## SUMMARY OF QUESTIONS BY STUDY OBJECTIVES AND BLOOM'S TAXONOMY

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- **sg** This question also appears in the Study Guide.
- **st** This question also appears in a self-test at the student companion website.
- **a** This question covers a topic in an appendix to the chapter.
### SUMMARY OF QUESTIONS BY STUDY OBJECTIVES AND BLOOM’S TAXONOMY

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</table>

Note: TF = True-False  BE = Brief Exercise  C = Completion  MC = Multiple Choice  Ex = Exercise

The chapter also contains one set of ten Matching questions and six Short-Answer Essay questions.

CHAPTER STUDY OBJECTIVES

1. **Describe the steps in determining inventory quantities.** The steps are (1) taking a physical inventory of goods on hand and (2) determining the ownership of goods in transit.

2. **Explain the accounting for inventories, and apply the inventory cost flow methods.** The primary basis of accounting for inventories is cost. Cost includes all expenditures necessary to acquire goods and place them in condition ready for sale. Cost of goods available for sale includes (a) cost of beginning inventory and (b) the cost of goods purchased. The inventory cost flow methods are: specific identification, and three assumed cost flow methods—FIFO, LIFO, and average-cost.

3. **Explain the financial effects of the inventory cost flow assumptions.** Companies may allocate the cost of goods available for sale to cost of goods sold and ending inventory by specific identification or by a method based on an assumed cost flow. When prices are rising, the first-in, first-out (FIFO) method results in lower cost of goods sold and higher net income than the average-cost and the last-in, first out (LIFO) methods. The reverse is true when prices are falling. In the balance sheet, FIFO results in an ending inventory that is closest to current value, whereas the inventory under LIFO is the farthest from current value. LIFO results in the lowest income taxes (because of lower taxable income).

4. **Explain the lower-of-cost-or-market basis of accounting for inventories.** Companies may use the lower-of-cost-or-market (LCM) basis when the current replacement cost (market) is less than cost. Under LCM, companies recognize the loss in the period in which the price decline occurs.
5. **Indicate the effects of inventory errors on the financial statements.** In the income statement of the current year: (a) An error in beginning inventory will have a reverse effect on net income (overstatement of inventory results in understatement of net income, and vice versa). (b) An error in ending inventory will have a similar effect on net income (overstatement of inventory results in overstatement of net income). If ending inventory errors are not corrected in the following period, their effect on net income for that period is reversed, and total net income for the two years will be correct. In the balance sheet, ending inventory errors will have the same effect on total assets and total stockholders’ equity and no effect on liabilities.

6. **Compute and interpret the inventory turnover ratio.** The inventory turnover ratio is calculated as cost of goods sold divided by average inventory. It can be converted to average days in inventory by dividing 365 days by the inventory turnover ratio.

7. **Apply the inventory cost flow methods to perpetual inventory records.** Under FIFO and a perpetual inventory system, companies charge to cost of goods sold the cost of the earliest goods on hand prior to each sale. Under LIFO and a perpetual system, companies charge to cost of goods sold the cost of the most recent purchase prior to sale. Under the moving-average (average cost) method and a perpetual system, companies compute a new average cost after each purchase.

8. **Describe the two methods of estimating inventories.** The two methods of estimating inventories are the gross profit method and the retail inventory method. Under the gross profit method, companies apply a gross profit rate to net sales to determine estimated cost of goods sold. They then subtract estimated cost of goods sold from cost of goods available for sale to determine the estimated cost of the ending inventory. Under the retail inventory method, companies compute a cost-to-retail ratio by dividing the cost of goods available for sale by the retail value of the goods available for sale. They then apply this ratio to the ending inventory at retail to determine the estimated cost of the ending inventory.
TRUE-FALSE STATEMENTS

1. Transactions that affect inventories on hand have an effect on both the balance sheet and the income statement.

2. The more inventory a company has in stock, the greater the company's profit.

3. Raw materials inventories are the goods that a manufacturer has completed and are ready to be sold to customers.

4. Goods that have been purchased FOB destination but are in transit, should be excluded from a physical count of goods.

5. Goods out on consignment should be included in the inventory of the consignor.

6. The specific identification method of costing inventories tracks the actual physical flow of the goods available for sale.

7. Management may choose any inventory costing method it desires as long as the cost flow assumption chosen is consistent with the physical movement of goods in the company.

8. The first-in, first-out (FIFO) inventory method results in an ending inventory valued at the most recent cost.

9. The matching principle requires that the cost of goods sold be matched against the ending merchandise inventory in order to determine income.

10. The specific identification method of inventory valuation is desirable when a company sells a large number of low-unit cost items.

11. If a company has no beginning inventory and the unit cost of inventory items does not change during the year, the value assigned to the ending inventory will be the same under LIFO and average cost flow assumptions.

12. If the unit price of inventory is increasing during a period, a company using the LIFO inventory method will show less gross profit for the period, than if it had used the FIFO inventory method.

13. If a company has no beginning inventory and the unit price of inventory is increasing during a period, the cost of goods available for sale during the period will be the same under the LIFO and FIFO inventory methods.

14. A company may use more than one inventory costing method concurrently.

15. Use of the LIFO inventory valuation method enables a company to report paper or phantom profits.

16. If a company changes its inventory valuation method, the effect of the change on net income should be disclosed in the financial statements.

17. Under the lower-of-cost-or-market basis, market is defined as current replacement cost.
18. Accountants believe that the write down from cost to market should not be made in the period in which the price decline occurs.

19. An error that overstates the ending inventory will also cause net income for the period to be overstated.

20. If inventories are valued using the LIFO cost assumption, they should not be classified as a current asset on the balance sheet.

21. Inventory turnover is calculated as cost of goods sold divided by ending inventory.

22. If a company uses the FIFO cost assumption, the cost of goods sold for the period will be the same under a perpetual or periodic inventory system.

23. In applying the LIFO assumption in a perpetual inventory system, the cost of the units most recently purchased prior to sale is allocated first to the units sold.

24. Under generally accepted accounting principles, management has the choice of physically counting inventory on hand at the end of the year or using the gross profit method to estimate the ending inventory.

25. The retail inventory method requires a company to value its inventory on the balance sheet at retail prices.

Additional True-False Questions

26. Finished goods are a classification of inventory for a manufacturer that are completed and ready for sale.

27. Under the FIFO method, the costs of the earliest units purchased are the first charged to cost of goods sold.

28. The pool of inventory costs consists of the beginning inventory plus the cost of goods purchased.

29. In a period of falling prices, the LIFO method results in a lower cost of goods sold than the FIFO method.

30. The lower-of-cost-or-market basis is an example of the accounting concept of conservatism.

31. Inventories are reported in the current assets section of the balance sheet immediately below receivables.

32. In a perpetual inventory system, the cost of goods sold under the FIFO method is based on the cost of the latest goods on hand during the period.

33. The gross profit method is based on the assumption that the rate of gross profit remains constant from one year to the next.
Answers to True-False Statements

|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|

MULTIPLE CHOICE QUESTIONS

34. Inventories affect
   a. only the balance sheet.
   b. only the income statement.
   c. both the balance sheet and the income statement.
   d. neither the balance sheet nor the income statement.

35. Merchandise inventory is
   a. reported under the classification of Property, Plant, and Equipment on the balance sheet.
   b. often reported as a miscellaneous expense on the income statement.
   c. reported as a current asset on the balance sheet.
   d. generally valued at the price for which the goods can be sold.

36. Items waiting to be used in production are considered to be
   a. raw materials.
   b. work in progress.
   c. finished goods.
   d. merchandise inventory.

37. In a manufacturing business, inventory that is ready for sale is called
   a. raw materials inventory.
   b. work in process inventory.
   c. finished goods inventory.
   d. store supplies inventory.

38. The factor which determines whether or not goods should be included in a physical count of inventory is
   a. physical possession.
   b. legal title.
   c. management's judgment.
   d. whether or not the purchase price has been paid.

39. If goods in transit are shipped FOB destination
   a. the seller has legal title to the goods until they are delivered.
   b. the buyer has legal title to the goods until they are delivered.
   c. the transportation company has legal title to the goods while the goods are in transit.
   d. no one has legal title to the goods until they are delivered.
40. An auto manufacturer would classify vehicles in various stages of production as
a. finished goods.
b. merchandise inventory.
c. raw materials.
d. work in process.

41. Independent internal verification of the physical inventory process occurs when
a. the employee is required to count all items twice for sake of verification.
b. the items counted are compared to the inventory account balance.
c. a second employee counts the inventory and compares the result to the count made 
   by the first employee.
d. all prenumbered inventory tags are accounted for.

42. An employee assigned to counting computer monitors in boxes should
a. estimate the number if there is a large quantity to be counted.
b. read each box and rely on the box description for the contents.
c. determine that the box contains a monitor.
d. rely on the warehouse records of the number of computer monitors.

43. After the physical inventory is completed,
a. quantities are listed on inventory summary sheets.
b. quantities are entered into various general ledger inventory accounts.
c. the accuracy of the inventory summary sheets is checked by the person listing the 
   quantities on the sheets.
d. unit costs are determined by dividing the quantities on the summary sheets by the 
   total inventory costs.

44. A recommended internal control procedure for taking physical inventories is that the 
    counting should be done by employees who do not have custodial responsibility for the 
    inventory. This is an example of what type of internal control procedure?
a. Establishment of responsibility 
b. Documentation procedure 
c. Independent internal verification 
d. Segregation of duties

45. Westcoe Company's goods in transit at December 31 include:

<table>
<thead>
<tr>
<th>sales made</th>
<th>purchases made</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) FOB destination</td>
<td>(3) FOB destination</td>
</tr>
<tr>
<td>(2) FOB shipping point</td>
<td>(4) FOB shipping point</td>
</tr>
</tbody>
</table>

Which items should be included in Westcoe's inventory at December 31?
a. (2) and (3)
b. (1) and (4)
c. (1) and (3)
d. (2) and (4)

46. The term "FOB" denotes
a. free on board.
b. freight on board.
c. free only (to) buyer.
d. freight charge on buyer.
47. Under a consignment arrangement, the
   a. consignor has ownership until goods are sold to a customer.
   b. consignor has ownership until goods are shipped to the consignee.
   c. consignee has ownership when the goods are in the consignee's possession.
   d. consigned goods are included in the inventory of the consignee.

48. Inventoriable costs include all of the following except the
   a. freight costs incurred when buying inventory.
   b. costs of the purchasing and warehousing departments.
   c. cost of the beginning inventory.
   d. cost of goods purchased.

49. Beginning inventory plus the cost of goods purchased equals
   a. cost of goods sold.
   b. cost of goods available for sale.
   c. net purchases.
   d. total goods purchased.

50. Cost of goods sold is computed from the following equation:
   a. beginning inventory – cost of goods purchased + ending inventory.
   b. sales – cost of goods purchased + beginning inventory – ending inventory.
   c. sales + gross profit – ending inventory + beginning inventory.
   d. beginning inventory + cost of goods purchased – ending inventory.

51. A company just starting in business purchased three merchandise inventory items at the
    following prices. First purchase $80; Second purchase $95; Third purchase $85. If the
    company sold two units for a total of $240 and used FIFO costing, the gross profit for the
    period would be
    a. $65.
    b. $75.
    c. $60.
    d. $50.

52. The LIFO inventory method assumes that the cost of the latest units purchased are
    a. the last to be allocated to cost of goods sold.
    b. the first to be allocated to ending inventory.
    c. the first to be allocated to cost of goods sold.
    d. not allocated to cost of goods sold or ending inventory.

Use the following information for questions 53–56.

A company just starting business made the following four inventory purchases in June:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>June</td>
<td>1</td>
<td>150 units</td>
<td>$ 390</td>
</tr>
<tr>
<td>June</td>
<td>10</td>
<td>200 units</td>
<td>585</td>
</tr>
<tr>
<td>June</td>
<td>15</td>
<td>200 units</td>
<td>630</td>
</tr>
<tr>
<td>June</td>
<td>28</td>
<td>150 units</td>
<td>495</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$2,100</td>
</tr>
</tbody>
</table>

A physical count of merchandise inventory on June 30 reveals that there are 200 units on hand.
53. Using the LIFO inventory method, the value of the ending inventory on June 30 is
   a. $536.
   b. $653.
   c. $1,447.
   d. $1,564.

54. Using the FIFO inventory method, the amount allocated to cost of goods sold for June is
   a. $653.
   b. $1,272.
   c. $1,447.
   d. $1,564.

55. Using the average-cost method, the amount allocated to the ending inventory on June 30 is
   a. $2,100.
   b. $1,500.
   c. $575.
   d. $600.

56. The inventory method which results in the highest gross profit for June is
   a. the FIFO method.
   b. the LIFO method.
   c. the weighted average unit cost method.
   d. not determinable.

57. A company purchased inventory as follows:
   - 200 units at $10
   - 300 units at $12
   The average unit cost for inventory is
   a. $10.00.
   b. $11.00.
   c. $11.20.
   d. $12.00.

58. Which of the following items will increase inventoriable costs for the buyer of goods?
   a. Purchase returns and allowances granted by the seller
   b. Purchase discounts taken by the purchaser
   c. Freight charges paid by the seller
   d. Freight charges paid by the purchaser

59. Inventoriable costs may be thought of as a pool of costs consisting of which two elements?
   a. The cost of beginning inventory and the cost of ending inventory
   b. The cost of ending inventory and the cost of goods purchased during the year
   c. The cost of beginning inventory and the cost of goods purchased during the year
   d. The difference between the costs of goods purchased and the cost of goods sold during the year
60. The cost of goods available for sale is allocated between
   a. beginning inventory and ending inventory.
   b. beginning inventory and cost of goods on hand.
   c. ending inventory and cost of goods sold.
   d. beginning inventory and cost of goods purchased.

61. Sam's Used Cars uses the specific identification method of costing inventory. During March, Sam purchased three cars for $6,000, $7,500, and $9,750, respectively. During March, two cars are sold for $9,000 each. Sam determines that at March 31, the $9,750 car is still on hand. What is Sam's gross profit for March?
   a. $5,250.
   b. $4,500.
   c. $750.
   d. $8,250.

62. Of the following companies, which one would not likely employ the specific identification method for inventory costing?
   a. Music store specializing in organ sales
   b. Farm implement dealership
   c. Antique shop
   d. Hardware store

63. A problem with the specific identification method is that
   a. inventories can be reported at actual costs.
   b. management can manipulate income.
   c. matching is not achieved.
   d. the lower-of-cost-or-market basis cannot be applied.

64. The selection of an appropriate inventory cost flow assumption for an individual company is made by
   a. the external auditors.
   b. the SEC.
   c. the internal auditors.
   d. management.

65. Which one of the following inventory methods is often impractical to use?
   a. Specific identification
   b. LIFO
   c. FIFO
   d. Average cost

66. Which of the following is not a common cost flow assumption used in costing inventory?
   a. First-in, first-out
   b. Middle-in, first-out
   c. Last-in, first-out
   d. Average cost

67. The accounting principle that requires that the cost flow assumption be consistent with the physical movement of goods is
   a. called the matching principle.
   b. called the consistency principle.
   c. nonexistent; that is, there is no accounting requirement.
   d. called the physical flow assumption.
68. Which of the following statements is true regarding inventory cost flow assumptions?
   a. A company may use more than one costing method concurrently.
   b. A company must comply with the method specified by industry standards.
   c. A company must use the same method for domestic and foreign operations.
   d. A company may never change its inventory costing method once it has chosen a method.

69. Which of the following statements is correct with respect to inventories?
   a. The FIFO method assumes that the costs of the earliest goods acquired are the last to be sold.
   b. It is generally good business management to sell the most recently acquired goods first.
   c. Under FIFO, the ending inventory is based on the latest units purchased.
   d. FIFO seldom coincides with the actual physical flow of inventory.

70. The cost of goods available for sale is allocated to the cost of goods sold and the
   a. beginning inventory.
   b. ending inventory.
   c. cost of goods purchased.
   d. gross profit.

Use the following information for questions 71–73.

At May 1, 2008, Treeline Company had beginning inventory consisting of 100 units with a unit cost of $7. During May, the company purchased inventory as follows:
   200 units at $7
   300 units at $8

The company sold 500 units during the month for $12 per unit. Treeline uses the average cost method.

71. The average cost per unit for May is
   a. $7.00.
   b. $7.50.
   c. $7.60.
   d. $8.00.

72. The value of Treeline’s inventory at May 31, 2008 is
   a. $700.
   b. $750.
   c. $800.
   d. $4,500.

73. Treeline’s gross profit for the month of May is
   a. $2,250.
   b. $3,750.
   c. $4,500.
   d. $6,000.
Use the following information for questions 74–77.

Tier II Company uses a periodic inventory system. Details for the inventory account for the month of January, 2008 are as follows:

<table>
<thead>
<tr>
<th>Units</th>
<th>Per unit price</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance, 1/1/08 200</td>
<td>$5.00</td>
<td>$1,000</td>
</tr>
<tr>
<td>Purchase, 1/15/08 100</td>
<td>5.30</td>
<td>530</td>
</tr>
<tr>
<td>Purchase, 1/28/08 100</td>
<td>5.50</td>
<td>550</td>
</tr>
</tbody>
</table>

An end of the month (1/31/08) inventory showed that 120 units were on hand.

74. How many units did the company sell during January, 2008?
   a. 80
   b. 120
   c. 200
   d. 280

75. If the company uses FIFO, what is the value of the ending inventory?
   a. $520
   b. $600
   c. $656
   d. $1,424

76. If the company uses LIFO, what is the value of the ending inventory?
   a. $520
   b. $600
   c. $656
   d. $1,480

77. If the company uses FIFO and sells the units for $10 each, what is the gross profit for the month?
   a. $1,376
   b. $1,424
   c. $2,800
   d. $3,000

Use the following information for questions 78-83.

W.B. Reindeer Company's inventory records show the following data:

<table>
<thead>
<tr>
<th>Units</th>
<th>Unit Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory, January 1 5,000</td>
<td>$9.00</td>
</tr>
<tr>
<td>Purchases:</td>
<td></td>
</tr>
<tr>
<td>June 18 4,500</td>
<td>8.00</td>
</tr>
<tr>
<td>November 8 3,000</td>
<td>7.00</td>
</tr>
</tbody>
</table>

A physical inventory on December 31 shows 2,000 units on hand. W.B. Reindeer sells the units for $12 each. The company has an effective tax rate of 20%. Reindeer uses the periodic inventory method.
78. Under the FIFO method, the December 31 inventory is valued at
   a. $14,000.
   b. $14,500.
   c. $15,000.
   d. $18,000.

79. What is the cost of goods available for sale?
   a. $21,000
   b. $36,000
   c. $45,000
   d. $102,000

80. Under the LIFO method, cost of goods sold is
   a. $10,500.
   b. $18,000.
   c. $84,000.
   d. $88,000.

81. The weighted-average cost per unit is
   a. $7.50.
   b. $8.00.
   c. $8.16.
   d. $8.75.

82. If the company uses FIFO, what is the gross profit for the period?
   a. $2,000
   b. $10,000
   c. $21,000
   d. $38,000

83. What is the difference in taxes if LIFO rather than FIFO is used?
   a. $800 additional taxes
   b. $3,200 tax savings
   c. $4,000 tax savings
   d. $4,000 additional taxes

Use the following inventory information for questions 84–86.

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
<th>Units</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1</td>
<td>Beginning Invent</td>
<td>20</td>
<td>$19</td>
<td>$380</td>
</tr>
<tr>
<td>7</td>
<td>Purchases</td>
<td>70</td>
<td>$20</td>
<td>1,400</td>
</tr>
<tr>
<td>22</td>
<td>Purchases</td>
<td>10</td>
<td>$22</td>
<td>220</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100</td>
<td></td>
<td>$2,000</td>
</tr>
</tbody>
</table>

A physical count of merchandise inventory on July 31 reveals that there are 30 units on hand.

84. Using the average-cost method, the value of ending inventory is
   a. $580.
   b. $600.
   c. $610.
   d. $620.
85. Using the FIFO inventory method, the amount allocated to cost of goods sold for July is
   a. $580.
   b. $620.
   c. $1,380.
   d. $1,420.

86. Using the LIFO inventory method, the amount allocated to cost of goods sold for July is
   a. $580.
   b. $620.
   c. $1,380.
   d. $1,420.

Use the following information for questions 87–88.

<table>
<thead>
<tr>
<th>Date</th>
<th>Transaction</th>
<th>Units</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1</td>
<td>Beginning Inventory</td>
<td>10</td>
<td>$120</td>
</tr>
<tr>
<td>5</td>
<td>Purchases</td>
<td>60</td>
<td>$112</td>
</tr>
<tr>
<td>14</td>
<td>Sale</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Purchases</td>
<td>30</td>
<td>$115</td>
</tr>
<tr>
<td>30</td>
<td>Sale</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>

87. Assuming that a periodic inventory system is used, what is the amount allocated to ending inventory on a LIFO basis?
   a. $3,664
   b. $3,674
   c. $7,696
   d. $7,706

88. Assuming that a periodic inventory system is used, what is the amount allocated to ending inventory on a FIFO basis?
   a. $3,644
   b. $3,674
   c. $7,696
   d. $7,706

Use the following information for questions 89–92.

<table>
<thead>
<tr>
<th>Date</th>
<th>Transaction</th>
<th>Units</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov. 1</td>
<td>Inventory</td>
<td>15</td>
<td>$8.00</td>
</tr>
<tr>
<td>8</td>
<td>Purchase</td>
<td>60</td>
<td>$8.60</td>
</tr>
<tr>
<td>17</td>
<td>Purchase</td>
<td>30</td>
<td>$8.40</td>
</tr>
<tr>
<td>25</td>
<td>Purchase</td>
<td>45</td>
<td>$8.80</td>
</tr>
</tbody>
</table>

A physical count of merchandise inventory on November 30 reveals that there are 50 units on hand. Assume a periodic inventory system is used.

89. Cost of goods sold under the average-cost method is
   a. $860.
   b. $856.
   c. $845.
   d. $800.
90. Ending inventory under FIFO is
   a. $438.
   b. $846.
   c. $421.
   d. $863.

91. Ending inventory under LIFO is
   a. $438.
   b. $421.
   c. $846.
   d. $863.

92. Assuming that the specific identification method is used and that ending inventory
    consists of 15 units from each of the three purchases and 5 units from the November 1
    inventory, cost of goods sold is
   a. $427.
   b. $857.
   c. $854.
   d. $836.

Use the following information for questions 93–96.

Ace Industries had the following inventory transactions occur during 2008:

<table>
<thead>
<tr>
<th>Date</th>
<th>Type</th>
<th>Units</th>
<th>Cost/unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/1/08</td>
<td>Purchase</td>
<td>18</td>
<td>$45</td>
</tr>
<tr>
<td>3/14/08</td>
<td>Purchase</td>
<td>31</td>
<td>$47</td>
</tr>
<tr>
<td>5/1/08</td>
<td>Purchase</td>
<td>22</td>
<td>$49</td>
</tr>
</tbody>
</table>

The company sold 51 units at $63 each and has a tax rate of 30%.

93. Assuming that a periodic inventory system is used, what is the company’s gross profit
    using LIFO? (rounded to whole dollars)
   a. $2,441
   b. $2,365
   c. $848
   d. $772

94. Assuming that a periodic inventory system is used, what is the company’s after-tax
    income using LIFO? (rounded to whole dollars)
   a. $772
   b. $848
   c. $594
   d. $540

95. Assuming that a periodic inventory system is used, what is the company’s gross profit
    using FIFO? (rounded to whole dollars)
   a. $2,441
   b. $2,365
   c. $848
   d. $772
96. Assuming that a periodic inventory system is used, what is the company’s after-tax income using FIFO? (rounded to whole dollars)
   a. $772
   b. $848
   c. $594
   d. $540

97. Companies adopt different cost flow methods for each of the following reasons except
   a. balance sheet effects.
   b. cash flow effects.
   c. income statements effects.
   d. tax effects.

98. In periods of rising prices, the inventory method which results in the inventory value on the balance sheet that is closest to current cost is the
   a. FIFO method.
   b. LIFO method.
   c. average-cost method.
   d. tax method.

99. Two companies report the same cost of goods available for sale but each employs a different inventory costing method. If the price of goods has increased during the period, then the company using
   a. LIFO will have the highest ending inventory.
   b. FIFO will have the highest cost of good sold.
   c. FIFO will have the highest ending inventory.
   d. LIFO will have the lowest cost of goods sold.

100. If companies have identical inventoriable costs but use different inventory flow assumptions when the price of goods have not been constant, then the
    a. cost of goods sold of the companies will be identical.
    b. cost of goods available for sale of the companies will be identical.
    c. ending inventory of the companies will be identical.
    d. net income of the companies will be identical.

101. In a period of increasing prices, which inventory flow assumption will result in the lowest amount of income tax expense?
    a. FIFO
    b. LIFO
    c. Average Cost
    d. Income tax expense for the period will be the same under all assumptions.

102. The specific identification method of costing inventories is used when the
    a. physical flow of units cannot be determined.
    b. company sells large quantities of relatively low cost homogeneous items.
    c. company sells large quantities of relatively low cost heterogeneous items.
    d. company sells a limited quantity of high-unit cost items.
103. The specific identification method of inventory costing
   a. always maximizes a company's net income.
   b. always minimizes a company's net income.
   c. has no effect on a company's net income.
   d. may enable management to manipulate net income.

104. The managers of Teng Company receive performance bonuses based on the net income of the firm. Which inventory costing method are they likely to favor in periods of declining prices?
   a. LIFO
   b. Average Cost
   c. FIFO
   d. Physical inventory method

105. In periods of inflation, phantom or paper profits may be reported as a result of using the
   a. perpetual inventory method.
   b. FIFO costing assumption.
   c. LIFO costing assumption.
   d. periodic inventory method.

106. Selection of an inventory costing method by management does not usually depend on
   a. the fiscal year end.
   b. income statement effects.
   c. balance sheet effects.
   d. tax effects.

107. In a period of rising prices, the costs allocated to ending inventory may be understated in
   the
   a. average-cost method.
   b. FIFO method.
   c. gross profit method.
   d. LIFO method.

108. The accountant at Kline Company is figuring out the difference in income taxes the company will pay depending on the choice of either FIFO or LIFO as an inventory costing method. The tax rate is 30% and the FIFO method will result in income before taxes of $5,460. The LIFO method will result in income before taxes of $4,935. What is the difference in tax that would be paid between the two methods?
   a. $525.
   b. $225.
   c. $158.
   d. Cannot be determined from the information provided.

109. The accountant at Carey Company has determined that income before income taxes amounted to $6,750 using the FIFO costing assumption. If the income tax rate is 30% and the amount of income taxes paid would be $225 greater if the LIFO assumption were used, what would be the amount of income before taxes under the LIFO assumption?
   a. $6,975
   b. $7,500
   c. $6,090
   d. $6,525
110. The manager of Wyatt Company is given a bonus based on income before income taxes. Net income, after taxes, is $5,600 for FIFO and $5,040 for LIFO. The tax rate is 30%. The bonus rate is 20%. How much higher is the manager's bonus if FIFO is adopted instead of LIFO?
   a. $200
   b. $300
   c. $160
   d. $560

111. The consistent application of an inventory costing method is essential for
   a. conservatism.
   b. accuracy.
   c. comparability.
   d. efficiency.

112. Which costing method cannot be used to determine the cost of inventory items before lower-of-cost-or-market is applied?
   a. Specific identification
   b. FIFO
   c. LIFO
   d. All of these methods can be used.

113. Inventory is reported in the financial statements at
   a. cost.
   b. market.
   c. the higher-of-cost-or-market.
   d. the lower-of-cost-or-market.

114. The lower-of-cost-or-market basis of valuing inventories is an example of
   a. comparability.
   b. the cost principle.
   c. conservatism.
   d. consistency.

115. Under the lower-of-cost-or-market basis in valuing inventory, market is defined as
   a. current replacement cost.
   b. selling price.
   c. historical cost plus 10%.
   d. selling price less markup.

116. The lower-of-cost-or-market (LCM) basis may be be used with all of the following methods except
   a. average cost.
   b. FIFO.
   c. LIFO.
   d. The LCM basis may be used with all of these.
117. Isaac Company developed the following information about its inventories in applying the lower-of-cost-or-market (LCM) basis in valuing inventories:

<table>
<thead>
<tr>
<th>Product</th>
<th>Cost</th>
<th>Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$110,000</td>
<td>$120,000</td>
</tr>
<tr>
<td>B</td>
<td>80,000</td>
<td>76,000</td>
</tr>
<tr>
<td>C</td>
<td>160,000</td>
<td>162,000</td>
</tr>
</tbody>
</table>

If Isaac applies the LCM basis, the value of the inventory reported on the balance sheet would be
a. $350,000.
b. $342,000.
c. $346,000.
d. $362,000.

118. Understating beginning inventory will understate
a. assets.
b. cost of goods sold.
c. net income.
d. owner's equity.

119. An error in the physical count of goods on hand at the end of a period resulted in a $10,000 overstatement of the ending inventory. The effect of this error in the current period is

<table>
<thead>
<tr>
<th>Cost of Goods Sold</th>
<th>Net Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Understated</td>
<td>Understated</td>
</tr>
<tr>
<td>b. Overstated</td>
<td>Overstated</td>
</tr>
<tr>
<td>c. Understated</td>
<td>Overstated</td>
</tr>
<tr>
<td>d. Overstated</td>
<td>Understated</td>
</tr>
</tbody>
</table>

120. If beginning inventory is understated by $10,000, the effect of this error in the current period is

<table>
<thead>
<tr>
<th>Cost of Goods Sold</th>
<th>Net Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Understated</td>
<td>Understated</td>
</tr>
<tr>
<td>b. Overstated</td>
<td>Overstated</td>
</tr>
<tr>
<td>c. Understated</td>
<td>Overstated</td>
</tr>
<tr>
<td>d. Overstated</td>
<td>Understated</td>
</tr>
</tbody>
</table>

121. A company uses the periodic inventory method and the beginning inventory is overstated by $4,000 because the ending inventory in the previous period was overstated by $4,000. The amounts reflected in the current end of the period balance sheet are

<table>
<thead>
<tr>
<th>Assets</th>
<th>Owner’s Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Overstated</td>
<td>Overstated</td>
</tr>
<tr>
<td>b. Correct</td>
<td>Correct</td>
</tr>
<tr>
<td>c. Understated</td>
<td>Understated</td>
</tr>
<tr>
<td>d. Overstated</td>
<td>Correct</td>
</tr>
</tbody>
</table>

122. Overstating ending inventory will overstate all of the following except
a. assets.
b. cost of goods sold.
c. net income.
d. owner's equity.
123. Disclosures about inventory should include each of the following except the:
   a. basis of accounting.
   b. costing method.
   c. quantity of inventory.
   d. major inventory classifications.

124. Inventory turnover is calculated by dividing cost of goods sold by:
   a. beginning inventory.
   b. ending inventory.
   c. average inventory.
   d. 365 days.

125. The following information is available for Knot Company at December 31, 2008: beginning inventory $80,000; ending inventory $120,000; cost of goods sold $900,000; and sales $1,200,000. Knot’s inventory turnover in 2008 is:
   a. 12 times.
   b. 11.3 times.
   c. 9 times.
   d. 7.5 times.

Use the following information for questions 126–127.

The following information was available for Carton Company at December 31, 2008: beginning inventory $90,000; ending inventory $70,000; cost of goods sold $660,000; and sales $900,000.

126. Carton’s inventory turnover ratio in 2008 was:
   a. 9.4 times.
   b. 8.3 times.
   c. 7.3 times.
   d. 6.0 times.

127. Carton’s days in inventory in 2008 was:
   a. 38.8 days.
   b. 44.0 days.
   c. 50.0 days.
   d. 60.8 days.

Use the following inventory information for questions 128–130.

<table>
<thead>
<tr>
<th>July</th>
<th>Beginning Inventory</th>
<th>10 units at $90</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Purchases</td>
<td>60 units at $84</td>
</tr>
<tr>
<td>14</td>
<td>Sale</td>
<td>40 units</td>
</tr>
<tr>
<td>21</td>
<td>Purchases</td>
<td>30 units at $87</td>
</tr>
<tr>
<td>30</td>
<td>Sale</td>
<td>28 units</td>
</tr>
</tbody>
</table>

128. Assuming that a perpetual inventory system is used, what is the ending inventory on a FIFO basis?
   a. $2,748
   b. $2,754
   c. $2,778
   d. $5,796
a129 Assuming that a perpetual inventory system is used, what is the ending inventory on a LIFO basis?
   a. $2,748
   b. $2,754
   c. $2,772
   d. $5,796

a130. Assuming that a perpetual inventory system is used, what is the ending inventory (rounded) under the average-cost method?
   a. $2,750
   b. $2,784
   c. $2,406
   d. $2,772

131. A new average cost is computed each time a purchase is made in the
   a. average-cost method.
   b. moving-average cost method.
   c. weighted-average cost method.
   d. all of these methods.

a132. When valuing ending inventory under a perpetual inventory system, the
   a. valuation using the LIFO assumption is the same as the valuation using the LIFO assumption under the periodic inventory system.
   b. moving average requires that a new average be computed after every sale.
   c. valuation using the FIFO assumption is the same as under the periodic inventory system.
   d. earliest units purchased during the period using the LIFO assumption are allocated to the cost of goods sold when units are sold.

a133. Jansen Company uses the perpetual inventory system and the moving-average method to value inventories. On August 1, there were 10,000 units valued at $40,000 in the beginning inventory. On August 10, 20,000 units were purchased for $8 per unit. On August 15, 24,000 units were sold for $16 per unit. The amount charged to cost of goods sold on August 15 was
   a. $40,000.
   b. $160,000.
   c. $192,000.
   d. $144,000.

a134. Under the gross profit method, each of the following items are estimated except for the
   a. cost of ending inventory.
   b. cost of goods sold.
   c. cost of goods purchased.
   d. gross profit.

a135. Under the retail inventory method, the estimated cost of ending inventory is computed by multiplying the cost-to-retail ratio by
   a. net sales.
   b. goods available for sale at retail.
   c. goods purchased at retail.
   d. ending inventory at retail.
Inventories are estimated
a. more frequently under a periodic inventory system than a perpetual inventory system.
b. using the wholesale inventory method.
c. more frequently under a perpetual inventory system than the periodic inventory system.
d. using the net method.

Nolan Department Store estimates inventory by using the retail inventory method. The following information was developed:

<table>
<thead>
<tr>
<th></th>
<th>At Cost</th>
<th>At Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning inventory</td>
<td>$318,000</td>
<td>$750,000</td>
</tr>
<tr>
<td>Goods purchased</td>
<td>900,000</td>
<td>1,350,000</td>
</tr>
<tr>
<td>Net sales</td>
<td></td>
<td>1,200,000</td>
</tr>
</tbody>
</table>

The estimated cost of the ending inventory is
a. $696,000.
b. $522,000.
c. $882,000.
d. $900,000.

Watson Department Store utilizes the retail inventory method to estimate its inventories. It calculated its cost to retail ratio during the period at 75%. Goods available for sale at retail amounted to $400,000 and goods were sold during the period for $250,000. The estimated cost of the ending inventory is
a. $150,000.
b. $300,000.
c. $112,500.
d. $200,000.

Gore Company prepares monthly financial statements and uses the gross profit method to estimate ending inventories. Historically, the company has had a 40% gross profit rate. During June, net sales amounted to $60,000; the beginning inventory on June 1 was $18,000; and the cost of goods purchased during June amounted to $27,000. The estimated cost of Gore Company's inventory on June 30 is
a. $9,000.
b. $36,000.
c. $15,000.
d. $24,000.

Additional Multiple Choice Questions

140. Goods in transit should be included in the inventory of the buyer when the
a. public carrier accepts the goods from the seller.
b. goods reach the buyer.
c. terms of sale are FOB destination.
d. terms of sale are FOB shipping point.

141. Inventory items on an assembly line in various stages of production are classified as
a. Finished goods.
b. Work in process.
c. Raw materials.
d. Merchandise inventory.
142. The cost flow method that often parallels the actual physical flow of merchandise is the
a. FIFO method.
b. LIFO method.
c. average-cost method.
d. gross profit method.

143. Rudolf Diesel Company's inventory records show the following data:

<table>
<thead>
<tr>
<th>Units</th>
<th>Unit Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory, January 1</td>
<td>5,000</td>
</tr>
<tr>
<td>Purchases: June 18</td>
<td>4,500</td>
</tr>
<tr>
<td>November 8</td>
<td>3,000</td>
</tr>
</tbody>
</table>

A physical inventory on December 31 shows 3,000 units on hand. Under the FIFO method, the December 31 inventory is
a. $21,000.
b. $21,750.
c. $24,000.
d. $27,000.

144. In a period of inflation, the cost flow method that results in the lowest income taxes is the
a. FIFO method.
b. LIFO method.
c. average-cost method.
d. gross profit method.

145. In a period of rising prices, FIFO will have
a. lower net income than LIFO.
b. lower cost of goods sold than LIFO.
c. lower income tax expense than LIFO.
d. lower net purchases than LIFO.

146. Under the LCM approach, the market value is defined as
a. FIFO cost.
b. LIFO cost.
c. current replacement cost.
d. selling price.

147. Euler Company made an inventory count on December 31, 2008. During the count, one of the clerks made the error of counting an inventory item twice. For the balance sheet at December 31, 2008, the effects of this error are

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
<th>Owner's Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. overstated</td>
<td>understated</td>
<td>overstated</td>
</tr>
<tr>
<td>b. understated</td>
<td>no effect</td>
<td>understated</td>
</tr>
<tr>
<td>c. overstated</td>
<td>no effect</td>
<td>overstated</td>
</tr>
<tr>
<td>d. overstated</td>
<td>overstated</td>
<td>understated</td>
</tr>
</tbody>
</table>

148. The inventory turnover ratio is computed by dividing cost of goods sold by
a. beginning inventory.
b. ending inventory.
c. average inventory.
d. 365 days.
Quigley Company's records indicate the following information for the year:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merchandise inventory, 1/1</td>
<td>$ 550,000</td>
</tr>
<tr>
<td>Purchases</td>
<td>2,250,000</td>
</tr>
<tr>
<td>Net Sales</td>
<td>3,000,000</td>
</tr>
</tbody>
</table>

On December 31, a physical inventory determined that ending inventory of $600,000 was in the warehouse. Quigley's gross profit on sales has remained constant at 30%. Quigley suspects some of the inventory may have been taken by some new employees. At December 31, what is the estimated cost of missing inventory?

- a. $100,000
- b. $200,000
- c. $300,000
- d. $700,000

**Answers to Multiple Choice Questions**

<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>34.</td>
<td>c</td>
<td>51.</td>
<td>a</td>
<td>68.</td>
<td>a</td>
<td>85.</td>
<td>c</td>
<td>102.</td>
<td>d</td>
<td>119.</td>
<td>c</td>
<td>a136.</td>
<td>a</td>
<td>a137.</td>
<td>b</td>
<td>a138.</td>
<td>c</td>
<td>35.</td>
<td>c</td>
<td>52.</td>
<td>c</td>
<td>69.</td>
<td>c</td>
<td>86.</td>
<td>d</td>
<td>103.</td>
</tr>
<tr>
<td>36.</td>
<td>a</td>
<td>53.</td>
<td>a</td>
<td>70.</td>
<td>b</td>
<td>87.</td>
<td>a</td>
<td>104.</td>
<td>a</td>
<td>121.</td>
<td>b</td>
<td>a139.</td>
<td>a</td>
<td>37.</td>
<td>c</td>
<td>54.</td>
<td>c</td>
<td>71.</td>
<td>b</td>
<td>88.</td>
<td>b</td>
<td>105.</td>
<td>b</td>
<td>122.</td>
<td>b</td>
<td>a140.</td>
</tr>
<tr>
<td>38.</td>
<td>b</td>
<td>55.</td>
<td>d</td>
<td>72.</td>
<td>b</td>
<td>89.</td>
<td>b</td>
<td>106.</td>
<td>a</td>
<td>123.</td>
<td>c</td>
<td>39.</td>
<td>a</td>
<td>56.</td>
<td>a</td>
<td>73.</td>
<td>a</td>
<td>90.</td>
<td>a</td>
<td>107.</td>
<td>d</td>
<td>124.</td>
<td>c</td>
<td>141.</td>
<td>b</td>
<td></td>
</tr>
<tr>
<td>40.</td>
<td>d</td>
<td>57.</td>
<td>c</td>
<td>74.</td>
<td>d</td>
<td>91.</td>
<td>b</td>
<td>108.</td>
<td>c</td>
<td>125.</td>
<td>c</td>
<td>41.</td>
<td>c</td>
<td>58.</td>
<td>d</td>
<td>75.</td>
<td>c</td>
<td>92.</td>
<td>b</td>
<td>109.</td>
<td>b</td>
<td>126.</td>
<td>b</td>
<td>142.</td>
<td>a</td>
<td></td>
</tr>
<tr>
<td>42.</td>
<td>c</td>
<td>59.</td>
<td>c</td>
<td>76.</td>
<td>b</td>
<td>93.</td>
<td>d</td>
<td>110.</td>
<td>c</td>
<td>127.</td>
<td>b</td>
<td>43.</td>
<td>a</td>
<td>60.</td>
<td>c</td>
<td>77.</td>
<td>a</td>
<td>94.</td>
<td>d</td>
<td>111.</td>
<td>c</td>
<td>a128.</td>
<td>c</td>
<td>145.</td>
<td>b</td>
<td></td>
</tr>
<tr>
<td>44.</td>
<td>d</td>
<td>61.</td>
<td>b</td>
<td>78.</td>
<td>a</td>
<td>95.</td>
<td>c</td>
<td>112.</td>
<td>d</td>
<td>a129.</td>
<td>b</td>
<td>146.</td>
<td>c</td>
<td>45.</td>
<td>b</td>
<td>62.</td>
<td>d</td>
<td>79.</td>
<td>d</td>
<td>96.</td>
<td>c</td>
<td>113.</td>
<td>d</td>
<td>a130.</td>
<td>a</td>
<td>147.</td>
</tr>
<tr>
<td>46.</td>
<td>a</td>
<td>63.</td>
<td>b</td>
<td>80.</td>
<td>c</td>
<td>97.</td>
<td>b</td>
<td>114.</td>
<td>c</td>
<td>a131.</td>
<td>b</td>
<td>148.</td>
<td>c</td>
<td>47.</td>
<td>a</td>
<td>64.</td>
<td>d</td>
<td>81.</td>
<td>c</td>
<td>98.</td>
<td>a</td>
<td>115.</td>
<td>a</td>
<td>a132.</td>
<td>c</td>
<td>a149.</td>
</tr>
<tr>
<td>48.</td>
<td>b</td>
<td>65.</td>
<td>a</td>
<td>82.</td>
<td>d</td>
<td>99.</td>
<td>c</td>
<td>116.</td>
<td>d</td>
<td>a133.</td>
<td>b</td>
<td>49.</td>
<td>b</td>
<td>66.</td>
<td>b</td>
<td>83.</td>
<td>a</td>
<td>100.</td>
<td>b</td>
<td>117.</td>
<td>c</td>
<td>a134.</td>
<td>c</td>
<td>50.</td>
<td>d</td>
<td>67.</td>
</tr>
</tbody>
</table>

**BRIEF EXERCISES**

**BE 150**

Michelle Lee Company identifies the following items for possible inclusion in the physical inventory. Indicate whether each item should be included or excluded from the inventory taking.

1. Goods shipped on consignment by Michelle Lee to another company.
2. Goods in transit from a supplier shipped FOB destination.
3. Goods shipped via common carrier to a customer with terms FOB shipping point.
4. Goods held on consignment from another company.
Solution 150  (3 min.)

1. Included
2. Excluded
3. Excluded
4. Excluded

BE 151

In the first month of operations, Barton Company made three purchases of merchandise in the following sequence: (1) 200 units at $6, (2) 300 units at $7, and (3) 400 units at $8. Assuming there are 300 units on hand, compute the cost of the ending inventory under (1) the FIFO method and (2) the LIFO method. Barton uses a periodic inventory system.

Solution 151  (5 min.)

1. FIFO
   \[300 \times 8 = 2,400\]

2. LIFO
   \[200 \times 6 = 1,200\]
   \[100 \times 7 = 700\]
   \[\text{Total} = 1,900\]

BE 152

Pembrook Company had beginning inventory on May 1 of $12,000. During the month, the company made purchases of $30,000 but returned $2,000 of goods because they were defective. At the end of the month, the inventory on hand was valued at $9,500.

Calculate cost of goods available for sale and cost of goods sold for the month.

Solution 152  (4 min.)

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning inventory</td>
<td>$12,000</td>
</tr>
<tr>
<td>Net purchases ($30,000 – $2,000)</td>
<td>+$28,000</td>
</tr>
<tr>
<td>Goods available for sale</td>
<td>$40,000</td>
</tr>
<tr>
<td>Ending inventory</td>
<td>–$9,500</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>$30,500</td>
</tr>
</tbody>
</table>
Inventories

Opti Company's inventory records show the following data for the month of September:

<table>
<thead>
<tr>
<th>Units</th>
<th>Unit Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory, September 1</td>
<td>100</td>
</tr>
<tr>
<td>Purchases: September 8</td>
<td>450</td>
</tr>
<tr>
<td>September 18</td>
<td>300</td>
</tr>
</tbody>
</table>

A physical inventory on September 30 shows 200 units on hand. Calculate the value of ending inventory and cost of goods sold if the company uses FIFO inventory costing and a periodic inventory system.

**Solution 153** (4 min.)

Ending inventory of 200 units: 200 x $3.70 = $740

Cost of goods sold:
- Units available for sale (100 + 450 + 300) = 850
- Units sold 850 – 200 = 650

\[
\begin{align*}
100 \times $3 &= 300 \\
450 \times $3.50 &= 1,575 \\
100 \times $3.70 &= 370 \\
\text{Cost of goods sold} &= \boxed{2,245}
\end{align*}
\]

**BE 154**

Use the information in BE 153 to calculate the value of ending inventory and cost of goods sold if the company uses LIFO inventory costing and a periodic inventory system.

**Solution 154** (4 min.)

Ending inventory: (100 units x $3.00) + (100 units x $3.50) = $650

Cost of goods sold: (300 units x $3.70) + (350 units x $3.50) = $2,335

**BE 155**

Use the information in BE 153 to calculate the value of the ending inventory and cost of goods sold if the company uses weighted average inventory costing and a periodic inventory system. Round cost per unit to 2 decimal places and ending inventory and cost of goods sold to the nearest dollar.
Solution 155  (4 min.)

Weighted average cost per unit:

Cost of goods available for sale = $2,985
Units available for sale  850
$2,985 ÷ 850 = $3.51

Ending inventory:  200 × $3.51 = $702
Cost of goods sold:  650 × $3.51 = $2,282

BE 156

The following accounts are included in the ledger of Able Company:

Advertising expense
Freight-in
Inventory
Purchases
Purchase returns and allowances
Sales
Sales returns and allowances

Which of the accounts would be included in calculating cost of goods sold?

Solution 156  (3 min.)

Freight-in
Inventory
Purchases
Purchase returns and allowances

BE 157

The Entertainment Center accumulates the following cost and market data at December 31.

<table>
<thead>
<tr>
<th>Inventory Categories</th>
<th>Cost Data</th>
<th>Market Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camera</td>
<td>$11,000</td>
<td>$10,200</td>
</tr>
<tr>
<td>Camcorders</td>
<td>8,000</td>
<td>8,500</td>
</tr>
<tr>
<td>DVDs</td>
<td>14,000</td>
<td>12,000</td>
</tr>
</tbody>
</table>

What is the lower-of-cost-or-market value of the inventory?

Solution 157  (5 min.)

<table>
<thead>
<tr>
<th>Inventory Categories</th>
<th>Cost Data</th>
<th>Market Data</th>
<th>Lower-of-cost-or-market value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camera</td>
<td>$11,000</td>
<td>$10,200</td>
<td>$10,200</td>
</tr>
<tr>
<td>Camcorders</td>
<td>8,000</td>
<td>8,500</td>
<td>8,000</td>
</tr>
<tr>
<td>DVDs</td>
<td>14,000</td>
<td>12,000</td>
<td>12,000</td>
</tr>
</tbody>
</table>

$30,200
BE 158
Shelby Supply Company reports net income of $120,000 in 2008. The ending inventory did not include goods valued at $5,000 that Shelby had consigned to Felicia’s Gift Shop.

(1) What is the correct net income for 2008?
(2) What impact will this error have on the balance sheet at 12/31/08?

Solution 158 (4 min.)
(1) If ending inventory is understated by $5,000, cost of goods sold will be overstated and net income will be understated by $5,000. The correct net income is $125,000.
(2) On the balance sheet, both inventory and owner’s equity will be understated by $5,000.

BE 159
At December 31, 2008, the following information was available for Rich Company: ending inventory $22,600; beginning inventory $21,400; cost of goods sold $171,000; and sales revenue $430,000.

Calculate the inventory turnover ratio and days in inventory for Rich.

Solution 159 (4 min.)
Inventory Turnover Ratio = $171,000 ÷ [($21,400 + $22,600) ÷ 2] = 7.8 times
Days in Inventory = 365 ÷ 7.8 = 46.8 days

EXERCISES

Ex. 160
The following information is available for Harold Company:
- Beginning inventory 600 units at $5
- First purchase 900 units at $6
- Second purchase 500 units at $7

Assume that Harold uses a periodic inventory system and that there are 700 units left at the end of the month.

Instructions
Compute the cost of ending inventory under the
(a) FIFO method.
(b) LIFO method.
Solution 160  (7 min.)
(a) FIFO Ending Inventory Cost:
\[ 500 \times 7 = 3,500 \]
\[ 200 \times 6 = 1,200 \]
\[ \text{Total} = 4,700 \]

(b) LIFO Ending Inventory Cost:
\[ 600 \times 5 = 3,000 \]
\[ 100 \times 6 = 600 \]
\[ \text{Total} = 3,600 \]

Ex. 161
Using the information in Ex. 160 above, compute each of the following under the average-cost method:

(a) Cost of ending inventory.
(b) Cost of goods sold.

Solution 161  (7 min.)
Average cost/unit = $5.95 \( (11,900 \div 2,000) \)
\[ 600 \times 5 = 3,000 \]
\[ 900 \times 6 = 5,400 \]
\[ 500 \times 7 = 3,500 \]
\[ \text{Total} = 11,900 \]

(a) Cost of ending inventory = $4,165 \((700 \times 5.95)\)

(b) Cost of goods sold = $7,735 \((1,300 \times 5.95)\) or $11,900 – $4,165

Ex. 162
Morton Company uses the periodic inventory method and had the following inventory information available:

<table>
<thead>
<tr>
<th>Units</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1</td>
<td>100</td>
<td>$4</td>
</tr>
<tr>
<td>1/20</td>
<td>400</td>
<td>$5</td>
</tr>
<tr>
<td>7/25</td>
<td>200</td>
<td>$7</td>
</tr>
<tr>
<td>10/20</td>
<td>300</td>
<td>$8</td>
</tr>
<tr>
<td></td>
<td>1,000</td>
<td>$6,200</td>
</tr>
</tbody>
</table>

A physical count of inventory on December 31 revealed that there were 400 units on hand.
Instructions
Answer the following independent questions and show computations supporting your answers.

1. Assume that the company uses the FIFO method. The value of the ending inventory at December 31 is $__________.

2. Assume that the company uses the Average-Cost method. The value of the ending inventory on December 31 is $__________.

3. Assume that the company uses the LIFO method. The value of the ending inventory on December 31 is $__________.

4. Determine the difference in the amount of income that the company would have reported if it had used the FIFO method instead of the LIFO method. Would income have been greater or less?

Solution 162  (20 min.)

1. FIFO: Ending inventory $3,100
   
   300 units @ $8 = $2,400
   100 units @ $7 = 700
   400 units $3,100

2. Average Cost: Ending inventory $2,480
   
   $6,200 ÷ 1,000 = $6.20 per unit × 400 units = $2,480

3. LIFO: Ending Inventory $1,900
   
   100 units @ $4 = $400
   300 units @ $5 = 1,500
   400 units $1,900

4. FIFO: Cost of goods sold $3,100
   
   LIFO: Cost of goods sold $4,300
   
   100 units @ $4 = $400
   400 units @ $5 = 2,000
   100 units @ $7 = 700
   600 units $3,100

   300 units @ $8 = $2,400
   200 units @ $7 = 1,400
   100 units @ $5 = 500
   600 units $4,300

Income would have been $1,200 ($4,300 vs. $3,100) greater if the company used FIFO instead of LIFO.
Ex. 163

Dixen Company sells many products. Whamo is one of its popular items. Below is an analysis of
the inventory purchases and sales of Whamo for the month of March. Dixen Company uses the
periodic inventory system.

<table>
<thead>
<tr>
<th>Purchases</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units</td>
<td>Unit Cost</td>
</tr>
<tr>
<td>3/1</td>
<td>Beginning inventory</td>
</tr>
<tr>
<td>3/3</td>
<td>Purchase</td>
</tr>
<tr>
<td>3/4</td>
<td>Sales</td>
</tr>
<tr>
<td>3/10</td>
<td>Purchase</td>
</tr>
<tr>
<td>3/16</td>
<td>Sales</td>
</tr>
<tr>
<td>3/19</td>
<td>Sales</td>
</tr>
<tr>
<td>3/25</td>
<td>Sales</td>
</tr>
<tr>
<td>3/30</td>
<td>Purchase</td>
</tr>
</tbody>
</table>

Instructions
(a) Using the FIFO assumption, calculate the amount charged to cost of goods sold for March.
(Show computations)
(b) Using the weighted average method, calculate the amount assigned to the inventory on
hand on March 31. (Show computations)
(c) Using the LIFO assumption, calculate the amount assigned to the inventory on hand on
March 31. (Show computations)

Solution 163  (20 min.)

<table>
<thead>
<tr>
<th>Purchases</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units</td>
<td>Unit Cost</td>
</tr>
<tr>
<td>3/1</td>
<td>Beginning inventory</td>
</tr>
<tr>
<td>3/3</td>
<td>Purchase</td>
</tr>
<tr>
<td>3/4</td>
<td>Sales</td>
</tr>
<tr>
<td>3/10</td>
<td>Purchase</td>
</tr>
<tr>
<td>3/16</td>
<td>Sales</td>
</tr>
<tr>
<td>3/19</td>
<td>Sales</td>
</tr>
<tr>
<td>3/25</td>
<td>Sales</td>
</tr>
<tr>
<td>3/30</td>
<td>Purchase</td>
</tr>
</tbody>
</table>

(a) Using FIFO - the earliest units purchased were the first sold.
3/1 100 @ $40 = $4,000
3/3 60 @ 50 = 3,000
3/10 90 @ 55 = 4,950
250 units $11,950 = the cost of goods sold

(b) Calculate the weighted average unit cost:
$20,400 ÷ 400 = $51
$51 × units in ending inventory (400 available less 250 sold = 150)
$51 × 150 = $7,650

(c) There are 150 units in ending inventory. They are comprised of the first units purchased
when LIFO is assumed.
3/1 100 @ $40 = $4,000
3/3 50 @ $50 = 2,500
150 units $6,500 = ending inventory
Ex. 164

Yenn Company uses the periodic inventory system to account for inventories. Information related to Yenn Company's inventory at October 31 is given below:

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Units</th>
<th>Cost per Unit</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct 1</td>
<td>Beginning inventory</td>
<td>400</td>
<td>$10.00</td>
<td>$4,000</td>
</tr>
<tr>
<td>Oct 8</td>
<td>Purchase</td>
<td>800</td>
<td>$10.40</td>
<td>8,320</td>
</tr>
<tr>
<td>Oct 16</td>
<td>Purchase</td>
<td>600</td>
<td>$10.80</td>
<td>6,480</td>
</tr>
<tr>
<td>Oct 24</td>
<td>Purchase</td>
<td>200</td>
<td>$11.60</td>
<td>2,320</td>
</tr>
</tbody>
</table>

Total units and cost: 2,000 units, $21,120

Instructions
1. Show computations to value the ending inventory using the FIFO cost assumption if 550 units remain on hand at October 31.
2. Show computations to value the ending inventory using the weighted-average cost method if 550 units remain on hand at October 31.
3. Show computations to value the ending inventory using the LIFO cost assumption if 550 units remain on hand at October 31.

Solution 164  (20 min.)

1. 550 units in ending inventory.
   Under FIFO, the units remaining in inventory are the ones purchased most recently.
   - 10/24 200 units @ $11.60 = $2,320
   - 10/16 350 units @ 10.80 = 3,780
   - Total 550 units $6,100

2. 550 units in ending inventory.
   Under average cost method, the weighted average cost per unit must be computed.
   - $21,120 ÷ 2,000 units = $10.56
   - 550 units × $10.56 = $5,808

3. 550 units in ending inventory.
   Under LIFO, the units remaining are the ones purchased earliest.
   - 10/1 400 units @ $10.00 = $4,000
   - 10/8 150 units @ 10.40 = 1,560
   - Total 550 units $5,560

Ex. 165

Sims Company is in the electronics industry and the price it pays for inventory is decreasing.

Instructions
Indicate which inventory method will:

a. provide the highest ending inventory.
b. provide the highest cost of goods sold.
c. result in the highest net income.
d. result in the lowest income tax expense.
e. produce the most stable earnings over several years.
Solution 165  (4 min.)

a. LIFO  
b. FIFO  
c. LIFO  
d. FIFO  
e. Average cost

Ex. 166

Utley Company reported the following summarized annual data at the end of 2008:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales revenue</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Cost of goods sold*</td>
<td>600,000</td>
</tr>
<tr>
<td>Gross margin</td>
<td>400,000</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>250,000</td>
</tr>
<tr>
<td>Income before income taxes</td>
<td>$150,000</td>
</tr>
</tbody>
</table>

*Based on an ending FIFO inventory of $250,000.

The income tax rate is 30%. The controller of the company is considering a switch from FIFO to LIFO. He has determined that on a LIFO basis, the ending inventory would have been $200,000.

Instructions

(a) Restate the summary information on a LIFO basis.

(b) What effect, if any, would the proposed change have on Utley's income tax expense, net income, and cash flows?

(c) If you were an owner of this business, what would your reaction be to this proposed change?

Solution 166  (25 min.)

(a) Restate to a LIFO basis:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales revenue</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Cost of goods sold*</td>
<td>650,000</td>
</tr>
<tr>
<td>Gross margin</td>
<td>350,000</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>250,000</td>
</tr>
<tr>
<td>Income before income taxes</td>
<td>$100,000</td>
</tr>
</tbody>
</table>

*Ending inventory would be $50,000 less ($250,000 – $200,000 = $50,000) under LIFO, thereby increasing cost of goods by $50,000.

(b) The taxes on the FIFO basis would be:

$150,000 × .30 = $45,000

Leaving Net Income of $105,000 ($150,000 – $45,000 = $105,000).

The taxes on the LIFO basis would be:

$100,000 × .30 = $30,000

Leaving Net Income of $70,000 ($100,000 – $30,000 = $70,000).
Solution 166  (cont.)

Switching to the LIFO basis will result in $15,000 less income tax expense and less net income of $35,000. The cash effect is $15,000 ($45,000 – $30,000 = $15,000) saved in taxes if LIFO were used.

(c) Owners of the business may favor the LIFO basis since more cash will be available for use in the business. LIFO results in more cash being retained in the business since less is paid out for income taxes.

Ex. 167

Compute the lower-of-cost-or-market valuation for Howe Company's total inventory based on the following:

<table>
<thead>
<tr>
<th>Inventory Categories</th>
<th>Cost Data</th>
<th>Market Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>18,000</td>
<td>17,200</td>
</tr>
<tr>
<td>B</td>
<td>14,000</td>
<td>14,600</td>
</tr>
<tr>
<td>C</td>
<td>21,000</td>
<td>20,500</td>
</tr>
</tbody>
</table>

Solution 167  (5 min.)

<table>
<thead>
<tr>
<th>Inventory Categories</th>
<th>Cost Data</th>
<th>Market Data</th>
<th>LCM</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>18,000</td>
<td>17,200</td>
<td>17,200</td>
</tr>
<tr>
<td>B</td>
<td>14,000</td>
<td>14,600</td>
<td>14,000</td>
</tr>
<tr>
<td>C</td>
<td>21,000</td>
<td>20,500</td>
<td>20,500</td>
</tr>
<tr>
<td>Total Valuation</td>
<td></td>
<td></td>
<td>51,700</td>
</tr>
</tbody>
</table>

Ex. 168

The controller of Lawn-Pro Company is applying the lower-of-cost-or-market basis of valuing its ending inventory. The following information is available:

<table>
<thead>
<tr>
<th></th>
<th>Cost</th>
<th>Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawnmowers:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-propelled</td>
<td>15,000</td>
<td>17,000</td>
</tr>
<tr>
<td>Push type</td>
<td>19,000</td>
<td>18,000</td>
</tr>
<tr>
<td>Total</td>
<td>34,000</td>
<td>35,000</td>
</tr>
<tr>
<td>Snowblowers:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manual</td>
<td>30,000</td>
<td>31,000</td>
</tr>
<tr>
<td>Self-start</td>
<td>19,000</td>
<td>21,000</td>
</tr>
<tr>
<td>Total</td>
<td>49,000</td>
<td>52,000</td>
</tr>
<tr>
<td>Total inventory</td>
<td>83,000</td>
<td>87,000</td>
</tr>
</tbody>
</table>

Instructions

Compute the value of the ending inventory by applying the lower-of-cost-or-market basis.
Solution 168  (15 min.)

**Lower-of-cost-or-market**

Lawnmowers:
- Self-propelled: $15,000
- Push type: $18,000

Snowblowers:
- Manual: $30,000
- Self-start: $19,000

Total inventory: $82,000

Ex. 169

Wert Company is preparing the annual financial statements dated December 31, 2008. Information about inventory stocked for regular sale follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity on Hand</th>
<th>Unit Cost When Acquired</th>
<th>Replacement Cost (market) at year end</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>50</td>
<td>$20</td>
<td>$19</td>
</tr>
<tr>
<td>B</td>
<td>100</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>C</td>
<td>20</td>
<td>60</td>
<td>62</td>
</tr>
<tr>
<td>D</td>
<td>40</td>
<td>40</td>
<td>37</td>
</tr>
</tbody>
</table>

**Instructions**

Compute the valuation for the December 31, 2008, inventory using the lower-of-cost-or-market basis.

Solution 169  (10 min.)

<table>
<thead>
<tr>
<th>Item</th>
<th>Units</th>
<th>Lower of Cost or Market</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>50</td>
<td>$19</td>
<td>$950</td>
</tr>
<tr>
<td>B</td>
<td>100</td>
<td>45</td>
<td>4,500</td>
</tr>
<tr>
<td>C</td>
<td>20</td>
<td>60</td>
<td>1,200</td>
</tr>
<tr>
<td>D</td>
<td>40</td>
<td>37</td>
<td>1,480</td>
</tr>
</tbody>
</table>

**Extension:** $8,130

Ex. 170

Dryer Company reported net income of $60,000 in 2008 and $80,000 in 2009. However, ending inventory was overstated by $5,000 in 2008.

**Instructions**

Compute the correct net income for Dryer Company for 2008 and 2009.
Solution 170  (6 min.)

2008 correct net income = $55,000  ($60,000 – $5,000)
2009 correct net income = $85,000  ($80,000 + $5,000)

Ex. 171

For each of the independent events listed below, analyze the impact on the indicated items at the end of the current year by placing the appropriate code letter in the box under each item.

<table>
<thead>
<tr>
<th>Code: O = item is overstated</th>
<th>U = item is understated</th>
<th>NA = item is not affected</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Events</th>
<th>Assets</th>
<th>Owner’s Equity</th>
<th>Cost of Goods Sold</th>
<th>Net Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A physical count of goods on hand at the end of the current year resulted in some goods being counted twice.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The ending inventory in the previous period was overstated.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Goods purchased on account in December of the current year and shipped FOB shipping point were recorded as purchases, but were not included in the count of goods on hand on December 31 because they had not arrived by December 31.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Goods purchased on account in December of the current year and shipped FOB destination were recorded as purchases, but were not included in the count of goods on hand on December 31 because they had not arrived by December 31.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. The internal auditors discovered that the ending inventory in the previous period was understated $15,000 and that the ending inventory in the current period was overstated $25,000.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Solution 171  (20 min.)

<table>
<thead>
<tr>
<th>Events</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. O O U O</td>
<td></td>
</tr>
<tr>
<td>2. NA NA O U</td>
<td></td>
</tr>
<tr>
<td>3. U U O U</td>
<td></td>
</tr>
<tr>
<td>4. NA U O U</td>
<td></td>
</tr>
<tr>
<td>5. O O U O</td>
<td></td>
</tr>
</tbody>
</table>
Nolan’s Hardware Store prepared the following analysis of cost of goods sold for the previous three years:

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning inventory 1/1</td>
<td>$40,000</td>
<td>$18,000</td>
<td>$25,000</td>
</tr>
<tr>
<td>Cost of goods purchased</td>
<td>50,000</td>
<td>55,000</td>
<td>70,000</td>
</tr>
<tr>
<td>Cost of goods available for sale</td>
<td>90,000</td>
<td>73,000</td>
<td>95,000</td>
</tr>
<tr>
<td>Ending inventory 12/31</td>
<td>18,000</td>
<td>25,000</td>
<td>40,000</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>$72,000</td>
<td>$48,000</td>
<td>$55,000</td>
</tr>
</tbody>
</table>

Net income for the years 2007, 2008, and 2009 was $70,000, $60,000, and $55,000, respectively. Since net income was consistently declining, Mr. Nolan hired a new accountant to investigate the cause(s) for the declines.

The accountant determined the following:
1. Purchases of $25,000 were not recorded in 2007.
2. The 2007 December 31 inventory should have been $24,000.
3. The 2008 ending inventory included inventory costing $5,000 that was purchased FOB destination and in transit at year end.
4. The 2009 ending inventory did not include goods costing $4,000 that were shipped on December 29 to Sampson Plumbing Company, FOB shipping point. The goods were still in transit at the end of the year.

Instructions
Determine the correct net income for each year. (Show all computations.)

Solution 172  (25 min.)

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning inventory 1/1</td>
<td>$ 40,000</td>
<td>$29,000</td>
<td>$20,000</td>
</tr>
<tr>
<td>Cost of goods purchased</td>
<td>(1) 75,000</td>
<td>55,000</td>
<td>70,000</td>
</tr>
<tr>
<td>Cost of goods available for sale</td>
<td>115,000</td>
<td>84,000</td>
<td>90,000</td>
</tr>
<tr>
<td>Ending inventory 12/31</td>
<td>(2) 24,000</td>
<td>(3) 20,000</td>
<td>40,000</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>$ 91,000</td>
<td>$64,000</td>
<td>$50,000</td>
</tr>
</tbody>
</table>

Net Income previously reported  
Add: Prior cost of goods sold  
Less: Revised cost of goods sold  
Corrected Net Income  

(1) Additional purchases $25,000  
(2) Additional ending inventory $6,000  
(3) Less ending inventory $5,000
Ex. 173

Hill Pharmacy reported cost of goods sold as follows:

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning inventory</td>
<td>$54,000</td>
<td>$64,000</td>
</tr>
<tr>
<td>Cost of goods purchased</td>
<td>847,000</td>
<td>891,000</td>
</tr>
<tr>
<td>Cost of goods available for sale</td>
<td>901,000</td>
<td>955,000</td>
</tr>
<tr>
<td>Ending inventory</td>
<td>64,000</td>
<td>55,000</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>$837,000</td>
<td>$900,000</td>
</tr>
</tbody>
</table>

Hill made two errors:
(1) 2008 ending inventory was overstated by $6,000.
(2) 2009 ending inventory was understated by $15,000.

Instructions
Assuming the errors had not been corrected, indicate the dollar effect that the errors had on the items appearing on the financial statements listed below. Also indicate if the amounts are overstated (O) or understated (U).

<table>
<thead>
<tr>
<th></th>
<th>2008 Amount</th>
<th>Overstated/ Understated</th>
<th>2009 Amount</th>
<th>Overstated/ Understated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owner’s equity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Solution 173 (20 min.)

Correct cost of goods sold:

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning inventory</td>
<td>$54,000</td>
<td>$58,000</td>
</tr>
<tr>
<td>Cost of goods purchased</td>
<td>847,000</td>
<td>891,000</td>
</tr>
<tr>
<td>Cost of goods available for sale</td>
<td>901,000</td>
<td>949,000</td>
</tr>
<tr>
<td>Ending inventory</td>
<td>58,000</td>
<td>70,000</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>$843,000</td>
<td>$879,000</td>
</tr>
</tbody>
</table>
Ex. 174

The following information is available for Manning Company:

- Beginning inventory $60,000
- Cost of goods sold $600,000
- Ending inventory $100,000
- Sales $750,000

Instructions

Compute each of the following:
(a) Inventory turnover.
(b) Days in inventory.

Solution 174  (5 min.)

(a) Inventory turnover:
\[
\frac{\$600,000}{\frac{\$60,000 + \$100,000}{2}} = \frac{\$600,000}{\$80,000} = 7.5
\]

(b) Days in inventory:
\[
\frac{365}{7.5} = 48.7 \text{ days}
\]

Ex. 175

Vaughn Company uses the perpetual inventory system and the LIFO method. The following information is available for the month of May:

- May 1 Beginning inventory 20 units @ $5
- May 10 Purchase 20 units @ $8
- May 15 Sales 15 units
- May 18 Purchase 10 units @ $9
- May 21 Sales 15 units
- May 30 Purchase 10 units @ $10

Instructions

Prepare a schedule to show cost of goods sold and the value of the ending inventory for the month of May.

Solution 175  (10 min.)

Cost of goods sold:

<table>
<thead>
<tr>
<th>Date</th>
<th>Units</th>
<th>Price</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 15</td>
<td>15</td>
<td>$8</td>
<td>$120</td>
</tr>
<tr>
<td>May 21</td>
<td>10</td>
<td>$9</td>
<td>$90</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>$8</td>
<td>$40</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td></td>
<td>$250</td>
</tr>
</tbody>
</table>

Ending inventory:

<table>
<thead>
<tr>
<th>Date</th>
<th>Units</th>
<th>Price</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 1</td>
<td>20</td>
<td>$5</td>
<td>$100</td>
</tr>
<tr>
<td>May 30</td>
<td>10</td>
<td>$10</td>
<td>$100</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td></td>
<td>$200</td>
</tr>
</tbody>
</table>
Romano Company uses the perpetual inventory system and had the following purchases and sales during March.

### Purchases

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Units</th>
<th>Unit Cost</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/1</td>
<td>Beginning inventory</td>
<td>100</td>
<td>$40</td>
<td>$4,000</td>
</tr>
<tr>
<td>3/3</td>
<td>Purchase 60 @ $50</td>
<td>60</td>
<td>$50</td>
<td></td>
</tr>
<tr>
<td>3/4</td>
<td>Sales 70 @ $80</td>
<td></td>
<td></td>
<td>$7,000</td>
</tr>
<tr>
<td>3/10</td>
<td>Purchase 200 @ $55</td>
<td>200</td>
<td>$55</td>
<td>$11,000</td>
</tr>
<tr>
<td>3/16</td>
<td>Sales 80 @ $90</td>
<td></td>
<td></td>
<td>$15,200</td>
</tr>
<tr>
<td>3/19</td>
<td>Purchase 40 @ $60</td>
<td>40</td>
<td>$60</td>
<td></td>
</tr>
<tr>
<td>3/25</td>
<td>Sales 120 @ $90</td>
<td></td>
<td></td>
<td>$13,900</td>
</tr>
</tbody>
</table>

### Sales

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Units</th>
<th>Selling Price/Unit</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/1</td>
<td>(100 @ $40)</td>
<td></td>
<td>$4,000</td>
<td></td>
</tr>
<tr>
<td>3/3</td>
<td>(100 @ $40)</td>
<td></td>
<td>(60 @ $50)</td>
<td>$7,000</td>
</tr>
<tr>
<td>3/4</td>
<td>(30 @ $40)</td>
<td></td>
<td>(60 @ $50)</td>
<td>$4,200</td>
</tr>
<tr>
<td>3/10</td>
<td>(30 @ $40)</td>
<td></td>
<td>(200 @ $55)</td>
<td>$11,500</td>
</tr>
<tr>
<td>3/16</td>
<td>(10 @ $50)</td>
<td></td>
<td>(200 @ $55)</td>
<td>$13,900</td>
</tr>
<tr>
<td>3/19</td>
<td>(10 @ $50)</td>
<td></td>
<td>(40 @ $60)</td>
<td>$7,350</td>
</tr>
<tr>
<td>3/25</td>
<td>(90 @ $55)</td>
<td></td>
<td>(40 @ $60)</td>
<td></td>
</tr>
</tbody>
</table>

March cost of goods sold = $13,050  
March 31 inventory = $7,350
\textbf{Solution 176} (cont.)

b) \textbf{LIFO}

\begin{center}
\begin{tabular}{|c|c|c|c|}
\hline
Date & Purchases & Sales & Balance \\
\hline
3/1 & (100 @ $40) & $4,000 & \\
3/3 & (60 @ $50) & $3,000 & (100 @ $40) \\
 & (60 @ $50) & $7,000 & (60 @ $50) \\
3/4 & (60 @ $50) & $3,400 & (90 @ $40) \\
 & (90 @ $40) & $3,600 & (90 @ $40) \\
3/10 & (200 @ $55) & $11,000 & (200 @ $55) \\
 & (90 @ $40) & $14,600 & (90 @ $40) \\
3/16 & (80 @ $55) & $4,400 & (120 @ $55) \\
 & (90 @ $40) & $10,200 & (90 @ $40) \\
3/19 & (40 @ $60) & $2,400 & (120 @ $55) \\
 & (40 @ $60) & $12,600 & (40 @ $60) \\
3/25 & (40 @ $60) & $6,800 & (40 @ $55) \\
 & (80 @ $55) & $5,800 & (80 @ $55) \\
\hline
\end{tabular}
\end{center}

March cost of goods sold = $14,600 ($3,400 + $4,400 + $6,800)
March 31 inventory = $5,800

\textbf{Ex. 177}

Adler Department Store prepares monthly financial statements but only takes a physical count of
merchandise inventory at the end of the year. The following information has been developed for
the month of July:

\begin{center}
\begin{tabular}{|c|c|c|}
\hline
 & At Cost & At Retail \\
\hline
Beginning inventory & $ 35,000 & $ 50,000 \\
Merchandise purchases & 115,000 & 150,000 \\
\hline
\end{tabular}
\end{center}

The net sales for July amounted to $140,000.

\textbf{Instructions}

Use the retail inventory method to estimate the ending inventory at cost for July. Show all
computations to support your answer.

\textbf{Solution 177} (10 min.)

\begin{center}
\begin{tabular}{|c|c|c|}
\hline
 & At Cost & At Retail \\
\hline
Beginning inventory & $ 35,000 & $ 50,000 \\
Merchandise purchases & 115,000 & 150,000 \\
Goods available for sale & $150,000 & 200,000 \\
Net sales & 140,000 & \\
(1) Ending inventory at retail & $60,000 & \\
(2) Cost to retail ratio = 75% ($150,000 ÷ $200,000). \\
(3) Ending inventory at cost = ($60,000 × 75%) = $45,000. \\
\hline
\end{tabular}
\end{center}
Horne Company suffered a loss of its inventory on March 28 due to a fire in its warehouse. As a basis for filing a claim with its insurance company, Horne Company developed the following information:

- March net sales through March 28: $360,000
- Beginning Inventory, March 1: $150,000
- Merchandise purchases through March 28: $180,000

The company has experienced an average gross profit rate of 35% in the past and this rate appears to be appropriate in the current period.

**Instructions**
Using the gross profit method, prepare an estimate of the cost of the inventory destroyed by fire on March 28. Show all computations in good form.

**Solution 178** (10 min.)

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net sales</td>
<td>$360,000</td>
</tr>
<tr>
<td>Less: Estimated gross profit ($360,000 × 35%)</td>
<td>$126,000</td>
</tr>
<tr>
<td>Estimated cost of goods sold</td>
<td>$234,000</td>
</tr>
<tr>
<td>Beginning inventory</td>
<td>$150,000</td>
</tr>
<tr>
<td>Merchandise purchases</td>
<td>$180,000</td>
</tr>
<tr>
<td>Goods available for sale</td>
<td>$330,000</td>
</tr>
<tr>
<td>Less: Estimated cost of goods sold</td>
<td>$234,000</td>
</tr>
<tr>
<td>Estimated cost of ending inventory destroyed by fire</td>
<td>$ 96,000</td>
</tr>
</tbody>
</table>

**Ex. 179**

The inventory of Snider Company was destroyed by fire on April 1. From an examination of the accounting records, the following data for the first three months of the year are obtained:

- Sales: $185,000
- Sales Returns and Allowances: $5,000
- Purchases: $90,000
- Freight-In: $3,500
- Purchase Returns and Allowances: $4,000

**Instructions**
Determine the merchandise lost by fire, assuming a beginning inventory of $60,000 and a gross profit rate of 40% on net sales.
Solution 179 (10 min.)

Net Sales ($185,000 – $5,000) $180,000
Less: Estimated gross profit (40% × $180,000) 72,000
Estimated cost of goods sold $108,000

Beginning inventory $60,000
Cost of goods purchased ($90,000 – $4,000 + $3,500) 89,500
Cost of goods available for sale 149,500
Less: Estimated cost of good sold 108,000
Estimated cost of merchandise lost $41,500

Ex. 180

Hyland Company reports goods available for sale at cost, $90,000. Beginning inventory at retail is $40,000 and goods purchased during the period at retail were $80,000. Sales for the period amounted to $88,000.

Instructions

Determine the estimated cost of the ending inventory using the retail inventory method.

Solution 180 (10 min.)

<table>
<thead>
<tr>
<th>At Cost</th>
<th>At Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning inventory</td>
<td>$40,000</td>
</tr>
<tr>
<td>Goods purchased</td>
<td>80,000</td>
</tr>
<tr>
<td>Goods available for sale</td>
<td>$90,000</td>
</tr>
<tr>
<td>Net sales</td>
<td>88,000</td>
</tr>
<tr>
<td>Ending inventory</td>
<td>$32,000</td>
</tr>
</tbody>
</table>

First calculate the cost to retail ratio.

$90,000 + $120,000 = 75%

Apply this ratio to the ending inventory at retail.

$32,000 × .75 = $24,000

$24,000 is the estimated cost of the ending inventory.
COMPLETION STATEMENTS

181. Accounting for inventories is important because inventories affect the ______________ section of the balance sheet and the ______________ section on the income statement.

182. In a manufacturing company, goods that are ready to be sold to customers are referred to as ______________, whereas in a merchandising company they are generally referred to as ______________.

183. The cost of goods purchased during a period plus the beginning inventory is the amount of goods ______________ during the period.

184. Inventoriable costs are allocated to ______________ and cost of goods ____________.

185. It is generally recognized that a major objective of accounting for inventory is the proper determination of ______________.

186. The ______________ method tracks the actual physical flow of each unit of inventory available for sale; however, management may be able to manipulate ______________ by using this method.

187. If the unit cost of inventory has continuously increased, the ______________, first-out inventory valuation method will result in a higher valued ending inventory than if the ______________, first-out method had been used.

188. The lower-of-cost-or-market basis of accounting for inventories should be applied when the ______________ cost of the goods is lower than its cost.

189. ______________ is calculated as cost of goods sold divided by average inventory.

190. Two widely used methods of estimating inventories are the ______________ method and the ______________ method.

ANSWERS TO COMPLETION STATEMENTS

181. current assets, cost of goods sold
182. finished goods, merchandise inventory
183. available for sale
184. ending inventory, sold
185. net income
186. specific identification, income
187. first-in, last-in
188. replacement
189. Inventory turnover
190. gross profit, retail inventory
### MATCHING

191. Match the items below by entering the appropriate code letter in the space provided.

<table>
<thead>
<tr>
<th>A. Merchandise Inventory</th>
<th>F. First-in, first-out (FIFO) method</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Work in process</td>
<td>G. Last-in, first-out (LIFO) method</td>
</tr>
<tr>
<td>C. FOB shipping point</td>
<td>H. Average-cost method</td>
</tr>
<tr>
<td>D. FOB destination</td>
<td>I. Inventory turnover</td>
</tr>
<tr>
<td>E. Specific identification method</td>
<td>J. Current replacement cost</td>
</tr>
</tbody>
</table>

____ 1. Measures the number of times the inventory sold during the period.
____ 2. Tracks the actual physical flow for each inventory item available for sale.
____ 3. Goods that are only partially completed in a manufacturing company.
____ 4. Cost of goods sold consists of the most recent inventory purchases.
____ 5. Goods ready for sale to customers by retailers and wholesalers.
____ 6. Title to the goods transfers when the public carrier accepts the goods from the seller.
____ 7. Ending inventory valuation consists of the most recent inventory purchases.
____ 8. The same unit cost is used to value ending inventory and cost of goods sold.
____ 9. Title to goods transfers when the goods are delivered to the buyer.
____ 10. The amount that would be paid at the present time to acquire an identical item.

### Answers to Matching

1. I
2. E
3. B
4. G
5. A
6. C
7. F
8. H
9. D
10. J
SHORT-ANSWER ESSAY QUESTIONS

S-A E 192

FIFO and LIFO are the two most common cost flow assumptions made in costing inventories. The amounts assigned to the same inventory items on hand may be different under each cost flow assumption. If a company has no beginning inventory, explain the difference in ending inventory values under the FIFO and LIFO cost bases when the price of inventory items purchased during the period have been (1) increasing, (2) decreasing, and (3) remained constant.

Solution 192

The FIFO method determines the ending inventory by the cost of the most recent purchase. The LIFO method determines the ending inventory by the cost of the earliest purchase. Therefore, if the FIFO method is used and the prices during the period are increasing, the ending inventory under FIFO will be greater than under LIFO. Likewise, if the FIFO method is used and the prices during the period are decreasing, the ending inventory under FIFO will be less than under LIFO. If prices remain constant and the company has no beginning inventory, then there will be no difference in ending inventory.

S-A E 193

Errors occasionally occur when physically counting inventory items on hand. Identify the financial statement effects of an overstatement of the ending inventory in the current period. If the error is not corrected, how does it affect the financial statements for the following year?

Solution 193

The overstatement of ending inventory will cause cost of goods sold to be understated. Consequently, net income for the period will be overstated. The effect on the balance sheet is that assets and owner’s equity will be overstated. The subsequent period will have an overstatement of beginning inventory. This will cause cost of goods sold to be overstated and net income to be understated, counterbalancing the overstatement of income in the prior period.

S-A E 194

A survey of major U.S. companies revealed that 77% of those companies used either LIFO or FIFO cost flow methods, while 19% used average cost, and only 4% used other methods.

Required:
Provide brief, yet concise responses to the following questions.

a. Why are LIFO and FIFO so popular?

b. Since computers and inventory management software are readily available, why aren’t more companies using specific identification?
Solution 194

a. FIFO and LIFO are based on cost flow assumptions that may be unrelated to the physical flow of goods. The reasons for using one of these methods involve the effects on the income statement, balance sheet, and taxes that the company must pay.

In periods of rising prices (inflation), LIFO provides for a lower net income, thus resulting in a lower tax liability. LIFO reflects the most realistic cost of goods sold (the most recent or highest costs). However, the cost of inventory on the balance sheet is distorted because it consists of the earliest or lowest costs.

In periods of rising prices, FIFO provides for the most realistic ending inventory cost on the balance sheet (using the most recent or highest costs). On the income statement, FIFO represents the least realistic cost of goods sold because the amount consists of the earliest or lowest costs. This makes net income higher, which is good for the external financial statements but it thus results in a higher tax liability. In periods of falling prices, opposite results apply.

b. With computers and inventory management software, it would appear that the specific identification method would be the most popular because it matches the actual cost of each item sold to its selling price. However, using computers to keep up with the information does not eliminate some of the problems with using specific identification.

One problem is an ethical one. A major disadvantage of the specific identification method is that management may be able to manipulate net income. For example, it can boost net income by selling units purchased at a low cost, or reduce net income by selling units purchased at a high cost. As long as customers receive the units they demand, they are indifferent when the company bought them. This manipulation means that net income is not objectively measured.

Another problem is that the costs of maintaining a specific identification system may outweigh the benefits of using such a method. As mentioned in part a, financial statement and tax effects of using FIFO and LIFO are more beneficial to companies than simply being able to match the actual cost of a unit to its selling price.

S-A E 195

Your former college roommate is opening a new retail store and asks you “Which inventory costing method should I use?”

What is your response? Include a comparison of the tax effect, balance sheet effect, and income statement effect for FIFO versus LIFO.

Solution 195

It is always good to hear from you and you have certainly asked a very good question. Since the consistency principle requires that you adopt accounting methods and stay with them (until there is need for a proper change), it is very important to consider the options before starting a business.

I suggest that you consider one of the three cost flow assumptions—Average, First-In, First-Out (FIFO), or Last-In, First-Out (LIFO). These methods are based on the assumption of cost flows instead of the actual physical flow of goods.
Solution 195  (cont.)

The effects on the income statement, balance sheet, and tax returns depend on whether your company experiences rising prices or falling prices.

Here is a summary of the effects for each inventory method, for companies that experience rising prices (the opposite will be true for falling prices).

<table>
<thead>
<tr>
<th>Inventory Method</th>
<th>Tax Effect</th>
<th>Income Statement Effect</th>
<th>Balance Sheet Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>Falls between FIFO and LIFO</td>
<td>Falls between FIFO and LIFO</td>
<td>Falls between FIFO and LIFO</td>
</tr>
<tr>
<td>FIFO</td>
<td>Highest net income, thus highest taxes</td>
<td>Highest net income. Thus more attractive for external financial reporting</td>
<td>Most realistic ending inventory because latest costs are matched to ending inventory</td>
</tr>
<tr>
<td>LIFO</td>
<td>Lowest net income, thus lowest taxes (works best if constant levels of inventory units are maintained)</td>
<td>Lowest net income (If you use LIFO for tax purposes, you must also use it for external financial reporting.)</td>
<td>Most unrealistic ending inventory because the earliest costs are matched to ending inventory</td>
</tr>
</tbody>
</table>

S-A E 196  (Ethics)

Suzy Cole and Joe Lane are department managers in the housewares and shoe departments, respectively, for Newmans, a large department store. Joe has observed Suzy taking inventory from her own department home, apparently without paying for it. He hesitates confronting Suzy because he is due to be promoted, and needs Suzy's recommendation. He also does not want to notify the company management directly, because he doesn't want an ethics investigation on his record, believing that it will give him a "goody-goody" image. This week, Suzy tried on several pairs of expensive running shoes in his department before finding a pair that suited her. She did not, however, buy them. That very pair was missing this morning.

Newmans recently replaced its old periodic inventory system with a perpetual inventory system using scanners and bar codes. In addition, the annual inventory is to be replaced by a monthly inventory conducted by an independent firm. On hearing the news of the changes, Joe relaxes. "The system will catch Suzy now," he says to himself.

Required:
1. Is Joe's attitude justified? Why or why not?
2. What, if any, action should Joe take now?

Solution 196

1. Joe's attitude is not justified. The system will only be able to detect that merchandise is missing, not to determine who took it.
Solution 196  (cont.)

2. Joe should notify his superiors at once. He has knowledge of what may be criminal acts, and by concealing them, he is very close to becoming a party to the acts. Joe's apparent fear of not being promotable because of a “goody-goody” image seems unjustified. It would seem more likely that Joe's refusal to accept unethical (and illegal) acts by others would make him a more valuable manager. He may even be jeopardizing his career with Newmans if someone else reports Suzy's actions. The resulting investigation may implicate Joe because of his failure to notify the proper authorities in a timely manner.

S-A E 197  (Communication)

Sam Wertz, a new employee of Nance Company, recorded $1,000 in consigned goods received as part of the firm's inventory. The goods were received one day after the end of the fiscal period, but Sam reasoned that the goods should be included in inventory sooner because Nance paid the freight. The mistake was brought to his attention by the purchasing department who said the goods should not have been recorded as Nance's inventory at all. Sam told Lisa Gomez, the purchasing supervisor, that nobody needed to worry, because the mistake would cancel itself out the following month. In Sam's opinion, there was no reason to get everyone excited over nothing, especially since it was monthly, and not annual, financial statements that were affected. Lisa Gomez has reported the problem to the accounting department.

Required:
You are Sam's supervisor. Write a memo to Sam explaining why the error should have been corrected.
MEMO

TO: Sam Wertz, Accounting Department

FROM: Mary Farr, Supervisor

DATE: March 12, 2008

It has come to my attention that $1,000 in consigned goods were included in the inventory reported in our January financial statements. You were informed that this amount should be removed from inventory, which you did not do, apparently believing that February's entries would correct the error.

The error would have been corrected in February if it were only a matter of your recording inventory in the wrong month. January's inventory and expenses would have been overstated, and February's understated, but the net effect would have been zero. Since the $1,000 is a fairly large amount, however, that still would not have been appropriate.

The error you made, however, was to enter into inventory goods that the company did not own, and will not own. Consigned goods are owned by the consignors until purchased by customers. We only provide our shops for the consignors to sell their goods, and we collect a fee for doing so.

Please correct the error at once. We may need to notify some of the other departments of the error as well. Please arrange to meet with me in my office as soon as possible to discuss the matter.

(signature)