\$1,375	Total	66	\$1,162			
<b>Cost Summary</b>							
	Direct Material Cost			\$1,375			
	Direct Labor Cost			1,162			
	Applied Manufacturing Overhead						
	Total Cost						

Geller applies overhead to jobs at a rate of \$15 per direct labor hour.

- a. How much overhead would be applied to Job #12478?
- b. What is the total cost of Job #12478?

- a. \$990
- b. \$3,527

Feedback: To apply manufacturing overhead, multiply the predetermined overhead rate (\$15 per direct labor hour) by the actual value of the allocation base (66 hours). (66 hours × \$15 per

direct labor hour = \$990) The total cost of the job is the sum of direct materials (\$1,375), direct labor (\$1,162), and applied manufacturing overhead (\$990).

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-02 Describe the source documents used to track direct materials and direct labor costs to the job cost sheet.*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Job cost sheet*

*Topic: Predetermined overhead rates*

*Topic: Prepare the cost of goods manufactured report*

*Topic: Record applied manufacturing overhead*

114. Belton Custom Kitchens is a custom cabinet builder. They recently completed a set of kitchen cabinets (Job #3097), as summarized below:

Job Number: #3097							
Date started: 11/10/20x5							
Date completed: 11/27/20x5							
Description: Oak kitchen cabinets							
					<b>Applied</b>		
<b>Direct Materials</b>		<b>Direct Labor</b>			<b>Manufacturing Overhead</b>		
Req #	Amount	Ticket	Hours	Amount	Hours	Rate	Amount
1385	\$300	2128	18	\$396			
1391	225	2130	27	621			
1395	150	2133	14	308			
1401	<u>215</u>	2144	<u>18</u>	<u>414</u>			
Total	\$890	Total	77	\$1,739			
<b>Cost Summary</b>							
	Direct Material Cost				\$890		
	Direct Labor Cost				1,739		
	Applied Manufacturing Overhead						
	Total Cost						

Belton applies overhead to jobs at a rate of \$17 per direct labor hour.

- a. How much overhead would be applied to Job #3097?
- b. What is the total cost of Job #3097?

- a. \$1,309
- b. \$3,938

Feedback: To apply manufacturing overhead, multiply the predetermined overhead rate (\$17 per direct labor hour) by the actual value of the allocation base (77 hours). (77 hours × \$17 per

direct labor hour = \$1,309) The total cost of the job is the sum of direct materials (\$890), direct labor (\$1,739), and applied manufacturing overhead (\$1,309). ( $\$3,938 = \$890 + \$1,739 + \$1,309$ )

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-02 Describe the source documents used to track direct materials and direct labor costs to the job cost sheet.*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Job cost sheet*

*Topic: Predetermined overhead rates*

*Topic: Prepare the cost of goods manufactured report*

*Topic: Record applied manufacturing overhead*

115. Koebel Corp. uses a job order costing system with manufacturing overhead applied to products on the basis of direct labor hours. For the upcoming year, Koebel Corp. estimated total manufacturing overhead cost at \$500,000 and total direct labor hours of 50,000. Koebel Corp. started the year with no beginning balances in either Work in Process Inventory or Finished Goods Inventory. During the year, actual manufacturing overhead incurred was \$512,500 and 49,000 direct labor hours were used.

- a. Calculate the predetermined overhead rate.
- b. Calculate how much manufacturing overhead will be applied to production.
- c. Is overhead over or underapplied? By how much?
- d. What account should be adjusted for over or underapplied overhead? Should the balance be increased or decreased?

- a. \$10
- b. \$490,000
- c. \$22,500 underapplied
- d. Cost of goods sold, increased

Feedback: a. The predetermined overhead rate is calculated by dividing estimated overhead by estimated allocation base.  $\$10 = \$500,000 / \$50,000$

b. Applied overhead is calculated by multiplying the predetermined overhead rate by the actual allocation base.  $\$490,000 = 49,000 \times \$10$

c. Determine whether overhead is over- or underapplied by subtracting applied overhead from actual overhead.  $\$512,500 - \$490,000 = \$22,500$  of underapplied overhead (since actual overhead exceeds applied overhead)

d. Increase cost of goods sold by \$22,500 with a direct adjustment because the underapplied overhead would be corrected by a credit to manufacturing overhead and a debit to cost of goods sold.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Job cost sheet*

116. Cadburn Corp. uses a job order costing system with manufacturing overhead applied to products on the basis of direct labor hours. For the upcoming year, Cadburn Corp. estimated total manufacturing overhead cost at \$250,000 and total direct labor hours of 50,000. During the year actual manufacturing overhead incurred was \$262,500 and 51,000 direct labor hours were used.
- Calculate the predetermined overhead rate.
  - Calculate how much manufacturing overhead will be applied to production.
  - Is overhead over- or underapplied? By how much?
  - What account should be adjusted for over- or underapplied overhead? Should the balance be increased or decreased?

- \$5
- \$255,000
- \$7,500 underapplied
- Cost of goods sold, increased with a debit and manufacturing overhead decreased and closed out with a credit.

Feedback: a. Calculate the predetermined overhead rate by dividing estimated overhead by estimated allocation base. ( $\$5 = \$250,000/50,000$ )

b. Calculate applied overhead by multiplying the predetermined overhead rate by the actual allocation base. ( $\$255,000 = \$5 \times 51,000$ )

c. Calculate over- or underapplied overhead by subtracting applied overhead from actual overhead. ( $\$7,500 = \$262,500 - \$255,000$ ) This amount is underapplied since actual overhead exceeds applied overhead and would be represented by a debit balance in the manufacturing overhead account.

d. Increase cost of goods sold by \$7,500 with a direct adjustment to credit the manufacturing overhead account and debit the cost of goods sold account.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*  
*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Job cost sheet*

*Topic: Predetermined overhead rates*

*Topic: Record applied manufacturing overhead*

117. Chloe Corp. uses a job order costing system with manufacturing overhead applied to products on the basis of direct labor hours. For the upcoming year, Chloe Corp. estimated total manufacturing overhead cost at \$480,000 and total direct labor hours of 40,000. During the year actual manufacturing overhead incurred was \$462,500 and 41,000 direct labor hours were used.
- Calculate the predetermined overhead rate.
  - Calculate how much manufacturing overhead will be applied to production.
  - Is overhead over- or underapplied? By how much?
  - What account should be adjusted for over- or underapplied overhead? Should the balance be increased or decreased?

- \$12
- \$492,000
- \$29,500 over-applied
- Cost of goods sold, decreased

Feedback: a. Calculate the predetermined overhead rate by dividing estimated overhead by estimated allocation base. ( $\$12 = \$480,000/40,000$ )

b. Calculate applied overhead by multiplying the predetermined overhead rate by the actual allocation base. ( $\$492,000 = \$12 \times 41,000$ )

c. Calculate over- or underapplied overhead by subtracting applied overhead from actual overhead. ( $\$29,500 = \$462,500 - \$492,000$ ) This amount is overapplied since applied overhead exceeds actual overhead and would be represented by a credit balance in the manufacturing overhead account.

d. Decrease cost of goods sold by \$29,500 with a direct adjustment to debit the manufacturing overhead account and credit the cost of goods sold account.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Job cost sheet*

*Topic: Predetermined overhead rates*

*Topic: Record applied manufacturing overhead*

118. Blueberry Corp. uses a job order costing system with manufacturing overhead applied to products on the basis of machine hours. For the upcoming year, Blueberry Corp. estimated total manufacturing overhead cost at \$270,000 and total machine hours of 45,000. During the year actual manufacturing overhead incurred was \$258,750 and 46,600 machine hours were used.
- Calculate the predetermined overhead rate.
  - Calculate how much manufacturing overhead will be applied to production.
  - Is overhead over- or underapplied? By how much?
  - What account should be adjusted for over- or underapplied overhead? Should the balance be increased or decreased?

- \$6
- \$279,600
- \$20,850 Over-applied
- Cost of goods sold, decreased

Feedback: a. Calculate predetermined overhead rate by dividing estimated overhead by estimated allocation base. ( $\$6 = \$270,000/45,000$ )

b. Calculate applied overhead by multiplying the predetermined overhead rate by the actual allocation base. ( $\$279,600 = \$6 \times 46,600$ )

c. Subtract applied overhead from actual overhead ( $\$20,850 = \$258,750 - \$279,600$ ) to determine that overhead is overapplied (since actual overhead is less than applied overhead) and would be represented by a credit balance in the manufacturing overhead account.

d. Decrease cost of goods sold by \$20,850 with a direct adjustment to debit the manufacturing overhead account and credit the cost of goods sold account.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Topic: Job cost sheet*

*Topic: Predetermined overhead rates*

*Topic: Record applied manufacturing overhead*

119. Curtis Inc. uses a job order costing system. Manufacturing overhead is applied on the basis of direct labor cost. Total manufacturing overhead was estimated to be \$75,000 for the year; direct labor was estimated to total \$150,000.

	1/1	12/31
Raw Materials Inventory	\$10,000	\$13,000
Work in Process Inventory	\$22,000	\$19,000
Finished Goods Inventory	\$34,000	\$41,000

The following transactions have occurred during the year.

Raw materials purchases	\$100,000
Direct materials used	\$91,000
Direct labor	\$145,000
Indirect materials used	\$6,000
Indirect labor	\$15,000
Factory equipment depreciation	\$24,000
Factory rent	\$18,000
Factory utilities	\$7,500
Other factory costs	\$6,500

- Calculate the predetermined overhead rate.
- Calculate cost of goods manufactured.
- Calculate the over- or underapplied overhead.
- Calculate adjusted cost of goods sold.

a. 50%

<b>b. Cost of goods manufactured computed as follows:</b>	
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Direct materials used	\$91,000
Direct labor	145,000
Overhead applied 50% × 145,000	<u>72,500</u>
Total manufacturing costs	308,500
+ beginning WIP	22,000
- ending WIP	<u>19,000</u>
Cost of goods manufactured	\$311,500
<b>c. Underapplied overhead computed as follows:</b>	
Indirect materials	\$6,000
Indirect labor	15,000
Factory equipment depreciation	24,000
Factory rent	18,000
Factory utilities	7,500
Other factory costs	<u>6,500</u>
Actual manufacturing overhead	\$77,000
Applied overhead	<u>72,500</u>
Under-applied overhead	\$4,500
<b>d. Adjusted Cost of goods sold computed as follows:</b>	
Beginning finished goods	\$34,000
Cost of goods manufactured	<u>311,500</u>
Goods available for sale	\$345,500
- ending finished goods	<u>41,000</u>
Unadjusted Cost of goods sold	\$304,500
Under-applied overhead	<u>4,500</u>
Adjusted Cost of goods sold	\$309,000

Feedback: a. Calculate the predetermined overhead rate by dividing estimated overhead by estimated allocation base of direct labor cost. (50% = \$75,000/\$150,000)

b. Apply overhead by multiplying the predetermined overhead rate by the actual allocation base. (\$72,500 = 50% × \$145,000). The cost of goods manufactured is the sum of direct materials (\$91,000), direct labor (\$145,000), and applied overhead (\$72,500), plus beginning WIP (\$22,000), less ending WIP (\$19,000). (\$311,500 = \$91,000 + \$145,000 + \$72,500 +

\$22,000 - \$19,000)

c. Actual manufacturing overhead is the sum of indirect materials, indirect labor, factory equipment depreciation, factory rent, factory utilities, and other factory costs. ( $\$77,000 = \$6,000 + \$15,000 + \$24,000 + \$18,000 + \$7,500 + \$6,500$ ) Compare actual manufacturing overhead ( $\$77,000$ ) to applied manufacturing overhead ( $\$72,500$ ). Overhead was underapplied since actual overhead exceeded applied overhead. ( $\$4,500 = \$77,000 - \$72,500$ )

d. Unadjusted cost of goods sold is the sum of beginning finished goods and cost of goods manufactured, reduced by ending finished goods. ( $\$304,500 = \$34,000 + \$311,500 - \$41,000$ ) Adjust cost of goods sold for underapplied overhead by increasing unadjusted cost of goods sold by the underapplied amount. ( $\$309,000 = \$304,500 + \$4,500$ )

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-02 Describe the source documents used to track direct materials and direct labor costs to the job cost sheet.*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Job cost sheet*

*Topic: Predetermined overhead rates*

*Topic: Prepare the cost of goods manufactured report*

*Topic: Record applied manufacturing overhead*

120. Kayla Inc. uses a job order costing system. Manufacturing overhead is applied on the basis of direct labor cost. Total manufacturing overhead was estimated to be \$150,000 for the year; direct labor was estimated to total \$300,000.

	1/1	12/31
Raw Materials Inventory	\$20,000	\$26,000
Work in Process Inventory	\$44,000	\$38,000
Finished Goods Inventory	\$68,000	\$82,000

The following transactions have occurred during the year.

Raw materials purchases	\$200,000
Direct materials used	\$182,000
Direct labor	\$290,000
Indirect materials used	\$12,000
Indirect labor	\$30,000
Factory equipment depreciation	\$48,000
Factory rent	\$36,000
Factory utilities	\$15,000
Other factory costs	\$13,000

- Calculate the predetermined overhead rate.
- Calculate cost of goods manufactured.
- Calculate the over- or underapplied overhead.
- Calculate adjusted cost of goods sold.

a. 50%

<b>b. Cost of goods manufactured computed as follows:</b>	
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Direct materials used	\$182,000
Direct labor	290,000
Overhead applied 50% × 290,000	<u>145,000</u>
Total manufacturing costs	\$617,000
+ beginning WIP	44,000
- ending WIP	<u>38,000</u>
Cost of goods manufactured	\$623,000
<b>c. Underapplied overhead computed as follows:</b>	
Indirect materials	\$12,000
Indirect labor	30,000
Factory equipment depreciation	48,000
Factory rent	36,000
Factory utilities	15,000
Other factory costs	<u>13,000</u>
Actual manufacturing overhead	\$154,000
Applied overhead (\$290,000 × 50%)	<u>145,000</u>
Under-applied overhead	\$9,000
<b>d. Adjusted Cost of goods sold computed as follows:</b>	
Beginning finished goods	\$68,000
Cost of goods manufactured	<u>623,000</u>
Goods available for sale	\$691,000
- ending finished goods	<u>82,000</u>
Unadjusted Cost of goods sold	\$609,000
Under-applied overhead	<u>9,000</u>
Adjusted Cost of goods sold	\$618,000

Feedback: a. Calculate predetermined overhead rate by dividing estimated overhead by estimated allocation base of direct labor cost. (50% = \$150,000/\$300,000)

b. Apply overhead by multiplying the predetermined overhead rate by the actual allocation base. (\$145,000 = 50% × \$290,000) Cost of goods manufactured is the sum of direct materials, direct labor, and applied overhead, plus beginning WIP, less ending WIP. (\$623,000 = \$182,000 + \$290,000 + \$145,000 + \$44,000 - \$38,000)

- c. Calculate actual manufacturing overhead by adding indirect materials, indirect labor, factory equipment depreciation, factory rent, factory utilities, and other factory costs. ( $\$154,000 = \$12,000 + \$30,000 + \$48,000 + \$36,000 + \$15,000 + \$13,000$ ) Subtract applied overhead ( $\$145,000$ ) from actual overhead ( $\$154,000$ ) to determine that overhead was underapplied by  $\$9,000$  (because applied overhead was less than actual overhead).
- d. Unadjusted cost of goods sold is the sum of beginning finished goods inventory and cost of goods manufactured, reduced by ending finished goods inventory. ( $\$609,000 = \$68,000 + \$623,000 - \$82,000$ ) Increase unadjusted cost of goods sold by  $\$9,000$  to adjust for the underapplied manufacturing overhead. ( $\$618,000 = \$609,000 + \$9,000$ )

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-02 Describe the source documents used to track direct materials and direct labor costs to the job cost sheet.*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Job cost sheet*

*Topic: Predetermined overhead rates*

*Topic: Prepare the cost of goods manufactured report*

*Topic: Record applied manufacturing overhead*

121. Cadbury Company uses a job order costing system. Manufacturing overhead is applied on the basis of direct labor cost. Total manufacturing overhead was estimated to be \$120,000 for the year; direct labor was estimated to total \$150,000.

	1/1	12/31
Raw Materials Inventory	\$13,000	\$10,000
Work in Process Inventory	\$19,000	\$22,000
Finished Goods Inventory	\$41,000	\$32,000

The following transactions have occurred during the year.

Raw materials purchases	\$100,000
Direct materials used	\$91,000
Direct labor	\$125,000
Indirect materials used	\$12,000
Indirect labor	\$18,000
Factory equipment depreciation	\$28,000
Factory rent	\$22,000
Factory utilities	\$9,500
Other factory costs	\$8,500

- Calculate the predetermined overhead rate.
- Calculate cost of goods manufactured.
- Calculate the over- or underapplied overhead.
- Calculate adjusted cost of goods sold.

a. 80%

<b>b. Cost of goods manufactured is computed as follows:</b>	
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Direct materials used	\$91,000
Direct labor	125,000
Overhead applied 80% × 125,000	<u>100,000</u>
Total manufacturing costs	\$316,000
+ beginning WIP	19,000
- ending WIP	<u>22,000</u>
Cost of goods manufactured	\$313,000
<b>c. Overapplied overhead computed as follows:</b>	
Indirect materials	\$12,000
Indirect labor	18,000
Factory equipment depreciation	28,000
Factory rent	22,000
Factory utilities	9,500
Other factory costs	<u>8,500</u>
Actual manufacturing overhead	\$98,000
Applied overhead (\$125,000 × 80%)	<u>100,000</u>
Over-applied overhead	\$2,000
<b>d. Adjusted cost of goods sold computed as follows:</b>	
Beginning finished goods	\$41,000
Cost of goods manufactured	<u>313,000</u>
Goods available for sale	\$354,000
- ending finished goods	<u>32,000</u>
Unadjusted Cost of goods sold	\$322,000
Over-applied overhead	<u>(2,000)</u>
Adjusted Cost of goods sold	\$320,000

Feedback: a. Calculate the predetermined overhead rate by dividing estimated overhead by estimated allocation base of direct labor cost. (80% = \$120,000/\$150,000)

b. Apply overhead by multiplying the predetermined overhead rate by the actual allocation base. (\$100,000 = 80% × \$125,000) Cost of goods manufactured equals the sum of direct materials, direct labor, and applied overhead, plus beginning WIP, less ending WIP. (\$313,000 = \$91,000 + \$125,000 + \$100,000)

c. Actual manufacturing overhead is the sum of indirect materials, indirect labor, factory equipment depreciation, factory rent, factory utilities, and other factory costs. ( $\$98,000 = \$12,000 + \$18,000 + \$28,000 + \$22,000 + \$9,500 + \$8,500$ ) Subtract applied manufacturing overhead by actual manufacturing overhead to determine it is overapplied. ( $\$2,000 = \$98,000 - \$100,000$ )

d. Unadjusted cost of goods sold is the sum of beginning finished goods inventory and cost of goods manufactured, less ending finished goods inventory. ( $\$322,000 = \$41,000 + \$313,000 - \$32,000$ ) Adjust cost of goods sold for the overapplied overhead by reducing it by  $\$2,000$ . ( $\$320,000 = \$322,000 - \$2,000$ )

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-02 Describe the source documents used to track direct materials and direct labor costs to the job cost sheet.*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Job cost sheet*

*Topic: Predetermined overhead rates*

*Topic: Prepare the cost of goods manufactured report*

*Topic: Record applied manufacturing overhead*

122. Ecola Company uses a job order costing system. Manufacturing overhead is applied on the basis of direct labor cost. Total manufacturing overhead was estimated to be \$120,000 for the year; direct labor was estimated to total \$150,000.

	1/1	12/31
Raw Materials Inventory	\$13,000	\$10,000
Work in Process Inventory	\$29,000	\$22,000
Finished Goods Inventory	\$41,000	\$32,000

The following transactions have occurred during the year.

Raw materials purchases	\$100,000
Direct materials used	\$87,000
Direct labor	\$135,000
Indirect materials used	\$16,000
Indirect labor	\$19,000
Factory equipment depreciation	\$28,000
Factory rent	\$15,000
Factory utilities	\$11,500
Other factory costs	\$8,500

- Calculate the predetermined overhead rate.
- Calculate cost of goods manufactured.
- Calculate the over or under-applied overhead.
- Calculate adjusted cost of goods sold.

a.  $80\% = \$120,000 / \$150,000$

<b>b. Cost of goods manufactured computed as follows:</b>	
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Direct materials used	\$87,000
Direct labor	135,000
Overhead applied $80\% \times 135,000$	<u>108,000</u>
Total manufacturing costs	\$330,000
+ beginning WIP	29,000
- ending WIP	<u>22,000</u>
Cost of goods manufactured	\$337,000
<b>c. Computation of overapplied overhead computed as follows:</b>	
Indirect materials	\$16,000
Indirect labor	19,000
Factory equipment depreciation	28,000
Factory rent	15,000
Factory utilities	11,500
Other factory costs	<u>8,500</u>
Actual manufacturing overhead	\$98,000
Applied overhead ( $\$135,000 \times 80\%$ )	<u>108,000</u>
Over-applied overhead	\$10,000
<b>d. Computation of adjusted cost of goods sold computed as follows:</b>	
Beginning finished goods	\$41,000
Cost of goods manufactured	<u>337,000</u>
Goods available for sale	\$378,000
- ending finished goods	<u>32,000</u>
Unadjusted Cost of goods sold	\$346,000
Over-applied overhead	<u>-10,000</u>
Adjusted Cost of goods sold	\$336,000

Feedback: a. Calculate the predetermined overhead rate by dividing estimated overhead by the estimated allocation base of direct labor cost. ( $80\% = \$120,000/\$150,000$ )

b. Apply overhead by multiplying the predetermined overhead rate by the actual allocation base. ( $\$108,000 = 80\% \times \$135,000$ ) Calculate cost of goods manufactured by adding direct materials, direct labor, and applied overhead, plus beginning WIP, less ending WIP. ( $\$337,000 = \$87,000 + \$137,000 + \$108,000 + \$29,000 - \$22,000$ )

c. Actual manufacturing overhead is calculated as the sum of indirect materials, indirect labor, factory equipment depreciation, factory rent, factory utilities, and other factory costs. ( $\$98,000 = \$16,000 + \$19,000 + \$28,000 + \$15,000 + \$11,500 + \$8,500$ ) Subtract applied overhead from actual overhead to determine that overhead was overapplied by  $\$10,000$ . ( $\$10,000 = \$98,000 - \$108,000$ )

d. Unadjusted cost of goods sold is the sum of beginning finished goods inventory and cost of goods manufactured, reduced for ending finished goods inventory. ( $\$346,000 = \$41,000 + \$337,000 - \$32,000$ ). Reduce cost of goods sold by  $\$10,000$  for the overapplied overhead. ( $\$336,000 = \$346,000 - \$10,000$ )

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Apply*

*Difficulty: 3 Hard*

*Learning Objective: 02-02 Describe the source documents used to track direct materials and direct labor costs to the job cost sheet.*

*Learning Objective: 02-03 Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Job cost sheet*

*Topic: Predetermined overhead rates*

*Topic: Prepare the cost of goods manufactured report*

*Topic: Record applied manufacturing overhead*

123. Josie Inc. has provided the following information for 20x5:

- a. Purchased raw materials on account for \$120,000.
- b. Issued \$115,000 in raw materials to production (\$22,000 were not traceable to specific jobs).
- c. Incurred \$115,000 in direct labor costs (14,375 hours) and \$62,500 in supervision costs (paid in cash).
- d. Incurred the following additional manufacturing overhead costs: factory lease \$24,000 (paid in cash); depreciation on equipment \$20,000; custodial supplies \$7,500 (paid in cash).
- e. Incurred the following nonmanufacturing costs, both paid in cash: advertising \$75,000; sales commissions \$88,000.
- f. Applied manufacturing overhead to jobs in process at a rate of \$10 per direct labor hour.
- g. Completed jobs costing a total of \$345,000.
- h. Sold jobs for \$425,000 on account. The cost of the jobs was \$342,000.
- i. Closed the Manufacturing Overhead account balance.

Prepare the journal entries to record these transactions.

a.	Raw Materials Inventory	\$120,000	
	Accounts Payable		\$120,000
b.	Work in Process Inventory	\$93,000	
	Manufacturing Overhead	\$22,000	
	Raw Materials Inventory		\$115,000
c.	Work in Process Inventory	\$115,000	
	Manufacturing Overhead	\$62,500	
	Cash		\$177,500
d.	Manufacturing Overhead	\$51,500	

	Accumulated Depreciation		\$20,000
	Cash		\$31,500
e.	Advertising Expense	\$75,000	
	Commissions Expense	\$88,000	
	Cash		\$163,000
f.	Work in Process Inventory	\$143,750	
	Manufacturing Overhead		\$143,750
g.	Finished Goods Inventory	\$345,000	
	Work in Process Inventory		\$345,000
h.	Accounts Receivable	\$425,000	
	Sales Revenue		\$425,000
	Cost of Goods Sold	\$342,000	
	Finished Goods Inventory		\$342,000
i.	Manufacturing Overhead	\$7,750	
	Cost of Goods Sold		\$7,750

Feedback: When materials are purchased, Raw Materials Inventory is debited. When materials are placed into production, Work in Process Inventory (for direct materials) or Manufacturing Overhead (for indirect materials) is debited, and Raw Materials credited. Labor costs are debited to Work in Process Inventory (direct) or Manufacturing Overhead (indirect). Actual manufacturing overhead costs are debited to Manufacturing Overhead. Nonmanufacturing costs are debited to an expense account. Applied manufacturing overhead is debited to Work in Process Inventory and credited to Manufacturing Overhead. The cost of completed jobs should be debited to Finished Goods Inventory and credited to Work in Process Inventory. The cost of sold jobs should be debited to Cost of Goods Sold and credited to Finished Goods Inventory. Under/overapplied overhead is credited/debited to Manufacturing Overhead, with the other side of the entry to Cost of Goods Sold.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Learning Objective: 02-S1 Prepare journal entries to record the flow of manufacturing and nonmanufacturing costs in a job order cost system.*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

*Topic: Journal entries for job order costing*

*Topic: Record actual manufacturing overhead*

*Topic: Record applied manufacturing overhead*

*Topic: Record labor costs*

*Topic: Record the purchase and issue of materials*

124. Frontier Inc. has provided the following information for 20x5:

- a. Purchased raw materials on account for \$240,000.
- b. Issued \$230,000 in raw materials to production (\$32,000 were not traceable to specific jobs).
- c. Incurred \$242,000 in direct labor costs (24,120 hours) and \$92,500 in supervision costs (paid in cash).
- d. Incurred the following additional manufacturing overhead costs: factory utilities \$24,000 (paid in cash); depreciation on equipment \$45,000; indirect supplies \$17,500 (paid in cash).
- e. Incurred the following nonmanufacturing costs, both paid in cash: advertising \$75,000; sales salaries \$88,000.
- f. Applied manufacturing overhead to jobs in process at a rate of \$9 per direct labor hour.
- g. Completed jobs costing a total of \$644,000.
- h. Sold jobs for \$856,000 on account. The cost of the jobs was \$642,000.
- i. Closed the manufacturing overhead account balance.

Prepare the journal entries to record these transactions.

a.	Raw Materials Inventory	\$240,000	
	Accounts Payable		\$240,000
b.	Work in Process Inventory	\$198,000	
	Manufacturing Overhead	\$32,000	
	Raw Materials Inventory		\$230,000
c.	Work in Process Inventory	\$242,000	
	Manufacturing Overhead	\$92,500	
	Cash		\$334,500
d.	Manufacturing Overhead	\$86,500	

	Accumulated Depreciation		\$45,000
	Cash		\$41,500
e.	Advertising Expense	\$75,000	
	Sales Salary Expense	\$88,000	
	Cash		\$163,000
f.	Work in Process Inventory	\$217,080	
	Manufacturing Overhead		\$217,080
g.	Finished Goods Inventory	\$644,000	
	Work in Process Inventory		\$644,000
h.	Accounts Receivable	\$856,000	
	Sales Revenue		\$856,000
	Cost of Goods Sold	\$642,000	
	Finished Goods Inventory		\$642,000
i.	Manufacturing Overhead	\$6,080	
	Cost of Goods Sold		\$6,080

Feedback: When materials are purchased, Raw Materials Inventory is debited. When materials are placed into production, Work in Process Inventory (for direct materials) or Manufacturing Overhead (for indirect materials) is debited, and Raw Materials credited. Labor costs are debited to Work in Process Inventory (direct) or Manufacturing Overhead (indirect). Actual manufacturing overhead costs are debited to Manufacturing Overhead. Nonmanufacturing costs are debited to an expense account. Applied manufacturing overhead is debited to Work in Process Inventory and credited to Manufacturing Overhead. The cost of completed jobs should be debited to Finished Goods Inventory and credited to Work in Process Inventory. The cost of sold jobs should be debited to Cost of Goods Sold and credited to Finished Goods Inventory. Under/overapplied overhead is credited/debited to Manufacturing Overhead, with the other side of the entry to Cost of Goods Sold.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Learning Objective: 02-S1 Prepare journal entries to record the flow of manufacturing and nonmanufacturing costs in a job order cost system.*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

*Topic: Journal entries for job order costing*

*Topic: Record actual manufacturing overhead*

*Topic: Record applied manufacturing overhead*

*Topic: Record labor costs*

*Topic: Record the purchase and issue of materials*

125. Northwest Inc. has provided the following information for 20x5:

- a. Purchased raw materials on account for \$150,000.
- b. Issued \$130,000 in raw materials to production (\$34,000 were not traceable to specific jobs).
- c. Incurred \$144,000 in direct labor costs (14,120 hours) and \$62,500 in supervision costs (paid in cash).
- d. Incurred the following additional manufacturing overhead costs: factory lease \$36,000 (paid in cash); depreciation on equipment \$30,000; indirect supplies \$13,500 (paid in cash).
- e. Incurred the following nonmanufacturing costs, both paid in cash: advertising \$45,000; sales commissions \$48,000.
- f. Applied manufacturing overhead to jobs in process at a rate of \$13 per direct labor hour.
- g. Completed jobs costing a total of \$415,000.
- h. Sold jobs for \$625,000 on account. The cost of the jobs was \$412,000.
- i. Closed the Manufacturing Overhead account balance.

Prepare the journal entries to record these transactions.

a.	Raw Materials Inventory	\$150,000	
	Accounts Payable		\$150,000
b.	Work in Process Inventory	\$96,000	
	Manufacturing Overhead	\$34,000	
	Raw Materials Inventory		\$130,000
c.	Work in Process Inventory	\$144,000	
	Manufacturing Overhead	\$62,500	
	Cash		\$206,500
d.	Manufacturing Overhead	\$79,500	

	Accumulated Depreciation		\$30,000
	Cash		\$49,500
e.	Advertising Expense	\$45,000	
	Commissions Expense	\$48,000	
	Cash		\$93,000
f.	Work in Process Inventory	\$183,560	
	Manufacturing Overhead		\$183,560
g.	Finished Goods Inventory	\$415,000	
	Work in Process Inventory		\$415,000
h.	Accounts Receivable	\$625,000	
	Sales Revenue		\$625,000
	Cost of Goods Sold	\$422,000	
	Finished Goods Inventory		\$422,000
i.	Manufacturing Overhead	\$7,560	
	Cost of Goods Sold		\$7,560

Feedback: When materials are purchased, Raw Materials Inventory is debited. When materials are placed into production, Work in Process Inventory (for direct materials) or Manufacturing Overhead (for indirect materials) is debited, and Raw Materials credited. Labor costs are debited to Work in Process Inventory (direct) or Manufacturing Overhead (indirect). Actual manufacturing overhead costs are debited to Manufacturing Overhead. Nonmanufacturing costs are debited to an expense account. Applied manufacturing overhead is debited to Work in Process Inventory and credited to Manufacturing Overhead. The cost of completed jobs should be debited to Finished Goods Inventory and credited to Work in Process Inventory. The cost of sold jobs should be debited to Cost of Goods Sold and credited to Finished Goods Inventory. Under/overapplied overhead is credited/debited to Manufacturing Overhead, with the other side of the entry to Cost of Goods Sold.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Learning Objective: 02-S1 Prepare journal entries to record the flow of manufacturing and nonmanufacturing costs in a job order cost system.*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

*Topic: Journal entries for job order costing*

*Topic: Record actual manufacturing overhead*

*Topic: Record applied manufacturing overhead*

*Topic: Record labor costs*

*Topic: Record the purchase and issue of materials*

126. Shellenback Inc. has provided the following information for 20x5:

- a. Purchased raw materials on account for \$200,000.
- b. Issued \$185,000 in raw materials to production (\$12,000 were not traceable to specific jobs).
- c. Incurred \$155,000 in direct labor costs (14,750 hours), \$52,500 in supervision costs (paid in cash).
- d. Incurred the following additional manufacturing overhead costs: factory lease \$22,000 (paid in cash); depreciation on equipment \$26,000; factory utilities \$13,500 (paid in cash).
- e. Incurred the following nonmanufacturing costs, both paid in cash: advertising \$55,000; sales commissions \$58,000.
- f. Applied manufacturing overhead to jobs in process at a rate of \$9 per direct labor hour.
- g. Completed jobs costing a total of \$457,000.
- h. Sold jobs for \$735,000 on account. The cost of the jobs was \$441,000.
- i. Closed the manufacturing overhead account balance.

Prepare the journal entries to record these transactions.

a.	Raw Materials Inventory	\$200,000	
	Accounts Payable		\$200,000
b.	Work in Process Inventory	\$173,000	
	Manufacturing Overhead	\$12,000	
	Raw Materials Inventory		\$185,000
c.	Work in Process Inventory	\$155,000	
	Manufacturing Overhead	\$52,500	
	Cash		\$207,500
d.	Manufacturing Overhead	\$61,500	

	Accumulated Depreciation		\$26,000
	Cash		\$35,500
e.	Advertising Expense	\$55,000	
	Commissions Expense	\$58,000	
	Cash		\$113,000
f.	Work in Process Inventory	\$132,750	
	Manufacturing Overhead		\$132,750
g.	Finished Goods Inventory	\$457,000	
	Work in Process Inventory		\$457,000
h.	Accounts Receivable	\$735,000	
	Sales Revenue		\$735,000
	Cost of Goods Sold	\$441,000	
	Finished Goods Inventory		\$441,000
i.	Manufacturing Overhead	\$6,750	
	Cost of Goods Sold		\$6,750

Feedback: When materials are purchased, Raw Materials Inventory is debited. When materials are placed into production, Work in Process Inventory (for direct materials) or Manufacturing Overhead (for indirect materials) is debited, and Raw Materials credited. Labor costs are debited to Work in Process Inventory (direct) or Manufacturing Overhead (indirect). Actual manufacturing overhead costs are debited to Manufacturing Overhead. Nonmanufacturing costs are debited to an expense account. Applied manufacturing overhead is debited to Work in Process Inventory and credited to Manufacturing Overhead. The cost of completed jobs should be debited to Finished Goods Inventory and credited to Work in Process Inventory. The cost of sold jobs should be debited to Cost of Goods Sold and credited to Finished Goods Inventory. Under/overapplied overhead is credited/debited to Manufacturing Overhead, with the other side of the entry to Cost of Goods Sold.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Apply*

*Difficulty: 2 Medium*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Learning Objective: 02-S1 Prepare journal entries to record the flow of manufacturing and nonmanufacturing costs in a job order cost system.*

*Topic: Calculate overapplied and underapplied manufacturing overhead*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

*Topic: Journal entries for job order costing*

*Topic: Record actual manufacturing overhead*

*Topic: Record applied manufacturing overhead*

*Topic: Record labor costs*

*Topic: Record the purchase and issue of materials*

127. Highview Corp. applies manufacturing overhead to production at 125% of direct labor cost. During 20x5, manufacturing overhead of \$100,000 was applied to production; actual manufacturing overhead was \$109,000. Beginning Work in Process Inventory was \$15,000 and beginning Finished Goods Inventory was \$35,000. Work in Process Inventory increased by 10% during the year and Finished Goods Inventory decreased by 20% during the year. Sales for 20x5 were \$450,000, yielding a \$130,000 gross profit.

Complete the following schedule:

Direct materials used in production	
Direct labor	
Manufacturing overhead applied	
Current manufacturing costs	
Beginning Work in Process Inventory	
Ending Work in Process Inventory	
Cost of goods manufactured	
Beginning Finished Goods Inventory	
Ending Finished Goods Inventory	
Unadjusted Cost of Goods Sold	
Overhead adjustment	
Adjusted Cost of Goods Sold	

Sales	\$450,000	
Less: Cost of Goods Sold	<b>(320,000)</b>	
Gross Profit	\$130,000	

Use Cost of Goods Sold \$320,000 at the bottom of the following statement and work backwards to find direct materials used in production:	
Direct materials used in production	\$125,500
Direct labor	80,000
Manufacturing overhead applied	<u>100,000</u>
Current manufacturing costs	305,500
Beginning Work in Process Inventory	15,000
Ending Work in Process Inventory	<u>16,500</u>
Cost of goods manufactured	304,000
Beginning Finished Goods Inventory	35,000
Ending Finished Goods Inventory	<u>28,000</u>
Unadjusted Cost of Goods Sold	311,000
Overhead adjustment	<u>9,000</u>
Adjusted Cost of Goods Sold	\$320,000

Feedback: Cost of goods manufactured = Direct materials + Direct labor + Applied overhead + Beginning WIP - Ending WIP. Over- or underapplied overhead = Actual - Applied overhead. Adjusted cost of goods sold = Beginning finished goods + cost of goods manufactured - Ending finished goods +/- Under/overapplied overhead.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Calculate overapplied and underapplied manufacturing overhead*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

*Topic: Prepare the cost of goods manufactured report*

*Topic: Record actual manufacturing overhead*

*Topic: Record applied manufacturing overhead*

*Topic: Record labor costs*

*Topic: Record the purchase and issue of materials*

128. Oscar Corp. applies manufacturing overhead to production at 150% of direct labor cost. During 20x5, manufacturing overhead of \$180,000 was applied to production; actual manufacturing overhead was \$199,000. Beginning Work in Process Inventory was \$20,000 and ending Work in Process Inventory was \$24,000. Beginning Finished Goods Inventory was \$42,000, ending Finished Goods Inventory was \$39,000. Sales for 20x5 were \$580,000, yielding a \$117,000 gross profit.

Complete the following schedule:

Direct materials used in production	
Direct labor	
Manufacturing overhead applied	
Current manufacturing costs	
Beginning Work in Process Inventory	
Ending Work in Process Inventory	
Cost of goods manufactured	
Beginning Finished Goods Inventory	
Ending Finished Goods Inventory	
Unadjusted Cost of Goods Sold	
Overhead adjustment	
Adjusted Cost of Goods Sold	

Sales	\$580,000
Less: Cost of Goods Sold	<u>(463,000)</u>
Gross Profit	\$117,000

Use Cost of Goods Sold \$463,000 at the bottom of the following statement and work

backwards to find direct materials used in production:

Direct materials used in production	\$145,000
Direct labor	120,000
Manufacturing overhead applied	<u>180,000</u>
Current manufacturing costs	\$445,000
Beginning Work in Process Inventory	20,000
Ending Work in Process Inventory	<u>24,000</u>
Cost of goods manufactured	\$441,000
Beginning Finished Goods Inventory	42,000
Ending Finished Goods Inventory	<u>39,000</u>
Unadjusted Cost of Goods Sold	\$444,000
Overhead adjustment	<u>19,000</u>
Adjusted Cost of Goods Sold	\$463,000

Feedback: Cost of goods manufactured = Direct materials + Direct labor + Applied overhead + Beginning WIP - Ending WIP. Over- or underapplied overhead = Actual - Applied overhead. Adjusted cost of goods sold = Beginning finished goods + cost of goods manufactured - Ending finished goods +/- Under/overapplied overhead.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Calculate overapplied and underapplied manufacturing overhead*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

*Topic: Prepare the cost of goods manufactured report*

*Topic: Record actual manufacturing overhead*

*Topic: Record applied manufacturing overhead*

*Topic: Record labor costs*

*Topic: Record the purchase and issue of materials*

129. Superior Corp. applies manufacturing overhead to production at 75% of direct labor cost. During 20x5, manufacturing overhead of \$150,000 was applied to production; actual manufacturing overhead was \$156,000. Ending Work in Process Inventory was \$22,000 and ending Finished Goods Inventory was \$36,000. Work in Process Inventory increased by 10% during the year and Finished Goods Inventory increased by 20% during the year. Unadjusted Cost of Goods Sold was \$575,000.

Complete the following schedule:

Direct materials used in production	
Direct labor	
Manufacturing overhead applied	
Current manufacturing costs	
Beginning Work in Process Inventory	
Ending Work in Process Inventory	
Cost of goods manufactured	
Beginning Finished Goods Inventory	
Ending Finished Goods Inventory	
Unadjusted Cost of Goods Sold	
Overhead adjustment	
Adjusted Cost of Goods Sold	

Use Unadjusted Cost of Goods Sold \$575,000 at the bottom of the following statement and work backwards to find direct materials used in production:

Direct materials used in production	\$233,000
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Direct labor	200,000
Manufacturing overhead applied	<u>150,000</u>
Current manufacturing costs	\$583,000
Beginning Work in Process Inventory	20,000
Ending Work in Process Inventory	<u>22,000</u>
Cost of goods manufactured	\$581,000
Beginning Finished Goods Inventory	30,000
Ending Finished Goods Inventory	<u>36,000</u>
Unadjusted Cost of Goods Sold	<b>\$575,000</b>
Overhead adjustment	<u>6,000</u>
Adjusted Cost of Goods Sold	\$581,000

Feedback: Cost of goods manufactured = Direct materials + Direct labor + Applied overhead + Beginning WIP - Ending WIP. Over- or underapplied overhead = Actual - Applied overhead. Adjusted cost of goods sold = Beginning finished goods + cost of goods manufactured - Ending finished goods +/- Under/overapplied overhead.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Calculate overapplied and underapplied manufacturing overhead*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

*Topic: Prepare the cost of goods manufactured report*

*Topic: Record actual manufacturing overhead*

*Topic: Record applied manufacturing overhead*

*Topic: Record labor costs*

*Topic: Record the purchase and issue of materials*

130. Christine Corp. applies manufacturing overhead to production at 80% of direct labor cost. During 20x5, manufacturing overhead of \$200,000 was applied to production; actual manufacturing overhead was \$189,000. Beginning Work in Process Inventory was \$25,000, and beginning Finished Goods Inventory was \$45,000. Work in Process Inventory decreased by 20% during the year and Finished Goods Inventory decreased by 10% during the year. Adjusted Cost of Goods Sold was \$623,500 for 20x5.

Complete the following schedule:

Direct materials used in production	
Direct labor	
Manufacturing overhead applied	
Current manufacturing costs	
Beginning Work in Process Inventory	
Ending Work in Process Inventory	
Cost of goods manufactured	
Beginning Finished Goods Inventory	
Ending Finished Goods Inventory	
Unadjusted Cost of Goods Sold	
Overhead adjustment	
Adjusted Cost of Goods Sold	

Use Adjusted Cost of Goods Sold \$623,500 at the bottom of the following statement and work backwards to find direct materials used in production:

Direct materials used in production	\$175,000
Direct labor	250,000

Manufacturing overhead applied	<u>200,000</u>
Current manufacturing costs	\$625,000
Beginning Work in Process Inventory	25,000
Ending Work in Process Inventory	<u>20,000</u>
Cost of goods manufactured	\$630,000
Beginning Finished Goods Inventory	45,000
Ending Finished Goods Inventory	<u>40,500</u>
Unadjusted Cost of Goods Sold	\$634,500
Overhead adjustment	<u>(11,000)</u>
Adjusted Cost of Goods Sold	\$623,500

Feedback: Cost of goods manufactured = Direct materials + Direct labor + Applied overhead + Beginning WIP - Ending WIP. Over- or underapplied overhead = Actual - Applied overhead. Adjusted cost of goods sold = Beginning finished goods + cost of goods manufactured - Ending finished goods +/- Under/overapplied overhead.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-04 Describe how costs flow through the accounting system in job order costing.*

*Learning Objective: 02-05 Calculate and dispose of overapplied or underapplied manufacturing overhead.*

*Learning Objective: 02-06 Calculate the cost of goods manufactured and cost of goods sold.*

*Topic: Calculate overapplied and underapplied manufacturing overhead*

*Topic: Dispose of overapplied or underapplied manufacturing overhead*

*Topic: Prepare the cost of goods manufactured report*

*Topic: Record actual manufacturing overhead*

*Topic: Record applied manufacturing overhead*

*Topic: Record labor costs*

*Topic: Record the purchase and issue of materials*

131. Pinnacle Consulting employs two CPAs, each having a different area of specialization. Judy specializes in tax consulting and Steve specializes in management consulting. Pinnacle expects to incur total overhead costs of \$519,750 during the year and applies overhead based on annual salary costs. Judy is a senior partner, her annual salary is \$225,000, and she is expected to bill 2,000 hours during the year. Steve is a senior associate, his annual salary is \$121,500, and he is expected to bill 1,800 hours during the year.

- a. Calculate the predetermined overhead rate.
- b. Assuming that the hourly billing rate should be set to cover the total cost of services plus a 20% markup, compute the hourly billing rates for Judy and Steve.

a. Predetermined Overhead Rate:  $\$519,750 / (\$225,000 + 121,500) = 150\%$  of Salary Cost  
b. Judy's billing rate = Annual Salary + Overhead (150% of Salary) =  $\$225,000 + \$337,500 = \$562,500 / 2,000$  hours = \$281.25 hourly cost.  $\$281.25 \times 1.20 = \$337.50$ /hour billing rate.  
Steve's billing rate = Annual Salary + Overhead (150% of Salary) =  $\$121,500 + \$182,250 = \$303,750 / 1,800$  hours = \$168.75 hourly cost.  $\$168.75 \times 1.20 = \$202.50$ /hour billing rate.

Feedback: Predetermined overhead rate = Estimated overhead/Estimated allocation base.  
Hourly cost = (Annual salary + overhead)/estimated hours. Billing rate = hourly cost plus markup of 20%.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-07 Apply job order costing to a service setting.*

*Topic: Job order costing in a service firm*

132. Ace Architects employs two architects, each having a different area of specialization. Caitlin specializes in industrial commercial construction and Zachary specializes in residential construction. Ace expects to incur total overhead costs of \$779,625 during the year and applies overhead based on annual salary costs. Caitlin is a senior partner, her annual salary is \$168,750, and she is expected to bill 2,000 hours during the year. Zachary is a senior associate, his annual salary is \$91,125, and he is expected to bill 1,800 hours during the year.

- a. Calculate the predetermined overhead rate.
- b. Assuming that the hourly billing rate should be set to cover the total cost of services plus a 20% markup, compute the hourly billing rates for Caitlin and Zachary.

a. Predetermined Overhead Rate:  $\$779,625 / (\$168,750 + 91,125) = 300\%$  of Salary Cost

b. Caitlin's billing rate = Annual Salary + Overhead (300% of Salary) =  $\$168,750 + \$506,250 = \$675,000 / 2,000$  hours =  $\$337.50$  hourly cost.  $\$337.50 \times 1.20 = \$405$ /hour billing rate.

Zachary's billing rate = Annual Salary + Overhead (300% of Salary) =  $\$91,125 + \$273,375 = \$364,500 / 1,800$  hours =  $\$202.50$  hourly cost.  $\$202.50 \times 1.20 = \$243$ /hour billing rate.

Feedback: Predetermined overhead rate = Estimated overhead/Estimated allocation base.  
Hourly cost = (Annual salary + overhead)/estimated hours. Billing rate = hourly cost plus markup of 20%.

*AACSB: Analytical Thinking*

*AICPA: FN Measurement*

*Blooms: Analyze*

*Difficulty: 3 Hard*

*Learning Objective: 02-07 Apply job order costing to a service setting.*

*Topic: Job order costing in a service firm*