**Chapter One: Inventories**

#### Introduction

Inventories are asset items held for sale in the ordinary course of business or goods that will be used or consumed in the production of goods to be sold. They are mainly divided into two:

* + Inventories of merchandising businesses
	+ Inventories of manufacturing businesses

In a *merchandising* company, inventory consists of many different items. These items have two common characteristics: (1) They are owned by the company, and (2) they are in a form ready for sale to customers in the ordinary course of business. Thus, merchandisers need only one inventory classification, **merchandise** **inventory**, to describe the many different items that make up the total inventory. In a *manufacturing* company, some inventory may not yet be ready for sale. As a result, manufacturers usually classify inventory into three categories: finished goods, work in process, and raw materials. **Finished goods inventory** is manufactured items that are completed and ready for sale. **Work in process** is that portion of manufactured inventory that has been placed into the production process but is not yet complete. **Raw materials** are the basic goods that will be used in production but have not yet been placed into production.

#### Importance of Inventories

Merchandise, being continuously purchased and sold, is one of the most active elements in the operation of wholesale and retail businesses. This is due to the following reasons:

* The sale of merchandise is the principal source of revenue for them.
* When the net income is determined, the cost of merchandise sold is the largest deductions from sales.
* A substantial part of a merchandising firm’s resources is invested in inventory, it is the largest of the current assets or those firms.

Because of the above reasons inventories, have effects on the current and the following period’s financial statements. If inventories are misstated (understated or overstated), the financial statements will be distorted

#### Inventory Systems: Periodic Vs Perpetual

**Periodic inventory system**

Under this system there is no continuous record of merchandise inventory account. The inventory balance remains the same throughout the accounting period, i.e. the beginning inventory balance. This is because when goods are purchased, they are debited to the purchases account rather than merchandise inventory account.

The revenue from sales is recorded each time a sale is made. No entry is made for the cost of goods sold. Companies do not keep detailed inventory records of the goods on hand throughout the period. Instead, they determine the cost of inventory on hand and cost of goods sold **only at the end of the accounting period**—that is, periodically. At that point, the company takes a physical inventory count to determine the cost of goods on hand.

The periodic inventory system is less costly to maintain than the perpetual inventory system, but it gives management less information about the current status of merchandise. This system is often used by retail enterprises that sell many kinds of low unit cost merchandise such as groceries, drugstores, hardware etc.

**Perpetual inventory system**

Under this system the accounting record continuously disclose the amount of inventory. So, the inventory balance will not remain the same in the accounting period. All increases are debited to merchandise inventory account and all decreases are credited to the same account. There are no purchases and purchase returns and allowances accounts in this system. At the time of sale, the cost of goods sold is recorded in addition to Journal entry for the sale. So, we can determine the cost of inventory as well as goods sold from the accounting record. No need of physical counting to determine their costs.

Companies that sell items of high unit value, such as appliances or automobiles, tended to use the perpetual inventory system. Management must choose the system or combination of systems that is best for achieving the company's goal.

**Determining Inventory Quantities**

No matter whether they are using a periodic or perpetual inventory system, all companies need to determine inventory quantities at the end of the accounting period. When using a perpetual system, companies take a physical inventory for two purposes: The first purpose is to check the accuracy of their perpetual inventory records. The second is to determine the amount of inventory lost due to wasted raw materials, shoplifting, or employee theft. Companies using a periodic inventory system must take a physical inventory for two *different* purposes: to determine the inventory on hand at the balance sheet date and to determine the cost of goods sold for the period. Determining inventory quantities involves two steps: (1) taking a physical inventory of goods on hand and (2) determining the ownership of goods.

**Taking a Physical Inventory:**

Taking a physical inventory involves actually counting, weighing, or measuring each kind of inventory on hand. In many companies, taking an inventory is a formidable task. Retailers have thousands of different inventory items. An inventory count is generally more accurate when goods are not being sold or received during the counting. Consequently, Companies often “take inventory” when the business is closed or when business is slow.

**Determining Ownership of Goods:**

One challenge in computing inventory quantities is determining what inventory a company owns. To determine ownership of goods, two questions must be answered: Do all of the goods included in the count belong to the company? Does the company own any goods that were not included in the count?

A complication in determining ownership is **goods in transit** (on board a truck, train, ship, or plane) at the end of the period. The company may have purchased goods that have not yet been received, or it may have sold goods that have not yet been delivered. To arrive at an accurate count, the company must determine ownership of these goods. Goods in transit should be included in the inventory of the company that has legal title to the goods. Legal title is determined by the terms of the sale as shown below:

1. When the terms are **FOB (free on board) shipping point**, ownership of the goods passes to the buyer when the public carrier accepts the goods from the seller.
2. When the terms are **FOB destination**, ownership of the goods remains with the seller until the goods reach the buyer.

**Inventory Costing**

After a company has determined the quantity of units of inventory, it applies unit costs to the quantities to compute the total cost of the inventory and the cost of goods sold. This process can be complicated if a company has purchased inventory items at different times and at different prices.

**Inventory Costing Methods under a Periodic System**

During any given fiscal period, companies typically purchase merchandise at several different prices. If a company prices inventories at cost and it made numerous purchases at different unit costs, which cost price should it use? Conceptually, a specific identification of the given items sold and unsold seems optimal. But this measure often proves both expensive and impossible to achieve. Consequently, companies use one of several systematic inventory **cost flow assumptions**.

* **Specific Identification:** Specific identification requires that companies keep records of the original cost of each individual inventory item. Historically, specific identification was possible only when a company sold a limited variety of high-unit-cost items that could be identified clearly from the time of purchase through the time of sale. Examples of such products are cars, pianos, or expensive antiques.
* **Cost Flow Assumptions:** Because specific identification is often impractical, other cost flow methods are permitted. These differ from specific identification in that they **assume** flows of costs that may be unrelated to the physical flow of goods.

There are three assumed cost flow methods:

* Cost flow is the order in which the expenditures were made-First-in, first-out **(FIFO)**
* Cost flow is the reverse order in which the expenditures were made-Last-in, first-out **(LIFO)**
* Cost flow is an average of the expenditure-**Average-cost**

**There is no accounting requirement that the cost flow assumption be consistent with the physical movement of the goods.** Company management selects theappropriate cost flow method.

**To illustrate** these three inventory cost flow methods, we will assume that Max Company uses a periodic inventory system. The beginning inventory, purchases during the year ended November 30, 2012 were as follows:

 **Date Explanation Units Unit Cost Total Cost**

November 1. Beginning inventory 300 $10 $3,000

 6. Purchase 500 12 6,000

 13. Purchase 800 11 8,800

 21. Purchase 700 9 6,300

 27. Purchase 400 13 5,200

 Total **2,700** **$29,300**

The company had a total of 2,700 units available that it could have sold during the period. The total cost of these units was $29,300. A physical inventory at the end of the year determined that during the year Max sold 1,500 units and had 1,200 units in inventory at November 30. Determine the cost of inventory and cost of goods sold on November 30, under each of the following inventory costing methods:

1. FIFO (first-in, first-out)
2. LIFO (last-in, first-out)
3. Average-cost method
* **FIRST-IN, FIRST-OUT (FIFO)**

The FIFO (first-in, first-out) method assumes that the **earliest goods** purchased are the first to be sold. FIFO often parallels the actual physical flow of merchandise; it generally is good business practice to sell the oldest units first.

Under FIFO, since it is assumed that the first goods purchased were the first goods sold, ending inventory is based on the prices of the most recent units purchased. That is, under FIFO, companies obtain the cost of the ending inventory by taking the unit cost of the most recent purchase and working backward until all units of inventory have been costed.

The following shows the allocation of the cost of goods available for sale at Max company under FIFO. In accordance with the assumption that the inventory is composed of the most recent costs.

The cost of the 1,200 units of **ending inventory** is determined as follows:

 Most recent costs, November 27 ………...… 400 units @ $13 ………… $5,200

 Next most recent costs, November 21 …….. 700 units @ 9 ……...…… 6,300

 Next most recent costs, November 13 …….. 100 units @ 11 ……...…… 1,100

 ***Inventory, November 30, 2012*** ….... **1,200** ……………………. **$12,600**

The **cost of goods sold** is determined as follows:

Cost of goods available for sale ………………… $29,300

Less: Ending inventory ……………………..…….. 12,600

***Cost of goods sold*** …………………………..……. **16,700**

* **LAST-IN, FIRST-OUT (LIFO)**

The LIFO (last-in, first-out) methodassumes that the **latest goods** purchased are the first to be sold. LIFO seldom coincides with the actual physical flow of inventory. (Exceptions include goods stored in piles, such as coal or hay, where goods are removed from the top of the pile as they are sold.) Under the LIFO method, the **costs** of the latest goods purchased are the first to be recognized in determining cost of goods sold.

Under LIFO, since it is assumed that the first goods sold were those that were most recently purchased, ending inventory is based on the prices of the oldest units purchased. That is, under LIFO, companies obtain the cost of the ending inventory by taking the unit cost of the earliest goods available for sale and working forward until all units of inventory have been costed.

The following shows the allocation of the cost of goods available for sale at Max company under LIFO. Hence the inventory remaining is assumed to be composed of the earliest costs. Based on the illustrative data presented above, the cost of the 1,200 units of inventory is determined in the following manner:

The cost of the 1,200 units of **ending inventory** is determined as follows:

Earliest costs, November 1 ………...........… 300 units @ $10 ……..…… $3,000

 Next earliest costs, November 6 …………... 500 units @ 12 ……....…… 6,000

 Next earliest costs, November 13 ……...….. 400 units @ 11 ……....…… 4,400

 ***Inventory, November 30, 2012*** ….... **1,200** ……………………. **$13,400**

The **cost of goods sold** is determined as follows:

Cost of goods available for sale ………………… $29,300

Less: Ending inventory ……………………..…….. 13,400

***Cost of goods sold*** …………………………..……. **15,900**

* **AVERAGE-COST (WEIGHTED AVERAGE METHOD)**

The average-cost methodallocates the cost of goods available for sale on the basis of the **weighted average unit cost** incurred. The average-cost method assumes that goods are similar in nature.

 Cost of Goods **÷** Total Units = **Weighted Average**

 Available for Sale Available for Sale **Unit Cost**

The company then applies the weighted average unit cost to the units on hand to determine the cost of the ending inventory.

Assuming the same data as in the preceding illustrations, the average cost of the 2,700 units and the cost of the 1,200 units in inventory are determined as follows:

**Average unit cost** ……………………. $29,300/2,700 = **10.85**

***Ending Inventory, November 30, 2012*** ……… 1,200 units @ $10.85 ………. **13,022**

Cost of goods available for sale ………………… $29,300

Less: Ending inventory ……………………..…….. 13,022

***Cost of goods sold*** …………………………..……. **16,278**

**Comparison of Inventory Costing Methods**

Each of the three alternative methods of costing inventories under the periodic system is based on a different assumption as to the flow of costs. If the cost of units and prices at which they were sold had remained stable, all three methods would have yield the same result. Prices do change, however, and as a consequence the three methods will usually yield different amounts for 1) inventory reported in the balance sheet at the end of the period, 2) the cost of merchandise sold for the period, and 3) the gross profit (and net income) reported for the period.

Using the example presented above and assuming the net sales were $40,000, the following partial income statement indicate the effect of each method:

 First-In, First-Out Average Cost Last-In, First-Out

Net Sales ……………………………………….. $40,000 $40,000 $40,000

Cost of merchandise sold:

Beginning Inventory ……………….….. $3,000 $3,000 $3,000

Purchase …………………………..…… 26,300 26,300 26,300

Merchandise available for sale ….…….. 29,300 29,300 29,300

Less Ending inventory ………………….12,600 13,022 13,400

Cost of merchandise sold ………………..……… 16,700 16,278 15,900

Gross profit ……………………….…………… $23,300 23,722 24,100

Note the cost of merchandise available for sale ($29,300) is the same under each of the three inventory cost flow methods. However, the ending inventories and the costs of merchandise sold are different. This difference is due to the unit costs that the company allocated to cost of goods sold and to ending inventory. Each dollar of difference in ending inventory results in a corresponding dollar difference in gross profit. For Max Company, an $800 difference exists between FIFO and LIFO cost of goods sold.

In periods of changing prices, the cost flow assumption can have a significant impact on income and on evaluations based on income. In most instances, prices are rising (inflation). In a period of inflation, FIFO produces a higher net income because the lower unit costs of the first units purchased is matched against revenues. If prices are falling, the results from the use of FIFO and LIFO are reversed: FIFO will report the lowest net income and LIFO the highest.

**Accounting For and Reporting Inventory under a Perpetual System**

Under the perpetual inventory system, all merchandise increase and decrease are recorded in a manner that by debiting/crediting the inventory account. The merchandise inventory account at the beginning of an accounting period reflects the merchandise on hand on that date. Sales are recorded in the sales account and, on the date of each sale, the cost of merchandise sold is recorded by debiting cost of merchandise Sold and crediting Merchandise inventory. Thus, in perpetual inventory system, the merchandise inventory account continuously (perpetually) discloses the balance of merchandise on hand. At the end of the period, the balance in the merchandise inventory account is reported on the balance sheet and the balance in the cost of merchandise sold account is reported on the income statement.

**Inventory Costing Method under a Perpetual System**

What inventory cost flow methods do companies employ if they use a perpetual inventory system? Simple—they can use any of the inventory cost flow methods.

**To illustrate** the application of the three assumed cost flow methods, assume the beginning inventory, purchase and sales data for TOM Company are as follows:

 **Date Explanation Units Unit Cost**

November **1**. Beginning inventory 800 15

 **5**. Sales 300

 **12**. Purchase 600 18

 **16**. Sales 400

 **22**. Sales 300

 **24**. Purchase 300 20

 **29**. Sales 250

The company maintains a perpetual inventory system. Determine the cost of merchandise sold in each sale and the inventory balance after each sale under each of the three inventory costing methods.

**First-In, First-Out (FIFO):** Under this method, the company charges to cost of goods sold the cost of the earliest goods on hand **prior to each sale**. The number of units on hand after each transaction, together with total costs, appears in the inventory section of the account.

**Perpetual System-FIFO**

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Purchase | Cost of Merchandise Sold | Inventory |
| Unit | Unit Cost | Total cost | Unit | Unit Cost | Total cost | Unit | Unit Cost | Total cost |
| Nov. 1 |  |  |  |  |  |  | 800 | 15 | 12,000 |
| 5 |  |  |  | 300 | 15 | 4,500 | 500 | 15 | 7,500 |
| 12 | 600 | 18 | 10,800 |  |  |  | 500600 | 1518 | 7,50010,800 |
| 16 |  |  |  | 400 | 15 | 6,000 | 100600 | 1518 | 1,50010,800 |
| 22 |  |  |  | 100200 | 1518 | 1,5003,600 | 400 | 18 | 7,200 |
| 24 | 300 | 20 | 6,000 |  |  |  | 400300 | 1820 | 7,2006,000 |
| 29 |  |  |  | 250 | 18 | 4,500 | 150300 | 1820 | 2,7006,000 |

The **ending inventory** in this situation is **$9,700** (2,700 + 6,000) and the **cost of goods sold** is **$20,100** [4,500 + 6,000 + 1,500 + 3,600 + 4,500].

**NB:** Both in periodic and perpetual system FIFO results the same ending inventory and cost of goods sold.

**Last-In, First-Out (LIFO):** Under this method using a perpetual system, the company charges to cost of goods sold the cost of the most recent purchase prior to sale.

**Perpetual System-LIFO**

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Purchase | Cost of Merchandise Sold | Inventory |
| Unit | Unit Cost | Total cost | Unit | Unit Cost | Total cost | Unit | Unit Cost | Total cost |
| Nov. 1 |  |  |  |  |  |  | 800 | 15 | 12,000 |
| 5 |  |  |  | 300 | 15 | 4,500 | 500 | 15 | 7,500 |
| 12 | 600 | 18 | 10,800 |  |  |  | 500600 | 1518 | 7,50010,800 |
| 16 |  |  |  | 400 | 18 | 7,200 | 500200 | 1518 | 7,5003,600 |
| 22 |  |  |  | 200100 | 1815 | 3,6001,500 | 400 | 15 | 6,000 |
| 24 | 300 | 20 | 6,000 |  |  |  | 400300 | 1820 | 6,0006,000 |
| 29 |  |  |  | 250 | 20 | 5,000 | 40050 | 1820 | 6,0001,000 |

The **ending inventory** in this LIFO perpetual is **$7,000** (6,000 + 1,000) and **cost of goods sold** is **$21,800** (4,500 + 7,200 + 3,600 + 1,500 + 5,000).

The use of LIFO in a perpetual system will usually produce cost allocations that differ from those using LIFO in a periodic system. In a perpetual system, the company allocates the latest units purchased *prior to each sale* to cost of goods sold. In contrast, in a periodic system, the latest units purchased *during the period* are allocated to cost of goods sold. Thus, when a purchase is made after the last sale, the LIFO periodic system will apply this purchase to the previous sale.

**Average-Cost**

The average-cost method in a perpetual inventory system is called the **moving average method**. Under this method the company computes a new average **after each purchase**, by dividing the cost of goods available for sale by the units on hand.They then apply the average cost to: (1) the units sold, to determine the cost ofgoods sold, and (2) the remaining units on hand, to determine the ending inventoryamount.

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**Perpetual System-Average Cost Method**

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Purchase | Cost of Merchandise Sold | Inventory |
| Unit | Unit Cost | Total cost | Unit | Unit Cost | Total cost | Unit | Unit Cost | Total cost |
| Nov. 1 |  |  |  |  |  |  | 800 | 15 | 12,000 |
| 5 |  |  |  | 300 | 15 | 4,500 | 500 | 15 | 7,500 |
| 12 | 600 | 18 | 10,800 |  |  |  | 1,100 | 16.64\* | 18,300 |
| 16 |  |  |  | 400 | 16.64 | 6,655 | 700 | 16.64 | 11,645 |
| 22 |  |  |  | 300 | 16.64 | 4,990 | 400 | 16.64 | 6,655 |
| 24 | 300 | 20 | 6,000 |  |  |  | 700 | 18.08\*\* | 12,655 |
| 29 |  |  |  | 250 | 18.08 | 4,520 | 450 | 18.08 | 8,135 |

**\*18,300/1,100 = 16.64**

**\*\*12,655/700 = 18.08**

The **ending inventory** in this situation is **$8,135** and the **cost of goods sold** is **$20,665** [4,500 + 6,655 + 4,990 + 4,520].

**Valuation of Inventory at Other Than Cost**

The value of inventory for companies selling high-technology or fashion goods can drop very quickly due to changes in technology or fashions. These circumstances sometimes call for inventory valuation methods other than cost.

When the value of inventory is lower than its cost, companies can “write down” the inventory to its market value. This is done by valuing the inventory at the **lower-of-cost-or-market (LCM)** in the period in which the price decline occurs. LCM is an example of the accounting concept of **conservatism**, which means that the best choice among accounting alternatives is the method that is least likely to overstate assets and net income.

Companies apply LCM to the items in inventory after they have used one of the cost flow methods (specific identification, FIFO, LIFO, or average cost) to determine cost. Under the LCM basis, market is defined as **current replacement cost**, not selling price. For a merchandising company, market is the cost of purchasing the same goods at the present time from the usual suppliers in the usual quantities.

**To illustrate** the application of LCM, assume that Max Company has the following lines of merchandise with costs and market values as indicated.

 **Lower-of-**

 **Cost Market Cost-or-Market**

 Flat screen TVs $60,000 $55,000 $55,000

 Satellite radios 45,000 52,000 45,000

 DVD recorders 48,000 45,000 45,000

 DVDs 15,000 14,000 14,000

 Total inventory **$159,000**

**INVENTORY ERRORS**

Unfortunately, errors occasionally occur in accounting for inventory. In some cases, errors are caused by failure to count or price the inventory correctly. In other cases, errors occur because companies do not properly recognize the transfer of legal title to goods that are in transit. When errors occur, they affect both the income statement and the balance sheet.

* **Income Statement Effects**

Under a periodic inventory system, both the beginning and ending inventories appear in the income statement. The ending inventory of one period automatically becomes the beginning inventory of the next period. Thus, inventory errors affect the computation of cost of goods sold and net income in two periods. The effects on cost of goods sold can be computed by entering incorrect data in the formula and then substituting the correct data.

Beginning inventory + Cost of Goods Purchase – Ending Inventory = Cost of Goods sold

If the error understates *beginning* inventory, cost of goods sold will be understated. If the error understates *ending* inventory, cost of goods sold will be overstated. The following shows the effects of inventory errors on the current year’s income statement.

**When Inventory Error: Goods Sold Is: Net Income Is:**

Understates beginning inventory Understated Overstated

Overstates beginning inventory Overstated Understated

The inventory at the end of one period becomes the inventory for the beginning of the following period. Thus, if the inventory is incorrectly stated at the end of the period, the net income of the period will be misstated and so will the net income for the next period. The amount of the two misstatement will be equal and in opposite directions. Therefore, the effect on net income of an incorrectly stated inventory, if not corrected, is limited to the period of the error and the next period. At the end of the next period, assume no additional errors, both assets and owner’s equity will be correctly stated.

 **Period 1 Period 2**

 **Cost of Cost of**

**Inventory Error Goods Sold Net Income Goods Sold Net Income**

Period 1 Ending

 inventory *overstated* Understated Overstated Overstated Understated

Period 1 Ending

 inventory *understated* Overstated Understated Understated Overstated

* **Balance Sheet Effects**

Companies can determine the effect of ending inventory errors on the balance sheet by using the basic accounting equation: Assets = Liabilities + Owner’s Equity. Errors in the ending inventory have the effects on the balance sheet shown below:

**Ending Inventory Error Assets Equity**

Overstated Overstated Overstated

Understated Understated Understated

**Estimating Inventory Cost**

Two circumstances explain why companies sometimes estimate inventories. First, a casualty such as fire, flood, or earthquake may make it impossible to take a physical inventory. Second, managers may want monthly or quarterly financial statements, but a physical inventory is taken only annually. The need for estimating inventories occurs primarily with a periodic inventory system because of the absence of perpetual inventory records.

There are two widely used methods of estimating inventories: (1) the gross profit method, and (2) the retail inventory method.

**Gross Profit Method of estimating inventories**

The gross profit method uses an estimate of the gross profit realized during the period to estimate the inventory at the end of the period. By using the rate of gross profit, the dollar amount of sales for a period can be divided into its two components: 1) gross profit and 2) cost of merchandise sold.

To illustrate assume that the merchandise inventory of Tom Company was destroyed by fire on November 26, 2012. The following data were obtained from the accounting records:

November 1. Merchandise inventory …………….. $240,000

November 1 – November 26 Purchase (net) ………………………. 440,000

 Sales (net) ………………...…………. 800,000

 Estimated gross profit rate ……………….. 35%

**Required:** Estimate the cost of merchandise destroyed.

Beginning inventory . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $240,000

Purchases in November (net) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 440,000

Merchandise available for sale . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . 680,000

Estimated cost of goods sold:

Sales in November (net) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $800,000

Less: Estimated gross profit of 35% . . . . . . . . . . . . . . . . . . . . . 280,000

Estimated cost of merchandise sold . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 520,000

Estimated *merchandise inventory* . . . . . . . . . . . . . . . . . . . . . . . . . . . **$160,000**

Thus the amount of merchandise inventory destroyed by fire estimated to be is $160,000.

The gross profit method is based on the assumption that the gross profit rate will remain constant. But it may not remain constant, due to a change in merchandising policies or in market conditions. In such cases, the company should adjust the rate to reflect current operating conditions. In some cases, companies can obtain a more accurate estimate by applying this method on a department or product-line basis.

**Retail Inventory Method**

A retail store has thousands of different types of merchandise at low unit costs. In such cases it is difficult and time-consuming to apply unit costs to inventory quantities. An alternative is to use the **retail inventory method** to estimate the cost of inventory. Most retail companies can establish a relationship between cost and sales price. The company then applies the cost-to-retail percentage to the ending inventory at retail prices to determine inventory at cost.

Under the retail inventory method, a company’s records must show both the cost and retail value of the goods available for sale.

To illustrate, on the basis of the following data, estimate the cost of merchandise inventory at November 30 by the retail method:

 **Cost Retail**

November 1. Merchandise inventory ….. $180,000 $272,500

November 1 – November 30 Purchase (net) ………….…. 340,000 540,000

 Sales (net) ………………………………. 590,000

**Solution:**

 **Cost Retail**

Merchandise inventory, November 1 ……………………….. $180,000 $272,500

Purchase in November (net) ………………………...…….…. 340,000 540,000

Merchandise available for sale ……………………………. $520,000 $812,500

Ratio of Cost to retail Price: 520,000/812,500 = 64%

Sales for November (net) …………………………..………………………. 590,000

Merchandise Inventory, November 30, at Retail ………………….……… $222,500

Merchandise Inventory, November 30, at estimated Cost ……………….. **$142,400**

 (222,500 X 64%)

Thus, the amount of merchandise inventory November 30 estimated to be is $142,400.

The retail inventory method also facilitates taking a physical inventory at the end of the year. The major disadvantage of the retail method is that it is an averaging technique. Thus, it may produce an incorrect inventory valuation if the mix of the ending inventory is not representative of the mix in the goods available for sale.