

**E7-4**

Simply rearrange the cost of goods sold equation

$$BI + P - EI = CGS$$

$$P = CGS - BI + EI$$

Cost of goods sold .....	\$1,408,848,000
– Beginning inventory .....	(399,795,000)
+ Ending inventory .....	<u>424,393,000</u>
Purchases .....	<u>\$1,433,446,000</u>

**E7-10**

1.

	FIFO	LIFO	AC
Cost of goods sold			
Beginning inventory (400 units @ \$30)	\$12,000	\$12,000	\$12,000
Purchases (400 units @ \$20)	8,000	8,000	8,000
Goods available for sales	20,000	20,000	20,000
Ending inventory (500 units)	11,000	14,000	12,500
Cost of goods sold	\$9,000	\$6,000	\$7,500
Sales, 300 units; unit sales price, \$50			
Expenses, \$2,500			

\*Computation of ending inventory:

FIFO: (400 units x \$20) + (100 units x \$30) = \$11,000

LIFO: (400 units x \$30) + (100 units x \$20) = \$14,000

Average: [(400 units @ \$30) + (400 units @ \$20)] ÷ 800 units =  
\$20,000 ÷ 800 units = \$25 per unit.  
\$25 x 500 units = \$12,500.

\*\*Cost of goods sold computations:

FIFO: (300 units @ \$30) = \$9,000.

LIFO: (300 units @ \$20) = \$6,000.

Average: [(400 units @ \$30) + (400 units @ \$20)] ÷ 800 units =  
\$20,000 ÷ 800 units = \$25 per unit.  
\$25 x 300 units = \$7,500.

2.

	<b>FIFO</b>	<b>LIFO</b>	<b>Average Cost</b>
Sales revenue	\$15,000	\$15,000	\$15,000
Cost of goods sold	9,000	6,000	7,500
Gross profit	6,000	9,000	7,500
Expenses	2,500	2,500	2,500
Pretax income	3,500	6,500	5,000

3.

Ranking in order of favorable cash flow: The higher rankings are given to the methods that produce the **lower** income tax expense because the lower the income tax expense the **higher** the cash savings.

- (1) FIFO—produces the lowest pretax income and as a result the lowest income tax. This result causes the highest cash savings on income tax.
- (2) Weighted average—produces next lower pretax income.
- (3) LIFO—produces the highest pretax income, hence the highest amount of cash to be paid for income tax.

The above comparative effects occurred because prices were **falling**. If prices were rising the three methods would have produced the opposite ranking.

**E7-13**

1.

Item	Quantity	Total cost			Total Market			LCM Valuation		
A	<u>30</u>	X	<u>20</u>	=	<u>\$ 600</u>	X	<u>15</u>	=	<u>\$ 450</u>	<u>\$ 450</u>
B	<u>55</u>	X	<u>40</u>	=	<u>2,200</u>	X	<u>44</u>	=	<u>2,420</u>	<u>2,200</u>
C	<u>35</u>	X	<u>52</u>	=	<u>1,820</u>	X	<u>55</u>	=	<u>1,925</u>	<u>1,820</u>
D	<u>15</u>	X	<u>27</u>	=	<u>405</u>	X	<u>32</u>	=	<u>480</u>	<u>405</u>
	Total				<u>\$</u>				<u>\$5,275</u>	<u>\$ 4,875</u>

Inventory valuation that should be used (LCM)

\$4,875

2.

The write-down to lower of cost or market will increase cost of goods sold expense by the amount of the write-down, \$150:

Total Cost – LCM Valuation = Write-down

$$\$5,025 \quad - \quad \$4,875 \quad = \quad \underline{\$150 \text{ Write-down}}$$

**E7-19**

1.

Ending Inventory in the current year=524.0

2.

Beginning LIFO reserve (excess of FIFO over LIFO)	\$ <u>(16.0)</u>
Less: Ending LIFO reserve (excess of FIFO over LIFO)	<u>(18.3)</u>
Difference in cost of goods sold under FIFO	<u>2.3</u>
Cost of goods sold under LIFO	<u>6,548.7</u>
Cost of goods sold under FIFO	\$ <u>6,551</u>

3.

When unit costs are rising, LIFO produces lower net income and a lower inventory valuation than FIFO. During a period of rising prices, using LIFO often reduces a company's tax liability. This might be the reason why BorgWarner management chose to use LIFO for certain of its inventories.