Unit 9 Inventory

I. Determining Cost of Goods Sold

A. The goods a business sells are called inventory or merchandise inventory.
B. Inventory is an asset because it has value.
C. A business tracks both units of inventory and an inventory's dollar value.
D. **Determining goods available for sale**
   1. **Beginning Inventory (BI)** is what is on hand at the beginning of the period.
   2. **Purchases (P)** represent merchandise bought from suppliers during the period.
   3. **Goods Available for Sale (GAFS)** represent everything that could be sold during the period.

BI + P = GAFS

E. **Cost of Goods Sold**
   1. **Ending Inventory (EI)** is what is on hand at the end of the period.
   2. **Cost of Goods Sold** equals Goods Available for Sale minus Ending Inventory.

GAFS - EI = COGS

Finding Cost of Goods Sold Given Ending Inventory

	Units	Cost
Beginning Inventory	70	$140
+ Purchases	+ 50	+ 100
Goods Available for Sale	120	$240
- Ending Inventory	- 50	- 100
Cost of Goods Sold	70	$140

Finding Ending Inventory Given Cost of Goods Sold

	Units	Cost
Beginning Inventory	70	$140
+ Purchases	+ 50	+100
Goods Available for Sale	120	$240
- Cost of Goods Sold	- 70	- 140
Ending Inventory	50	$100

II. The Distribution System

A. Retailers buy goods from a wholesaler or manufacturer and store them as inventory.
B. Sales are made from inventory.

Manufacturer → Wholesaler → Retailer → Customer

III. Periodic Inventory Costing Methods

A. With periodic inventory costing methods, inventory is charged to cost of goods sold at the end of each period.
B. This system is easy to manage but does not provide an up-to-date inventory valuation and exact product costing.
C. There are three periodic inventory costing methods.

   1. **Last-In, First-Out (LIFO)**
   2. **First-In, First-Out (FIFO)**
   3. **Average Cost**

D. The XYZ Corporation has the following inventory information. The value of its ending inventory using these three methods has been demonstrated on the next page.

Date	Description	Units	Unit Price	Total Value
1/1/98	Inventory	400	$2	$800
1/5/98	Purchase	100	3	300
5/5/98	Purchase	100	4	400
12/13/98	Purchase	100	5	500
12/31/98	Inventory	400		?

Last-In, First-Out Method (Inventory is at top)		
Units	**Unit Price**	**Total Value**
400	$2	$800

First-In, First-Out Method (Inventory is at bottom)		
Units	**Unit Price**	**Total Value**
100	$5	$ 500
100	4	400
100	3	300
100	2	200
400		$1,400

Average Cost Method

Date	Description	Units	Unit Price	Total Value
1/1/98	Inventory	400	$2	$ 800
1/5/98	Purchase	100	3	300
5/5/98	Purchase	100	4	400
12/13/98	Purchase	100	5	500
	Totals	700		$2,000

$$\text{Unit Cost} = \frac{\text{Total Cost}}{\text{Total Units}} = \frac{\$2{,}000}{700} = \$2.857$$

Inventory = Unit Cost x Units
= $2.857 (400)
= $1,142.80

E. **Analysis**

1. Prices increased dramatically during the period. This was done to emphasize how different methods are affected by rising prices.
2. LIFO assigned recently purchased high-priced items to cost of goods sold.
   a. Higher cost of goods sold lowered profit, lowered tax expense, and lowered equity.
   b. The left side of the balance sheet was also lower as inventory was valued at low-priced items purchased earlier. This means that inventory was valued substantially below replacement cost of 400 x $5 = $2,000.
   c. This method was chosen because the company wanted to delay income taxes and did not mind reporting low income and valuing inventory substantially below replacement cost.
3. FIFO would have assigned low-priced items purchased earlier to cost of goods sold.
   a. Lower cost of goods sold would have increased profit, increased income tax expense, and increased equity.
   b. The left side of the balance sheet would have been higher as inventory would have been valued at high-priced later purchases. This means that inventory was priced closer to replacement cost of 400 x $5 = $2,000.
4. The average cost method would have valued inventory between the other two methods because prices changed continually in one direction. Many find this balanced valuation method attractive.
5. Consistent application of accounting methods is required by the IRS.

IV. Perpetual Inventory Costing Methods

A. With a perpetual inventory system, inventory is charged to cost of goods sold after each sale. The use of computers has made this method more practical.

B. The three periodic inventory methods outlined above may be applied on a perpetual basis.

Perpetual Inventory Costing Using LIFO

		Purchases			Cost of Goods Sold			Inventory		
Date	**Explanation**	**Units**	**Unit Cost**	**Total Cost**	**Units**	**Unit Cost**	**Total Cost**	**Units**	**Unit Cost**	**Total Cost**
1/1/98	Beginning Inventory							400	2	800
1/5/98	Purchase of 100	100	3	300				400 100	2 3	1,100
2/9/98	Sale of 50				50	3	150	400 50	2 3	950
3/18/98	Sale of 100				50 50	3 2	150 100	350	2	700
5/5/98	Purchase of 100	100	4	400				350 100	2 4	1,100
7/29/98	Sale of 150				100 50	4 2	400 100	300	2	600
12/13/98	Purchase of 100	100	5	500				300 100	2 5	1,100