Overview

Chapter 9 is quite long and covers a number of issues involving both inventory and cost of goods sold. Hopefully, you learned something about inventory methods in your introductory accounting courses so that this isn’t all new for you. Regardless, there is a lot to take in in this chapter, so you may need to spend more time studying it than you do the rest of the chapters in this book.

Manufacturing businesses have multiple kinds of inventory to account for. They purchase raw materials, have inventory at various stages of completion, and have finished goods ready to ship or turn over to customers. Manufacturing companies also have additional kinds of inventorial costs. Salaries of factory workers and other overhead costs go into inventory (and eventually cost of goods sold).

Businesses usually begin an accounting period with inventory and then make additional purchases during the period. These two items together equal the cost of goods available for sale to customers during a period. There are a variety of possible methods under GAAP with which a company can allocate these costs between cost of goods sold and ending inventory. First-in, first-out (FIFO) is the most popular method, but other methods include last-in, first-out (LIFO), specific identification, and average cost.

Although inventories are generally shown on the balance sheet at their historical cost, GAAP requires them to be written down to “market” if that is a lesser amount. Computing what exactly “market” is can be more complicated than it looks on the surface. Businesses then can choose to write inventory down to market on an item-by-item basis, by major classes of inventory, or the inventory as a whole.

The chapter also discusses some inventory estimation techniques, which are less precise but still permissible in some circumstances. These include the gross profit method, dollar-value LIFO methods, and retail inventory methods.
Learning Objectives

Refer to the Review of Learning Objectives at the end of the chapter. It is crucial that this section of the chapter is second nature to you before you attempt the homework, a quiz, or exam. This important piece of the chapter serves as your CliffsNotes or "cheat sheet" to the basic concepts and principles that must be mastered.

If after reading this section of the chapter you still don’t feel comfortable with all of the Learning Objectives covered, you will need to spend additional time and effort reviewing those concepts that you are struggling with.

The following “Tips, Hints, and Things to Remember” are organized according to the Learning Objectives (LOs) in the chapter and should be gone over after reading each of the LOs in the textbook.

Tips, Hints, and Things to Remember

LO1 – Define inventory for a merchandising business, and identify the different types of inventory for a manufacturing business.

Why? Things like raw materials, work in process, and finished goods generally only apply to manufacturing businesses. Think of the inventory for a manufacturing business as being grouped into three categories: yet to be transformed (raw materials), being manufactured (work in process), and completely manufactured (finished goods). Finished goods are essentially the only goods that nonmanufacturing businesses have in inventory.

Merchandising businesses purchase goods and then turn around and sell them. Hence, their accounting for inventory is usually more simple. If, however, they are purchasing, to resell thousands of different items (think Wal-Mart), then accounting for their inventory can hardly be considered simple.
LO2 – Explain the advantages and disadvantages of both periodic and perpetual inventory systems.

**Why?** Is one system better than the other? The answer is no. However, for certain businesses, using one versus the other can be advantageous. The periodic system requires the least amount of work on a daily basis, especially for a company with a large number of transactions. Can you imagine, for instance, a grocery store in the pre-computer age using a perpetual inventory system? A cashier in such a grocery store wouldn’t be able to go through more than a few baskets of groceries in an entire day if they wanted to keep the accounting records accurate.

On the other hand, if a computer system is purchased and the products are all coded to be easily scanned in and scanned out, a perpetual system has several advantages. The inventory of the store need not be counted every time the books are closed (although doing so will show the amount of shrinkage that has occurred—something that can’t be done with the periodic method). The purchasing agents will have better information about inventory quantities and can, therefore, make better purchasing decisions. Inventory levels can be kept lower, reducing spoilage and warehousing costs while at the same time decreasing the potential for stock-outs since low quantity items are more easily identified.

LO3 – Determine when ownership of goods in transit changes hands and what circumstances require shipped inventory to be kept on the books.

**How?** Ownership involves the transfer of title. Generally when title transfers, so does ownership, and the asset should usually be taken off of the books of the seller and placed on the books of the buyer at that time. (Look back to Chapter 8 for more on this and for some exceptions.)

LO4 – Compute total inventory acquisition cost.

**How?** For merchandising businesses, inventory includes only those costs incurred to procure the inventory (cost plus freight less discounts less purchase returns and allowances). For manufacturing businesses, inventory cost is more complicated. It includes the same items as merchandising businesses when it comes to raw materials, but in addition to raw materials, other product costs are also included. Those include labor costs incurred to manufacture the product and a variety of overhead costs that are incurred in running the manufacturing facility. All of those costs go into inventory as well and either end up in cost of goods sold or ending inventory.
LO5 – Use the four basic inventory valuation methods: specific identification, average cost, FIFO, and LIFO.

**How?** Specific identification is easy enough. The others require more detailed calculations. Don’t try and shortcut them. Go through each step in the calculations and make sure that your final numbers for Ending Inventory and Cost of Goods Sold total a number you can call Cost of Goods Available for Sale (which equals purchases plus beginning inventory). After all, what you are really doing in all three situations is allocating the total cost of goods available for sale between Cost of Goods Sold and Ending Inventory.

Finally, note that average cost and LIFO on the perpetual method will usually result in different Cost of Goods Sold and Ending Inventory amounts than on the periodic method. The calculations use the same steps though. They just need to be repeated every time something is sold. FIFO produces the same results under both the periodic and perpetual methods.

LO6 – Explain how LIFO inventory layers are created, and describe the significance of the LIFO reserve.

**What?** LIFO layers are created when more inventory is purchased than is sold. LIFO layers are used when less inventory is purchased than is sold. If prices are rising and LIFO layers are used—especially if they are very old LIFO layers—then the gross profit from those sales that liquidated old LIFO layers can be very high when compared with normal gross profit figures.

LO7 – Choose an inventory valuation method based on the trade-offs among income tax effects, bookkeeping costs, and the impact on the financial statements.

**What?** Understand Exhibit 9-15 in the textbook. You will likely see a test question or two dealing with it in this course as well as on the CPA Exam. Realize, first of all, that the average cost method will fall somewhere between the two. It is FIFO and LIFO that will yield the extremes in Ending Inventory/Cost of Goods Sold valuation.

Perhaps the most common question asked deals with income taxes. If prices are rising, LIFO will yield the best tax effects, at least for the first year LIFO is adopted. In years after the first one, the tax effects are frequently minor or nonexistent. Years in which LIFO layers are liquidated can actually cause LIFO to yield higher taxes than FIFO. LIFO doesn’t permanently reduce taxes; it only defers them. Also, realize that if prices are decreasing (which is frequently the case in the high-tech industry), then the opposite is true. FIFO will cause the best tax effects in the first year when prices are falling.
LO8 – Apply the lower-of-cost-or-market (LCM) rule to reflect declines in the market value of inventory.

**How?** LCM is as simple as picking the middle of three numbers and then comparing the middle number to another to find the lower of the two. What are the three numbers? The three numbers are: (1) replacement cost (usually given), (2) net realizable value (NRV), and (3) NRV less normal profit (NP). Pick the middle of those three and compare it to cost (the amount already on the books). If cost is lower, then nothing needs to be done. If cost is higher, then inventory needs to be written down to market.

**How?** LCM under IAS 2 is much simpler to calculate. It is simply the lower of cost or NRV.

LO9 – Use the gross profit method to estimate ending inventory.

**How?** The gross profit method is a simple way to estimate ending inventory (and cost of goods sold). It isn’t allowed for GAAP reporting purposes. It could be used to estimate losses due to natural disasters, for budgets, or to get a ballpark figure for current inventory if the periodic method is being used and a physical count can’t be taken. All that is involved is a computation of cost of goods available for sale (beginning inventory plus purchases), an inference of estimated cost of goods sold based on historical gross profit percentages and sales for the period, and then a subtraction of estimated cost of goods sold from cost of goods available for sale to come up with estimated ending inventory.

LO10 – Determine the financial statement impact of inventory recording errors.

**How?** The sooner you commit the following formula to memory, the quicker this chapter becomes manageable. The formula makes sense, so rather than trying to memorize the formula without understanding it, it is better to understand it first and then be able to infer it when needed. Remember that ultimately the cost of goods available for sale needs to be allocated between cost of goods sold and ending inventory. So it is cost of goods available for sale that initially needs to be computed. Included are the two items mentioned several times already: beginning inventory and purchases. Nothing else can make up cost of goods available for sale. With that in mind, the following formula should roll out of your head whenever needed. (I recommend writing it out on the top of your homework, quiz, or exam at the outset since you’re likely to be using it multiple times.)
Beginning inventory
+ Purchases
= Cost of goods available for sale
– Ending inventory
= Cost of goods sold

With the prior formula in mind, you can determine the effect any errors will have on the
year-end financial statements. Let’s assume that some purchases didn’t get recorded,
but they did get counted with the rest of the inventory at year end. What would the effect be on the financial statements?

Beginning inventory (not affected)
+ Purchases (understated)
= Cost of goods available for sale (understated)
– Ending inventory (not affected)
= Cost of goods sold (understated)

The result, therefore, of purchases not getting recorded is that purchases and cost of
goods available for sale are both understated, ending inventory is still correctly stated,
and cost of goods sold is understated, which will cause net income to be overstated and
retained earnings to be overstated as well.

If the purchases were not recorded or counted (maybe they were shipped FOB shipping
point on December 30 and didn’t arrive until January 4), then the result would change,
using the same method, to the following:

Beginning inventory (not affected)
+ Purchases (understated)
= Cost of goods available for sale (understated)
– Ending inventory (understated)
= Cost of goods sold (not affected)

The result, therefore, of purchases not getting recorded or counted is that purchases,
cost of goods available for sale, and ending inventory are all understated, but cost of
goods sold is not affected. This topic will be discussed further in Chapter 20.

LO11 – Analyze inventory using financial ratios, and properly compare
ratios of different firms after adjusting for differences in inventory valuation
methods.

How? See the second How? on page 3-4 of this guide.
LO12 – Compute estimates of FIFO, LIFO, average cost, and lower-of-cost-or-market inventory using the retail inventory method.

**What?** Don’t make the retail inventory method harder than it is. If you understand the rest of this chapter well, this method shouldn’t be that difficult to comprehend. The retail inventory method is really just a combination of the gross profit method (using actual, current-year cost percentages rather than historical gross profit margin percentages) and the other methods discussed earlier in the chapter (LO5 and LO8).

LO13 – Use LIFO pools, dollar-value LIFO, and dollar-value LIFO retail to compute ending inventory.

LO14 – Account for the impact of changing prices on purchase commitments.

LO15 – Record inventory purchase transactions denominated in foreign currencies.

The following sections, featuring various multiple choice questions, matching exercises, and problems, along with solutions and approaches to arriving at the solutions, is intended to develop your problem-solving and critical-thinking abilities. While learning through trial and error can be effective for improving your quiz and exam scores, and it can be a more interesting way to study than merely re-reading a chapter, that is only a secondary objective in presenting this information in this format.

The main goal of the following sections is to get you thinking, “How can I best approach this problem to arrive at the correct solution—even if I don’t know enough at this point to easily arrive at the proper results?” There is not one simple approach that can be applied to all questions to arrive at the right answer. Think of the following approaches as possibilities, as tools that you can place in your problem-solving toolkit—a toolkit that should be consistently added to. Some of the tools have yet to even be created or thought of. Through practice, creative thinking, and an ever-expanding knowledge base, you will be the creator of the additional tools.
Multiple Choice

MC9-1 (LO1) Which of the following describes the flow of product costs through the inventory accounts of a manufacturer?
   a. raw materials, work in process, finished goods
   b. raw materials, overhead, finished goods
   c. raw materials, direct labor, overhead, finished goods
   d. purchases, finished goods

MC9-2 (LO2) The SD Company makes the following entry in its accounting records:

<table>
<thead>
<tr>
<th>Description</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of Goods Sold</td>
<td>275</td>
<td>Inventory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>275</td>
</tr>
</tbody>
</table>

This entry would be made when merchandise is
   a. sold and the periodic inventory method is used.
   b. sold and the perpetual inventory method is used.
   c. purchased and the perpetual inventory method is used.
   d. purchased and the periodic inventory method is used.

MC9-3 (LO3) Bench Company’s Accounts Payable balance at December 31, 2011, was $1,900,000 before considering the following transactions:

- Goods were in transit from a vendor to Bench on December 31, 2011. The unpaid invoice price was $100,000, and the goods were shipped FOB shipping point on December 29, 2011. The goods were received on January 4, 2012.
- Goods shipped to Bench FOB shipping point on December 20, 2011, from a vendor were lost in transit. The invoice price was $50,000. On January 5, 2012, Bench filed a $50,000 claim against the common carrier.

In its December 31, 2011, balance sheet, Bench should report Accounts Payable of
   a. $1,950,000.
   b. $1,900,000.
   c. $2,050,000.
   d. $2,000,000.
MC9-4 (LO4) On May 1, Crazy Company recorded purchases of inventory of $80,000 and $100,000 under credit terms of 2/15, net/30. The payment due on the $80,000 purchase was remitted on May 14. The payment due on the $100,000 purchase was remitted on May 29. Under the net method and the gross method, these purchases should be included at what respective net amounts in the determination of cost of goods available for sale?

<table>
<thead>
<tr>
<th>Net Method</th>
<th>Gross Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. $178,400</td>
<td>$176,400</td>
</tr>
<tr>
<td>b. $176,400</td>
<td>$176,400</td>
</tr>
<tr>
<td>c. $176,400</td>
<td>$176,400</td>
</tr>
<tr>
<td>d. $180,000</td>
<td>$178,400</td>
</tr>
</tbody>
</table>

MC9-5 (LO5) Assume that cost of goods sold is $195,000, and ending inventory is $55,000 for a company using the FIFO method. If ending inventory for the same period for the same company is $65,000 under the LIFO method, how much is cost of goods sold under the LIFO method?

a. $185,000  
b. $195,000  
c. $205,000  
d. cannot be determined from just the information given

MC9-6 (LO6) Which of the following statements is TRUE?

a. A company must use the FIFO cost flow assumption for taxes if it is also using FIFO for financial accounting and reporting.

b. A company may use FIFO for inventory valuation purposes on the balance sheet provided that LIFO cost of goods sold is reported on the income statement.

c. Application of LIFO for financial reporting purposes must strictly follow IRS regulations relating to LIFO.

d. LIFO is the only inventory method that must be used for financial reporting purposes if used for income tax purposes.

MC9-7 (LO7) Which of the following statements is NOT true?

a. LIFO usually does a better job than FIFO of matching current costs with current revenues.

b. When there is inflation, LIFO yields lower taxable income than average cost if inventory levels are stable or increasing.

c. LIFO’s Ending Inventory balance agrees more closely than FIFO with current replacement cost.

d. FIFO, more than LIFO, usually corresponds with the physical flow of goods.
A company sells four products: I, II, III, and IV. The company values all inventories using the lower-of-cost-or-market rule. The company has consistently experienced a profit margin of 20 percent of sales and expects this rate to hold for the future. Additional information, shown below, is available for the most recent year as of December 31.

<table>
<thead>
<tr>
<th>Product</th>
<th>Original Cost</th>
<th>Cost to Replace</th>
<th>Estimated Cost to Sell</th>
<th>Expected Selling Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>$60</td>
<td>$70</td>
<td>$10</td>
<td>$100</td>
</tr>
<tr>
<td>II</td>
<td>70</td>
<td>90</td>
<td>20</td>
<td>120</td>
</tr>
<tr>
<td>III</td>
<td>80</td>
<td>60</td>
<td>10</td>
<td>60</td>
</tr>
<tr>
<td>IV</td>
<td>90</td>
<td>80</td>
<td>20</td>
<td>90</td>
</tr>
</tbody>
</table>

Using the lower-of-cost-or-market rule, what is the reported inventory value at December 31 for one unit of product IV?

- a. $60
- b. $70
- c. $80
- d. $90

Steal Me Company’s accounting records indicated the following information:

- Inventory, beginning of 2011: $1,000,000
- Purchases during 2011: 5,000,000
- Sales during 2011: 6,400,000

A physical inventory taken on December 31, 2011, revealed actual ending inventory at cost was $1,150,000. Steal Me’s gross profit on sales has regularly been about 25 percent in recent years. The company believes some inventory may have been stolen during the year. What is the estimated amount of stolen inventory at December 31, 2011?

- a. $50,000
- b. $200,000
- c. $350,000
- d. $370,000
MC9-10 (LO10) Blunder Company began operations in 2009. During the first two years of operations, Blunder made undiscovered errors in taking its year-end inventories that understated 2009 ending inventory by $40,000 and overstated 2010 ending inventory by $50,000. The errors were not discovered until the company received its first audit in 2012. What was the combined effect of these errors on reported income?

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>understated $40,000</td>
<td>overstated $50,000</td>
<td>not affected</td>
</tr>
<tr>
<td>b.</td>
<td>understated $40,000</td>
<td>overstated $10,000</td>
<td>not affected</td>
</tr>
<tr>
<td>c.</td>
<td>understated $40,000</td>
<td>overstated $90,000</td>
<td>understated $50,000</td>
</tr>
<tr>
<td>d.</td>
<td>overstated $40,000</td>
<td>understated $50,000</td>
<td>overstated $10,000</td>
</tr>
</tbody>
</table>

MC9-11 (LO11) Selected information from the accounting records of Ryan Company is as follows:

Net sales for 2011  $900,000  
Cost of goods sold for 2011 $600,000  
Inventory at December 31, 2010  180,000  
Inventory at December 31, 2011  156,000  

Thayer’s inventory turnover for 2011 is
a. 5.36 times.  
b. 3.85 times.  
c. 3.67 times.  
d. 3.57 times.
Matching

Matching 9-1 (LO1) Listed below are the terms and associated definitions from the chapter for LO1. Match the correct definition letter with each term number.

___ 1. inventory  a. inventory acquired by a manufacturer for use in the production process
___ 2. raw materials b. inventory of a manufacturer that is partly processed and requires further work before it can be sold
___ 3. direct materials c. costs other than direct materials and direct labor
___ 4. indirect materials d. assets held for sale in the normal course of business; also, assets held to be used as materials in a production process
___ 5. work in process e. manufactured products for which the manufacturing process is complete
___ 6. manufacturing overhead f. materials that are necessary to facilitate the production process but are not directly incorporated in the final product
___ 7. finished goods g. the primary physical materials making up the final product

Matching 9-2 (LO2, LO3) Listed below are the terms and associated definitions from the chapter for LO2 and LO3. Match the correct definition letter with each term number.

___ 1. periodic inventory system  a. inventory that is physically located at a dealer but whose ownership is retained by the shipper until the dealer sells the inventory
___ 2. perpetual inventory system b. the amount of inventory that is lost, stolen, or spoiled
c. terms of sale under which title of goods passes to the purchaser at the point of destination
d. a method of accounting for inventory in which cost of goods sold is determined and inventory is adjusted to the proper balance at the end of the accounting period; purchases are recorded in the Purchases account, and ending inventory is determined by a physical count
e. terms of sale under which title of goods passes to the purchaser at the point of shipment
___ 3. shrinkage f. a method of accounting for inventory in which detailed records of each inventory purchase and sale are maintained; this system provides a current record of inventory on hand and cost of goods sold to date
___ 4. FOB (free on board) shipping point
___ 5. FOB (free on board) destination
___ 6. consigned goods
Matching 9-3 (LO4) Listed below are the terms and associated definitions from the chapter for LO4. Match the correct definition letter with each term number.

<table>
<thead>
<tr>
<th>Term Number</th>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ 1.</td>
<td>period costs</td>
<td>a. a reduction in the “list” sales price of an item to the “net” sales price actually charged to the customer; generally dependent on the volume of business or size of order from the customer</td>
</tr>
<tr>
<td>___ 2.</td>
<td>inventorial product costs</td>
<td>b. recognized as an expense during the period in which it is incurred; not included as part of inventory cost</td>
</tr>
<tr>
<td>___ 3.</td>
<td>activity-based cost (ABC)</td>
<td>c. a characteristic of the production process that is known to create overhead costs</td>
</tr>
<tr>
<td>___ 4.</td>
<td>cost drivers</td>
<td>d. a method of inventory accounting that records inventory as if cash discounts will be taken</td>
</tr>
<tr>
<td>___ 5.</td>
<td>trade discounts</td>
<td>e. a reduction in sales price allowed if payment is received within a specified period, usually offered to customers to encourage prompt payment</td>
</tr>
<tr>
<td>___ 6.</td>
<td>cash discounts</td>
<td>f. a method of inventory accounting that records inventory cost before considering cash discounts</td>
</tr>
<tr>
<td>___ 7.</td>
<td>net method</td>
<td>g. included in the total cost of manufactured inventory</td>
</tr>
<tr>
<td>___ 8.</td>
<td>gross method</td>
<td>h. allocates overhead based on clearly identified characteristics of the production process that are known to create overhead costs</td>
</tr>
</tbody>
</table>
Matching 9-4 (LO5, LO6) Listed below are the terms and associated definitions from the chapter for LO5 and LO6. Match the correct definition letter with each term number.

___ 1. specific identification method
___ 2. average cost method
___ 3. first-in, first-out (FIFO) method
___ 4. last-in, first-out (LIFO) method
___ 5. LIFO layer
___ 6. LIFO reserve
___ 7. LIFO liquidation
___ 8. LIFO conformity rule
___ 9. LIFO inventory pools
___ 10. dollar-value LIFO

a. an inventory valuation method that assumes that the units sold are the most recent ones purchased or manufactured
b. an adaptation of LIFO that measures inventory by total dollar amount rather than by individual units; LIFO incremental layers are determined based on total dollar changes
c. a group of inventory items having common characteristics and assumed to be the same when applying LIFO
d. an inventory valuation method that assigns the same cost to each unit sold and to each item in the inventory
e. a reduction or elimination of old LIFO layers because total purchases or production in the current period is less than sales
f. an inventory valuation method that assumes that the units sold are the first ones purchased or manufactured
g. the difference between LIFO ending inventory and the amount obtained using another method such as FIFO or average cost
h. an inventory valuation method that assigns the actual cost of inventory items sold to cost of goods sold
i. a federal tax regulation that requires the use of LIFO for financial reporting purposes if LIFO is used for income tax purposes
j. an incremental group of LIFO inventory items created in any year in which the number of units purchased or produced exceeds the number sold
Matching 9-5 (LO8, LO9, LO10, LO11) Listed below are the terms and associated definitions from the chapter for LO8 through LO11. Match the correct definition letter with each term number.

<table>
<thead>
<tr>
<th>Term Number</th>
<th>Term Description</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>lower of cost or market (LCM)</td>
<td>a. the net realizable value; used as an upper limit in defining market when valuing inventory at the lower of cost or market</td>
</tr>
<tr>
<td>2</td>
<td>market</td>
<td>b. the generally accepted method for valuation of inventories; this method can be applied to inventories on an aggregate or individual item basis</td>
</tr>
<tr>
<td>3</td>
<td>replacement cost</td>
<td>c. the net realizable value less a normal profit; used as a lower limit in defining market when valuing inventory at the lower of cost or market</td>
</tr>
<tr>
<td>4</td>
<td>entry cost</td>
<td>d. the value received for an asset when sold</td>
</tr>
<tr>
<td>5</td>
<td>exit value</td>
<td>e. an inventory estimation technique based on the relationship between gross profit and sales; used to estimate cost of goods sold, which in turn, is used to estimate the value of the inventory not yet sold</td>
</tr>
<tr>
<td>6</td>
<td>ceiling</td>
<td>f. the cost that would be required to replace an existing asset</td>
</tr>
<tr>
<td>7</td>
<td>floor</td>
<td>g. used to evaluate whether the level of inventory is appropriate, given the volume of business</td>
</tr>
<tr>
<td>8</td>
<td>gross profit method</td>
<td>h. the acquisition cost of an asset</td>
</tr>
<tr>
<td>9</td>
<td>number of days’ sales in inventory</td>
<td>i. the replacement cost adjusted for an upper and lower limit that reflects the estimated net realizable value</td>
</tr>
</tbody>
</table>
Matching 9-6 (LO12, LO13, LO14, LO15) Listed below are the terms and associated definitions from the chapter for LO12 through LO15. Match the correct definition letter with each term number.

___ 1. purchase commitment  a. permits the estimation of an inventory amount without the time and expense of taking a physical inventory or maintaining detailed perpetual inventory records; this method is more flexible than the gross profit method in that it allows estimates to be based on FIFO, LIFO, or average cost assumptions, and it even permits estimation of lower-of-cost-or-market values

___ 2. foreign currency transaction  b. an overall measure of how much prices have increased during the year

___ 3. dollar-value LIFO retail method  c. used to evaluate whether the level of inventory is appropriate, given the volume of business

___ 4. inventory turnover  d. an advance promise to purchase inventory in the future at a set price

___ 5. price index  e. LIFO layers are stated in terms of retail values; after the LIFO retail layers have been identified and priced using a price index, the retail inventory of each layer is multiplied by the appropriate cost percentage

___ 6. retail inventory method  f. for a U.S. company, a transaction denominated in a currency other than the U.S. dollar

**Problems**

**Problem 9-1 (LO3)** The Inventory account of Rufus Company at December 31, 2011, included the following items:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merchandise out on consignment at sales price (including markup of 35 percent on selling price)</td>
<td>$18,000</td>
</tr>
<tr>
<td>Goods purchased, in transit (shipped FOB shipping point)</td>
<td>6,000</td>
</tr>
<tr>
<td>Goods held by Rufus on consignment</td>
<td>5,500</td>
</tr>
<tr>
<td>Goods sold for $15,000 with an original cost of $8,000, in transit (shipped FOB shipping point)</td>
<td>8,000</td>
</tr>
</tbody>
</table>

Based on this information, the Inventory account at December 31, 2011, should be reduced by what amount?
Problem 9-2 (LO5) The data below relate to widgets, which are used by Maynard, Inc., in its warehousing operation:

<table>
<thead>
<tr>
<th>Date</th>
<th>Received</th>
<th>Issued</th>
<th>Price</th>
<th>Received</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 1</td>
<td>1,600</td>
<td></td>
<td>$16</td>
<td></td>
<td>$25,600</td>
</tr>
<tr>
<td>Jan. 11</td>
<td>2,000</td>
<td>960</td>
<td>14</td>
<td>$28,000</td>
<td></td>
</tr>
<tr>
<td>Feb. 16</td>
<td></td>
<td>680</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar. 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June 22</td>
<td>580</td>
<td></td>
<td>15</td>
<td></td>
<td>8,700</td>
</tr>
<tr>
<td>Aug. 18</td>
<td></td>
<td>950</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sept. 10</td>
<td></td>
<td>810</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct. 8</td>
<td>1,510</td>
<td></td>
<td>17</td>
<td></td>
<td>25,670</td>
</tr>
<tr>
<td>Dec. 9</td>
<td>400</td>
<td>930</td>
<td>18</td>
<td></td>
<td>7,200</td>
</tr>
<tr>
<td>Dec. 21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the data above, provide answers for the following (show computations for 1. and 2.):

1. Assuming a perpetual inventory system is used, compute the ending inventory under (a) FIFO and (b) LIFO.
2. Assuming a perpetual inventory system is used, compute the cost of goods sold under (a) FIFO and (b) LIFO.
3. If a perpetual inventory of widgets is kept on an average cost basis, the ending inventory will be
   a. lower than if kept on a LIFO basis.
   b. higher than if kept on a FIFO basis.
   c. lower than if kept on a FIFO basis.
   d. impossible to determine.

Problem 9-3 (LO8) The Crater Company began its operations in early 2011. The company carries five different types of inventory that are listed below along with other relevant data. The company values its inventory at the lower of cost or market. At December 31, 2011, Crater has exactly one unit of each item in ending inventory.

<table>
<thead>
<tr>
<th>Item</th>
<th>Actual Cost</th>
<th>Replacement Cost</th>
<th>Estimated Selling Price</th>
<th>Estimated Cost to Sell</th>
<th>Normal Profit Margin on Selling Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$12.00</td>
<td>$13.00</td>
<td>$20.00</td>
<td>$4.00</td>
<td>20%</td>
</tr>
<tr>
<td>2</td>
<td>14.00</td>
<td>10.00</td>
<td>10.00</td>
<td>2.00</td>
<td>10%</td>
</tr>
<tr>
<td>3</td>
<td>16.00</td>
<td>10.00</td>
<td>20.00</td>
<td>6.00</td>
<td>15%</td>
</tr>
<tr>
<td>4</td>
<td>18.00</td>
<td>15.00</td>
<td>24.00</td>
<td>2.00</td>
<td>25%</td>
</tr>
<tr>
<td>5</td>
<td>20.00</td>
<td>22.00</td>
<td>30.00</td>
<td>4.00</td>
<td>30%</td>
</tr>
</tbody>
</table>
1. Complete the following table using the lower-of-cost-or-market rule as of December 31, 2011.

<table>
<thead>
<tr>
<th>Item</th>
<th>Ceiling</th>
<th>Floor</th>
<th>Market</th>
<th>LCM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Compute the inventory loss, if any, Crater should show in 2011 using the lower-of-cost-or-market rule applied on an individual items basis.

3. Prepare the adjusting entry, if any, required as of December 31, 2011, assuming all such entries are made directly to the Inventory account.

Solutions, Approaches, and Explanations

MC9-1
Answer: a
Approach and explanation: There are three primary categories of inventory for a manufacturing business. Choice a includes those three. Work in process includes manufacturing overhead, direct materials, and direct labor. Therefore, choices b and c are incomplete. Even if they did include all three components of work in process, they wouldn’t be as clear and concise a choice with choice a also available.

Choice d sounds more like what a merchandising business would have, although they don’t tend to refer to their inventory as finished goods. Generally, a merchandising business will just call their inventory “inventory” or “merchandise inventory.”

MC9-2
Answer: b
Approach and explanation: Choice a would be “no entry” as Inventory and Cost of Goods Sold are only affected at the end of the period, not when inventory is sold, under the periodic method.

The correct entry for choice c would be:

Inventory 275
Accounts Payable (or Cash) 275

The correct entry for choice d would be:

Purchases 275
Accounts Payable (or Cash) 275
Note, again, that under the periodic method, the Inventory account does not receive any adjustments until the end of the period. Inventory is not debited or credited when purchases or sales are made under the periodic method.

**MC9-3**  
Answer: c  
Approach and explanation: The $1,900,000 account balance was before the two items, meaning that if one, or both, of the items should be included in Accounts Payable at year end, they will be additions to the existing $1,900,000 balance.

The first item should be included in Accounts Payable beginning on December 29 since title transferred at the shipping point. It doesn’t matter whether the goods arrived on December 31 or January 4. The result is the same—Accounts Payable when shipped, not when received.

The second item is the same situation. It doesn’t matter that the carrier lost the goods in transit. Bench still has a liability to the vendor since Bench took title to the goods on December 20. The only way this $50,000 would not be included in Bench’s Accounts Payable balance on December 31 is if the carrier paid the vendor, not Bench, $50,000 by December 31, 2011. If the carrier paid Bench $50,000 for the loss before year end, Bench would still owe $50,000 to the vendor.

If either of these items were, instead, FOB destination, then they would be excluded from the December 31, 2011, Accounts Payable balance of Bench (and would be included in the vendor’s inventory at year end).

**MC9-4**  
Answer: c  
Approach and explanation: You are more likely to arrive at the correct solution to this question if you don’t use a shortcut on it in your head. Instead, write out what the journal entries would be under each method. The following assumes the perpetual method is used, but the end result wouldn’t change if the periodic method was used. Purchases would merely get the debit instead of Inventory.

**Net Method**

<table>
<thead>
<tr>
<th>Description</th>
<th>Debit Amount</th>
<th>Credit Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>176,400</td>
<td></td>
</tr>
<tr>
<td>Accounts Payable</td>
<td></td>
<td>176,400</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>78,400</td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td></td>
<td>78,400</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>98,000</td>
<td></td>
</tr>
<tr>
<td>Discounts Lost</td>
<td>2,000</td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td></td>
<td>100,000</td>
</tr>
</tbody>
</table>
Notice that Discounts Lost, not Inventory, gets the debit for the extra $2,000 that must be paid for not paying within the discount period. This means that the net method will cause a lesser amount of cost of goods available for sale when compared to the gross method if discounts are not all taken. By using the net method, costs that would otherwise be product costs are turned into period costs (finance charges).

**Gross Method**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>180,000</td>
<td></td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>180,000</td>
<td></td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>80,000</td>
<td>1,600</td>
</tr>
<tr>
<td>Inventory</td>
<td></td>
<td>78,400</td>
</tr>
<tr>
<td>Cash</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100,000</td>
<td></td>
</tr>
</tbody>
</table>

By not doing this problem in your head, you not only reduce the chances of mathematical errors, but you also make sure you don’t miss anything in your answer. When you list entries, you are also essentially checking yourself and possibly helping yourself get to the correct answer.

For instance, if you don’t know off the top of your head what the journal entry should be under the gross method for payment within a discount period, you can do the entry in steps.

**Step 1:** Get Accounts Payable off the books with a debit for the full amount.

**Step 2:** Credit Cash for the amount paid.

**Step 3:** Since you are left with an unbalanced entry, you know that you must credit something for the difference. This hole in your entry may help you to figure out the amount and account (Inventory) that receives the credit.

Intuitively, it isn’t easy to come up with the $1,600 reduction in Inventory; however, by going through the three steps above, it isn’t so difficult.

**MC9-5**

Answer: a

Approach and explanation: Recall that under any inventory method, what is being done is an allocation of the cost of goods available for sale. So if a company has cost of goods sold of $195,000 and ending inventory of $55,000 under any method, their cost of goods available for sale must have been the two numbers combined, or $250,000.
The cost of goods available for sale isn’t going to change if the company uses LIFO, average cost, or the specific identification method. Therefore, if its ending inventory under any of these other methods is $65,000 for the same period, then its cost of goods sold will be the difference between the cost of goods available for sale and the ending inventory, or $185,000 ($250,000 – $65,000).

One need not know what beginning inventory was and how much each sale and purchase was in order to necessarily recompute ending inventory or cost of goods sold under a different inventory valuation method, provided that enough information is provided. In this case, there is enough information and that is why choice d is incorrect.

**MC9-6**
Answer: a
Approach and explanation: This question tests your understanding of the LIFO conformity rule. As far as a test-taking strategy goes, you can see that choices a and d are opposites. It would be very difficult for both to be false. Therefore, even if you don’t have a clue what the LIFO conformity rule is, you should make an educated guess and rule out choices b and c.

The LIFO conformity rule doesn’t mean that financial reporting follows IRS regulations (choice c). What it means is that the same method must be used for IRS purposes that are used for financial accounting and reporting. Hence, choice a is correct. LIFO isn’t the only method that the conformity rule applies to, and that is why choice d is false.

Choice b is the most incorrect of all. It would make no sense, for financial or income tax purposes, to use one method for the income statement (cost of goods sold) and a different method for the balance sheet (Inventory). Doing so would distort what is happening. The various inventory valuation methods are cost allocators, not misrepresentations of what the goods available for sale were. Using two different methods for two different financial statements in the same period would falsify the goods available for sale figure.

**MC9-7**
Answer: c
Approach and explanation: Note, first of all, that this question is asking for the statement that is not true. Underline, circle, or otherwise highlight the word “not” in the question. Then be sure to read all of the choices. Otherwise, you may pick the first statement because it sounds right, thinking you are looking for the statement that is true.

While FIFO doesn’t usually do a poor job of matching current costs with current revenues, there can be a delay of months between the time inventory is purchased and sold when FIFO is used, so the last period’s purchases can make up a portion of sales. LIFO usually doesn’t have as much, or any, lag in comparison. Hence, choice a is a true statement.
Just because average cost isn’t listed in Exhibit 9-15 doesn’t mean that you shouldn’t be able to compare it to FIFO and LIFO. Average cost falls in the middle of the two. Therefore, if you are comparing FIFO to average cost, average cost becomes like LIFO relative to FIFO, but not as extreme. And if you are comparing LIFO to average cost, average cost becomes like FIFO relative to LIFO, but not as extreme. Choice b is also true because LIFO yields lower taxable income compared to average cost and FIFO if inventory levels are stable or increasing and if there is inflation. If prices are falling, the opposite is true and FIFO results in the lowest taxable income, with average cost in the middle. If inventory levels are falling, then you can’t tell which method yields the lowest taxable income without running actual numbers.

LIFO’s Ending Inventory balance tends to be very old inventory. It can be many years old, in fact, and that is why choice c is the correct answer. FIFO’s Ending Inventory balance agrees more closely than LIFO with current replacement cost.

LIFO doesn’t usually correspond well with the physical flow of goods. For some businesses that use LIFO, the accounting makes it look as if they are selling things before they have even purchased them. Imagine a business that buys much of its inventory for the next quarter during the last week of the prior quarter. That inventory shows up as cost of goods sold in the quarter before it is even sold. Obviously, these businesses are selling other products they previously purchased, but this example shows how FIFO makes more sense in terms of physical flow as only goods that have already been purchased can show up in cost of goods sold.

MC9-8
Answer: b
Approach and explanation: For LCM calculations, your first step should ignore original cost. Instead, you should look for the three numbers that determine “market” and pick the middle of the three. In this case, one is given: replacement cost is $80. The NRV is $70 ($90 – $20). The NRV – NP is $52 [$90 × (1 – 0.20) – $20], where 0.20 indicates the normal profit margin. So the three numbers are $80, $70, and $52. The middle number is $70 and that completes your first step.

The second step is to compare the $70 to the original cost of $90. The lower of the two is the $70, so that is the correct answer.

Let’s tweak the facts a bit and assume that the expected selling price is $115 instead of $90. Replacement cost = $80, NRV = $95 ($115 – $20), and NRV – NP = $72 [$115 × (1 – 0.20) – $20], so the middle of the three now becomes the replacement cost of $80. The $80 gets compared to the original cost of $90, and choice c becomes the correct answer.
Let's tweak the facts a bit, again, and assume that the expected selling price is $140 instead of $90. Replacement cost = $80, NRV = $120 ($140 – $20), and NRV – NP = $92 [$140 × (1 – 0.20) – $20], so the middle of the three now becomes the NRV – NP of $92. The $92 gets compared to the original cost of $90, and choice d becomes the correct answer.

Under no circumstances would an answer greater than $90 be the correct choice if the original cost remains at $90. Students sometimes get so caught up in the first step of the calculation that they automatically assume that the middle of the three numbers should be the reported inventory value. Most cases, in real life, yield a middle number for the first step that is higher than cost, and hence, original cost is the reported inventory value.

**MC9-9**  
**Answer: a**

**Approach and explanation:** With the gross profit method, the formula given on page 9-6 and an estimate of a company's gross margin is used to back into cost of goods sold and ending inventory without actually counting them.

\[
\begin{align*}
\text{Beginning inventory} & \quad \$1,000,000 \\
+ \text{Purchases} & \quad 5,000,000 \\
= \text{Cost of goods available for sale} & \quad \$6,000,000 \\
- \text{Ending inventory} & \quad 4,800,000^* \\
= \text{Cost of goods sold} & \quad \$1,200,000
\end{align*}
\]

\*[\$6,400,000 × (1 – 0.25)] = \$4,800,000

Therefore, if actual ending inventory is only $1,150,000, and the gross profit on sales was still 25 percent in this year, then $50,000 ($1,200,000 – $1,150,000) worth of inventory has been stolen.

In practice, as the chapter mentions, you have to be careful when using this method. It is only an estimate. If the actual gross profit percentage is not 25 percent in the current year, then the amount stolen will be different, perhaps very different. For instance, which answer would be correct if the gross profit percentage for 2011 was actually 30 percent?

\[
\begin{align*}
\text{Beginning inventory} & \quad \$1,000,000 \\
+ \text{Purchases} & \quad 5,000,000 \\
= \text{Cost of goods available for sale} & \quad \$6,000,000 \\
- \text{Ending inventory} & \quad 4,480,000^* \\
= \text{Cost of goods sold} & \quad \$1,520,000
\end{align*}
\]

\*[\$6,400,000 × (1 – 0.30)] = \$4,480,000
Therefore, if actual ending inventory is $1,150,000, and the gross profit on sales was 30 percent in this year, then $370,000 ($1,520,000 – $1,150,000) worth of inventory has been stolen and choice d would then be correct.

So you can see that a small difference in gross profit percentage (in this example at least) can lead to a large difference in the estimate for the amount stolen. In this case, with a five percentage point change in gross margin, the amount stolen increases by a factor of more than seven (not five percent)!

MC9-10
Answer: c
Approach and explanation: If this one was tough for you, and it frequently is for students, review the How? beginning on page 9-5. Each year should be approached separately as follows:

2009
Cost of goods available for sale (not affected)
– Ending inventory (understated by $40,000)
= Cost of goods sold (overstated by $40,000)

Revenue (not affected)
– Cost of goods sold (overstated by $40,000)
= Income (understated by $40,000)

At this point, you can cross off choice d because you now know that income is understated by the amount that ending inventory was understated, or $40,000. The next year is a bit more complicated because the prior year’s ending inventory becomes the next year’s beginning inventory.

2010
Beginning inventory (understated by $40,000)
+ Purchases (not affected)
= Cost of goods available for sale (understated by $40,000)
– Ending inventory (overstated by $50,000)
= Cost of goods sold (understated by $90,000)

Revenue (not affected)
– Cost of goods sold (understated by $90,000)
= Income (overstated by $90,000)

Since the only choice for overstated by $90,000 is c, you don’t even have to do a computation for 2011. But, if this were a problem instead of a multiple choice question, how would you do it?
2011
Beginning inventory (overstated by $50,000) + Purchases (not affected) = Cost of goods available for sale (overstated by $50,000) – Ending inventory (not affected) = Cost of goods sold (overstated by $50,000)
Revenue (not affected) – Cost of goods sold (overstated by $50,000) = Income (understated by $50,000)

Just because ending inventory was fixed by the end of 2011 doesn’t mean that income is okay in 2011 (choices a and b). Beginning inventory was off, so income would still be off as the calculation above shows.

Here is a trick you should learn for cases in which inventory does get fixed before the prior errors are discovered. If inventory gets corrected, it means things are now correct overall, without thinking about individual periods (2009 – 2011). This means that the over- and understatements over the years should net to zero. Notice how choice c nets to zero [$(40,000) + $90,000 + $(50,000)]. The other choices don’t net to zero, which means that had you noticed that inventory was correct at the end of 2011, you could have just added up the choices and eliminated any that didn’t add to zero, arriving at the correct choice c without even calculating a single year’s under- or overstatement!

MC9-11
Answer: d
Approach and explanation: Just a few things to remember with these ratio calculations:

1. When you are dealing with a balance sheet account (Inventory), you should use an average if you have both beginning and ending amounts, rather than just the beginning and ending amount.

2. Use the income statement account that is most closely related to the balance sheet account. Net Sales is used for many revenue-related turnover ratios, but it is not the most closely associated account with Inventory; Cost of Goods Sold is more connected to Inventory than any other account on the income statement.

3. Whatever comes before “turnover” is going to be in the denominator, not the numerator.

The calculation is, therefore:

\[
\frac{\$600,000}{(\$180,000 + \$156,000)/2}
\]
Matching 9-1
1. d
2. a
3. g
4. f
5. b
6. c
7. e

Complete these terminology matching exercises without looking back at the textbook or on to the glossary. After all, you probably won’t have those as a reference at test time. Learning through trial and error causes the item to be learned better and to stick in your memory longer than if you just look at the textbook, glossary, or a dictionary and “cook book” the answers. Sure you may get the answer correct on your first attempt, but missing something is sometimes best for retention. Don’t be afraid of failure while studying and practicing.

Matching 9-2
1. d
2. f
3. b
4. e
5. c
6. a

Matching 9-3
1. b
2. g
3. h
4. c
5. a
6. e
7. d
8. f

Matching 9-4
1. h
2. d
3. f
4. a
5. j
6. g
7. e
8. i
9. c
10. b
Matching 9-5
1. b
2. i
3. f
4. h
5. d
6. a
7. c
8. e
9. g

Matching 9-6
1. d
2. f
3. e
4. c
5. b
6. a

Problem 9-1
First, you should note a couple of key words. Those words are “included” in the first sentence of the problem and “reduced” in the last sentence of the problem. If you miss the meanings of one of those words, you will get the problem all wrong.

Amounts that should not be included in the inventory are:

- Markup on goods out on consignment (35% of $18,000) $ 6,300
- Goods held by Rufus on consignment 5,500
- Goods sold for $15,000 with an original cost of $8,000 in transit (shipped FOB shipping point) 8,000
- Reduction of Inventory account $19,800

Problem 9-2
1. (a) FIFO:
   400 units @ $18 = $ 7,200
   1,360 units @ $17 = 23,120
   1,760 units $30,320

   (b) LIFO:
   780 units @ $16 = $12,480
   580 units @ $17 = 9,860
   400 units @ $18 = 7,200
   1,760 units $29,540
2.
   (a) Cost of goods available for sale \( $95,170^* \)
   Less ending inventory \( 30,320 \)
   Cost of goods sold \( $64,850 \)

\*\( $25,600 + $28,000 + $8,700 + $25,670 + $7,200 = $95,170 \)

(b) Cost of goods available for sale \( $95,170 \)
   Less ending inventory \( 29,540 \)
   Cost of goods sold \( $65,630 \)

3. Answer: d
   Approach and explanation: See the solution to MC9-7 on page 9-21.

Problem 9-3
For an approach and explanation, see the solution to MC9-8 beginning on page 9-22.

1.

<table>
<thead>
<tr>
<th>Item</th>
<th>Ceiling</th>
<th>Floor</th>
<th>Market</th>
<th>LCM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$16.00</td>
<td>$12.00</td>
<td>$13.00</td>
<td>$12.00</td>
</tr>
<tr>
<td>2</td>
<td>8.00</td>
<td>7.00</td>
<td>8.00</td>
<td>8.00</td>
</tr>
<tr>
<td>3</td>
<td>14.00</td>
<td>11.00</td>
<td>11.00</td>
<td>11.00</td>
</tr>
<tr>
<td>4</td>
<td>22.00</td>
<td>16.00</td>
<td>16.00</td>
<td>16.00</td>
</tr>
<tr>
<td>5</td>
<td>26.00</td>
<td>17.00</td>
<td>22.00</td>
<td>20.00</td>
</tr>
</tbody>
</table>

2. Inventory loss \( $13.00^* \)

\*\( ($12.00 + $14.00 + $16.00 + $18.00 + $20.00) – ($12.00 + $8.00 + $11.00 + $16.00) + $20.00 = $13.00 \)

3. Loss from Decline in Value of Inventory 13
   Inventory 13
Glossary

Note that Appendix C in the rear portion of the textbook contains a comprehensive glossary for all of the terms used in the textbook. That is the place to turn to if you need to look up a word but don’t know which chapter(s) it appeared in. The glossary below is identical with one major exception: It contains only those terms used in Chapter 9. This abbreviated glossary can prove quite useful when reviewing a chapter, when studying for a quiz for a particular chapter, or when studying for an exam which covers only a few chapters including this one. Use it in those instances instead of wading through the 19 pages of comprehensive glossary in the textbook trying to pick out just those words that were used in this chapter.

activity-based cost (ABC) system  Cost system that allocates overhead based on clearly identified characteristics of the production process that are known to create overhead costs.

average cost method  An inventory valuation method that assigns the same average cost to each unit sold and to each item in the inventory.

cash discount  A reduction in sales price allowed if payment is received within a specified period, usually offered to customers to encourage prompt payment.

ceiling  The net realizable value; used as an upper limit in defining market when valuing inventory at the lower of cost or market.

consigned goods  Inventory that is physically located at a dealer but whose ownership is retained by the shipper until the dealer sells the inventory.

cost driver  Characteristic of the production process that is known to create overhead costs.

direct materials  Materials used directly in the production of goods; the primary physical materials making up the final product.

dollar-value LIFO  An adaptation of LIFO that measures inventory by total dollar amount rather than by individual units. LIFO incremental layers are determined based on total dollar changes.

dollar-value LIFO retail method  LIFO layers are stated in terms of retail values; after the LIFO retail layers have been identified and priced using a price index, the retail inventory of each layer is multiplied by the appropriate cost percentage.

entry cost  The acquisition cost of an asset.

exit value  The value received for an asset when sold.

finished goods  Manufactured products for which the manufacturing process is complete.

first-in, first-out (FIFO) method  An inventory valuation method that assumes that the units sold are the first ones purchased or manufactured.
floor The net realizable value less a normal profit; used as a lower limit in defining market when valuing inventory at the lower of cost or market.

FOB (free on board) destination Terms of sale under which title of goods passes to the purchaser at the point of destination.

FOB (free on board) shipping point Terms of sale under which title of goods passes to the purchaser at the point of shipment.

foreign currency transaction For a U.S. company, a transaction denominated in a currency other than the U.S. dollar.

gross method A method of inventory accounting that records inventory cost before considering cash discounts.

gross profit method An inventory estimation technique based on the relationship between gross profit and sales. The gross profit percentage is used to estimate cost of goods sold, which in turn, is used to estimate the value of the inventory not yet sold.

gross profit percentage Gross profit divided by sales; a measure of the profitability of sales in relation to the cost of the goods sold.

indirect materials Materials that are necessary to facilitate the production process but are not directly incorporated in the final product.

inventory Assets held for sale in the normal course of business; also, assets held to be used as materials in a production process.

inventory turnover Measured by dividing cost of goods sold by average inventory; used to evaluate whether the level of inventory is appropriate, given the volume of business.

last-in, first-out (LIFO) method An inventory valuation method that assumes that the units sold are the most recent ones purchased or manufactured.

LIFO conformity rule A federal tax regulation that requires the use of LIFO for financial reporting purposes if LIFO is used for income tax purposes.

LIFO inventory pool A group of inventory items having common characteristics and assumed to be the same when applying LIFO.

LIFO layer An incremental group of LIFO inventory items created in any year in which the number of units purchased or produced exceeds the number sold.

LIFO liquidation Reduction or elimination of old LIFO layers because total purchases or production in the current period is less than sales.

LIFO reserve The difference between LIFO ending inventory and the amount obtained using another method such as FIFO or average cost.

lower of cost or market (LCM) Generally accepted method for valuation of inventories in which assets are recorded at the lower of their cost or market value; this method can be applied to inventories on an aggregate or individual item basis.
manufacturing overhead  All manufacturing costs other than direct materials and direct labor.

market (in “lower of cost or market”)  The replacement cost adjusted for an upper and lower limit that reflects the estimated net realizable value.

net method  A method of inventory accounting that records inventory net of any cash discounts.

number of days’ sales in inventory  Measured by dividing average inventory by average daily cost of goods sold; used to evaluate whether the level of inventory is appropriate, given the volume of business.

period cost  Cost that is recognized as an expense during the period in which it is incurred; not included as part of inventory cost.

periodic inventory system  A method of accounting for inventory in which cost of goods sold is determined and inventory is adjusted to the proper balance at the end of the accounting period. Purchases are recorded in the Purchases account, and ending inventory is determined by a physical count.

perpetual inventory system  A method of accounting for inventory in which detailed records of each inventory purchase and sale are maintained. This system provides a current record of inventory on hand and cost of goods sold to date.

price index  An overall measure of how much prices have increased during the year.

product (inventoriable) cost  Costs included in the total cost of manufactured inventory.

purchase commitment  An advance commitment to purchase inventory in the future at a set price.

raw materials  Inventory acquired by a manufacturer for use in the production process.

replacement cost  The cost that would be required to replace an existing asset.

retail inventory method  Inventory valuation method that permits the estimation of an inventory amount without the time and expense of taking a physical inventory or maintaining detailed perpetual inventory records; this method is more flexible than the gross profit method in that it allows estimates to be based on FIFO, LIFO, or average cost assumptions, and it even permits estimation of lower-of-cost-or-market values.

shrinkage  The amount of inventory that is lost, stolen, or spoiled.

specific identification method  Inventory valuation method that assigns the actual cost of inventory items sold to cost of goods sold.

trade discount  A reduction in the “list” sales price of an item to the “net” sales price actually charged to the customer; trade discounts are generally dependent on the volume of business or size of order from the customer.

work in process  Inventory of a manufacturer that is partly processed and requires further work before it can be sold.