Chapter 6
Inventory and Cost of Goods Sold

REVIEW QUESTIONS

Question 6-1 (LO 6-1)
Inventory includes items a company intends for sale to customers. Inventory also includes items that are not yet finished products. The cost of inventory that has not been sold by the end of the reporting period is reported in the balance sheet as an asset. The cost of inventory that has been sold during the reporting period is reported as an expense (cost of goods sold) in the income statement.

Question 6-2 (LO 6-1)
Service companies generate revenues by providing services to their customers. Manufacturing or merchandising companies generate revenues by selling inventory rather than a service.

Question 6-3 (LO 6-1)
Raw materials inventory includes the cost of components that will become part of the finished product but have not yet been used in production. **Work-in-process inventory** refers to the products that have started the production process but are not yet complete at the end of the period. The cost of work in process inventory includes the cost of raw materials used in production, the cost of direct labor that we can trace directly to the goods in process, and an allocated portion of other manufacturing costs, called overhead. **Finished goods inventory** is the cost of fully assembled but unshipped inventory at the end of the reporting period.

Question 6-4 (LO 6-2)
The cost of goods (or inventory) available for sale equals the cost of beginning inventory plus additional purchases during the reporting period. By subtracting the cost of ending inventory at the end of the reporting period from the cost of goods available for sale, we calculate cost of goods sold during the reporting period.

Question 6-5 (LO 6-2)
The balance of cost of goods sold in the income statement represents the cost of inventory sold during the period. For a company like Best Buy, this would include inventory sold such as phones, CD players, portable radios, cameras, camcorders, DVD players, computers, and other electronic devices and accessories. The balance of inventory in the balance sheet represents the cost of inventory not sold by the end of the reporting period.

Question 6-6 (LO 6-2)
A multiple-step income statement reports multiple levels of profitability. **Gross profit** equals net sales minus cost of goods sold. **Operating income** equals gross profit minus operating expenses. **Income before income taxes** equals operating income plus non-operating revenues and minus non-operating expenses. **Net income** equals all revenues minus all expenses.

Answers to Review Questions (continued)

Question 6-7 (LO 6-3)
Because of the large number of inventory transactions for most companies and the high volatility in many inventory costs, it is not possible or cost effective to identify the cost of each item sold. Therefore, assumptions are made as to which units of inventory are sold.

Question 6-8 (LO 6-3)
The three most common inventory cost flow assumptions are FIFO (first-in, first-out), LIFO (last-in, first-out), and weighted-average cost. These methods provide assumptions as to which inventory units are sold, whereas the specific identification method matches or identifies each unit of inventory with its actual cost.

Question 6-9 (LO 6-4)
FIFO results in the highest reported amount for ending inventory when inventory costs are rising. The reason is that under the FIFO method, the oldest (or first) items are sold first and these are the lower-cost items, leaving the higher-cost items to be reported in ending inventory.

Question 6-10 (LO 6-4)
FIFO results in the highest reported amount of net income when inventory costs are rising. The reason is that under the FIFO method, the oldest (or first) items are sold first and these are the lower-cost items. Reporting cost of goods sold based on the lower-cost items results in net income being higher.

Question 6-11 (LO 6-4)
Since FIFO assumes the first purchases sell first, the amount it reports for ending inventory (in the *balance sheet*), the last or most recent purchases, better approximates the current cost of inventory. LIFO assumes the last purchases are sold first, reporting the most recent inventory cost in cost of goods sold (in the *income statement*). Thus, LIFO more realistically matches the current costs of inventory needed to produce current revenues.

Question 6-12 (LO 6-4)
LIFO generally results in lower income taxes payable when inventory costs are increasing because net income in this case is lower (than if FIFO were used). The LIFO conformity rule requires a company that uses LIFO for tax reporting to also use LIFO for financial reporting.

Question 6-13 (LO 6-5)
The perpetual inventory system maintains a continual – or *perpetual* – record of inventory purchased and sold, while the periodic system *periodically* adjusts for purchases and sales of inventory at the end of the reporting period.

Question 6-14 (LO 6-5)
Freight charges add to the cost of inventory, while purchase discounts and purchase returns reduce the cost of inventory.

Answers to Review Questions (continued)

Question 6-15 (LO 6-6)
Cost of inventory is the net cost of purchases and freight, less purchase discounts, returns, and allowances. Net realizable value is normally selling price less cost of completion, disposal, and transportation costs. When net realizable value falls below cost, we adjust inventory down from cost to net realizable value. (For LIFO, we report inventory at lower of cost or replacement value.)

Question 6-16 (LO 6-6)
The cost of inventory is determined using specific identification, FIFO, LIFO, or weighted-average cost. Net realizable value is determined using selling price less cost of completion, disposal, and transportation costs.

Question 6-17 (LO 6-6)
The entry to adjust from cost to net realizable value for inventory write-downs includes a debit to cost of goods sold (increase to expenses) and a credit to inventory (decrease to assets). The adjustment has the following effects:
   (a) assets (inventory) = decrease
   (b) liabilities = no effect
   (c) stockholders' equity (or retained earnings) = decrease
   (d) revenues = no effect
   (e) expenses (cost of goods sold) = increase
   (f) net income = decrease

Question 6-18 (LO 6-6)
Firms are required to report the falling value of inventory but not allowed to report the increasing value of inventory. Conservative accounting implies that there is more potential harm to users of financial statements if estimated *gains* turn out to be wrong than if estimated *losses* turn out to be wrong. Therefore, companies typically do not report estimated gains.

Question 6-19 (LO 6-7)
The inventory turnover ratio equals cost of goods sold divided by average inventory. The ratio shows the number of times the firm sells its average inventory balance during a reporting period. The more frequently a business is able to sell or "turn over" its average inventory balance, the less the company needs to invest in inventory for a given level of sales. Typically, a higher ratio indicates greater effectiveness of a company in managing its investment in inventory.

Answers to Review Questions (continued)

Question 6-20 (LO 6-7)
Gross profit equals net sales minus cost of goods sold. The gross profit ratio equals gross profit divided by net sales. The gross profit ratio measures the amount by which the sale price of inventory exceeds its cost per dollar of sales. The higher the ratio, the higher is the "markup" a company is able to achieve on its inventories.

Question 6-21 (LO 6-8)
Under the periodic system, the sale of inventory is recorded by increasing an asset account (cash or accounts receivable) and increasing sales revenue. Under the perpetual system, two transactions are recorded. The first entry is the same as that under the periodic system. The second entry involves recording the cost of goods sold and decreasing inventory.

Question 6-22 (LO 6-8)
The purposes of the period-end adjustment are to (1) update the balance of inventory for its ending amount, (2) record cost of goods sold, and (3) close the temporary purchases accounts to zero.

Question 6-23 (LO 6-9)
Understating ending inventory in the current year will have the following effects in the current year:
- (a) assets (inventory) = understated
- (b) liabilities = no effect
- (c) stockholders' equity (or retained earnings) = understated
- (d) revenues = no effect
- (e) expenses (cost of goods sold) = overstated
- (f) net income = understated

Question 6-24 (LO 6-9)
Understating ending inventory in the current year will have the following effects in the following year:
- (a) assets (inventory) = no effect
- (b) liabilities = no effect
- (c) stockholders' equity (or retained earnings) = no effect
- (d) revenues = no effect
- (e) expenses (cost of goods sold) = understated
- (f) net income = overstated

BRIEF EXERCISES

Brief Exercise 6-1 (LO 6-1)

1. b.
2. a.
3. c.

Brief Exercise 6-2 (LO 6-1)

1. c.
2. a.
3. b.

Brief Exercise 6-3 (LO 6-2)

	Beginning inventory	$ 8,000
+	Purchases	23,000
	Cost of goods available for sale	31,000
−	Ending inventory	10,000
	Cost of goods sold	$21,000

Brief Exercise 6-4 (LO 6-2)

Company	Sales revenue	Cost of goods sold	Gross profit[a]	Operating expenses	Net income[b]
Lennon	$18,000	(a) $10,000	$ 8,000	$3,500	$4,500
Harrison	20,000	11,000	(b) 9,000	6,000	3,000
McCartney	13,000	9,000	4,000	(c) 2,500	1,500
Starr	16,000	6,000	10,000	6,500	(d) 3,500

[a] Gross profit = Sales revenue − Cost of goods sold
[b] Net income = Gross profit − Operating expenses

Brief Exercise 6-5 (LO 6-3)

Date	Transaction	Number of units	Unit cost	**Ending Inventory**
Nov. 3	Purchase	40	$90	**$3,600**

Date	Transaction	Number of units	Unit cost	**Cost of Goods Sold**
Jan. 1	Beginning inventory	60	$82	**$ 4,920**
May 5	Purchase	250	85	**21,250**
Nov. 3	Purchase	160	90	**14,400**
		470[a]		**$40,570**

[a] First 470 units purchased are assumed sold

Brief Exercise 6-6 (LO 6-3)

Date	Transaction	Number of units	Unit cost	**Ending Inventory**
Jan. 1	Beginning inventory	40	$82	**$3,280**

Date	Transaction	Number of units	Unit cost	**Cost of Goods Sold**
Jan. 1	Beginning inventory	20	$82	**$ 1,640**
May 5	Purchase	250	85	**21,250**
Nov. 3	Purchase	200	90	**18,000**
		470[a]		**$40,890**

[a] Last 470 units purchased are assumed sold

Brief Exercise 6-7 (LO 6-3)

Date	Transaction	Number of units	Unit cost	Total Cost
Jan. 1	Beginning inventory	60	$82	$ 4,920
May 5	Purchase	250	85	21,250
Nov. 3	Purchase	200	90	18,000
		510		$44,170

Weighted-average cost = $44,170 / 510 units = $86.6078 / unit

Ending inventory = 40 × $86.6078 = $3,464.31

Cost of goods sold = 470 × $86.6078 = $40,705.69 (rounded)

Brief Exercise 6-8 (LO 6-3)

Date	Transaction	Number of units	Unit cost	**Ending Inventory**
May 5	Purchase	20	$85	**$1,700**
Nov. 3	Purchase	20	90	**1,800**
		40		**$3,500**

Date	Transaction	Number of units	Unit cost	**Cost of Goods Sold**
Jan. 1	Beginning inventory	60	$82	**$ 4,920**
May 5	Purchase	230	85	**19,550**
Nov. 3	Purchase	180	90	**16,200**
		470		**$40,670**

Brief Exercise 6-9 (LO 6-4)

Inventory Costs	Higher total assets	Higher cost of goods sold	Higher net income
Rising	*FIFO*	**LIFO**	**FIFO**
Declining	**LIFO**	**FIFO**	**LIFO**

Brief Exercise 6-10 (LO 6-5)

February 2	Debit	Credit
Inventory	**40,000**	
Accounts Payable		**40,000**
(*Purchase inventory on account*)		

March 17	Debit	Credit
Accounts Receivable	**60,000**	
Sales Revenue		**60,000**
(*Sell inventory on account*)		
Cost of Goods Sold	**40,000**	
Inventory		**40,000**
(*Cost of inventory sold*)		

Brief Exercise 6-11 (LO 6-5)

February 2	Debit	Credit
Inventory	**40,000**	
Accounts Payable		**40,000**
(*Purchase inventory on account*)		

February 2	Debit	Credit
Inventory	**600**	
Cash		**600**
(*Pay freight charges*)		

Brief Exercise 6-12 (LO 6-5)

February 2	Debit	Credit
Inventory	**60,000**	
Accounts Payable		**60,000**
(Purchase inventory on account)		

February 5	Debit	Credit
Accounts Payable	**4,000**	
Inventory		**4,000**
(Return inventory purchased on account)		
($4,000 = 100 units × $40 unit cost)		

Brief Exercise 6-13 (LO 6-5)

February 2	Debit	Credit
Inventory	**40,000**	
Accounts Payable		**40,000**
(Purchase inventory on account)		

February 10	Debit	Credit
Accounts Payable	**40,000**	
Inventory		**1,200**
Cash		**38,800**
(Pay on account with 3% discount)		
($1,200 = $40,000 × 3%)		

Brief Exercise 6-14 (LO 6-6)

Inventory	Quantity	Lower of Cost and NRV per unit	Ending Inventory
Ski jackets	20	$ 95	$1,900
Skis	25	300	7,500
			$9,400

Brief Exercise 6-15 (LO 6-6)

Inventory	Quantity	Lower of Cost and NRV per unit	Ending Inventory
Optima cameras	110	$45	$4,950
Inspire speakers	50	45	2,250
			$7,200

Brief Exercise 6-16 (LO 6-7)

$$\text{Inventory turnover ratio} = \frac{\text{Cost of goods sold}}{\text{Average inventory}} = \frac{\$180{,}000}{(\$55{,}000 + \$45{,}000) / 2}$$

$$= \textbf{3.6 times}$$

$$\text{Average days in inventory} = \frac{365}{\text{Inventory turnover ratio}} = \frac{365}{3.6}$$

$$= \textbf{101.4 days}$$

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Net sales}} = \frac{(\$250{,}000 - \$180{,}000)}{\$250{,}000}$$

$$= \textbf{28\%}$$

Brief Exercise 6-17 (LO 6-8)

February 2	Debit	Credit
Purchases	**40,000**	
Accounts Payable		**40,000**
(*Purchase inventory on account*)		

March 17	Debit	Credit
Accounts Receivable	**60,000**	
Sales Revenue		**60,000**
(*Sell inventory on account*)		

No entry for cost of goods sold

Brief Exercise 6-18 (LO 6-8)

February 2	Debit	Credit
Purchases	**40,000**	
Accounts Payable		**40,000**
(*Purchase inventory on account*)		

February 2	Debit	Credit
Freight-In	**600**	
Cash		**600**
(*Pay freight charges*)		

Brief Exercise 6-19 (LO 6-8)

February 2	Debit	Credit
Purchases	**60,000**	
Accounts Payable		**60,000**
(*Purchase inventory on account*)		

February 5	Debit	Credit
Accounts Payable	**4,000**	
Purchase Returns		**4,000**
(*Return inventory purchased on account*)		
(*$4,000 = 100 units × $40 unit cost*)		

Brief Exercise 6-20 (LO 6-8)

February 2	Debit	Credit
Purchase	**40,000**	
Accounts Payable		**40,000**
(*Purchase inventory on account*)		

February 10	Debit	Credit
Accounts Payable	**40,000**	
Purchase Discounts		**1,200**
Cash		**38,800**
(*Pay on account with 3% discount*)		
($1,200 = $40,000 \times 3\%$)		

Brief Exercise 6-21 (LO 6-9)

Overstating ending inventory by $15,000 has the following effects:

Current year
Cost of goods sold is understated by $15,000.
Gross profit is overstated by $15,000.

Following year
Cost of goods sold is overstated by $15,000.
Gross profit is understated by $15,000.

Brief Exercise 6-22 (LO 6-9)

Overstating ending inventory by $15,000 has the following effects:

Current year
Inventory is overstated by $15,000.
Retained earnings is overstated by $15,000.

Following year
Inventory is not affected.
Retained earnings is not affected.

EXERCISES

Exercise 6-1 (LO 6-2)

Beginning inventory	$ 55,000
Add: Purchases	910,000
Cost of goods available for sale	965,000
Less: Ending inventory	(45,000)
Cost of goods sold	**$920,000**

Exercise 6-2 (LO 6-2)

Wayman Corporation **Multiple-step Income Statement** **For the year ended December 31, 2021**		
Sales revenue	$390,000	
Cost of goods sold	130,000	
Gross profit		$260,000
Salaries expense	40,000	
Utilities expense	50,000	
Advertising expense	30,000	
Total operating expenses		120,000
Operating income		140,000
Interest expense		20,000
Income before income taxes		120,000
Income tax expense		50,000
Net income		$ 70,000

Exercise 6-3 (LO 6-2)

Requirement 1

Tisdale Incorporated Multiple-step Income Statement For the year ended December 31, 2021		
Net sales	$300,000	
Cost of goods sold	190,000	
Gross profit		$110,000
Selling expenses	60,000	
General expenses	50,000	
Administrative expenses	40,000	
Total operating expenses		150,000
Operating income (loss)		(40,000)
Nonoperating revenue		110,000
Income before income taxes		70,000
Income tax expense		30,000
Net income		$ 40,000

Requirement 2

While Tisdale Incorporated is able to report positive net income ($40,000), the company does not appear to have much profit-generating potential. For its core operations, the company reports a negative operating income or loss (−$40,000). This means that normal operations are not profitable. These are the operations that continue into the next year. Investors should not count on nonoperating revenue ($110,000) to recur.

Exercise 6-4

(LO 6-3)
Requirement 1 FIFO

(a)

Date	Transaction	Number of units	Unit cost	**Ending Inventory**
Oct. 6	Purchase	80	$58	**$4,640**

(b)

Date	Transaction	Number of units	Unit cost	**Cost of Goods Sold**
Jan. 1	Beginning inventory	60	$52	**$ 3,120**
Apr. 7	Purchase	140	54	**7,560**
Jul. 16	Purchase	210	57	**11,970**
Oct. 6	Purchase	40	58	**2,320**
		450[a]		**$24,970**

[a] First 450 units purchased are assumed sold

(c) **Sales revenue** = 450 units × $70 = **$31,500**

(d) **Gross profit** = Sales revenue − Cost of goods sold

$$= \$31,500 - \$24,970 = \textbf{\$6,530}$$

Exercise 6-4 (continued)
Requirement 2 LIFO
(a)

Date	Transaction	Number of units	Unit cost	Ending Inventory
Jan. 1	Beginning Inventory	60	$52	$3,120
Apr. 7	Purchase	20	54	1,080
		80		$4,200

(b)

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Apr. 7	Purchase	120	$54	$ 6,480
Jul. 16	Purchase	210	57	11,970
Oct. 6	Purchase	120	58	6,960
		440[a]		$25,410

[a] Last 440 units purchased are assumed sold

(c) **Sales revenue** = 450 units × $70 = **$31,500**

(d) **Gross profit** = Sales revenue − Cost of goods sold

$$= \$31,500 - \$25,410 = \textbf{\$6,090}$$

Exercise 6-4 (concluded)
Requirement 3 **Weighted average**

Date	Transaction	Number of units	Unit cost	Total cost
Jan. 1	Beginning Inventory	60	$52	$ 3,120
Apr. 7	Purchase	140	54	7,560
Jul. 16	Purchase	210	57	11,970
Oct. 6	Purchase	120	58	6,960
		530		$29,610

Weighted-average cost = $29,610 / 530 units = $55.8679

(a) **Ending inventory** = 80 units × $55.8679 = **$4,469**

(b) **Cost of goods sold** = 450 units × $55.8679 = $**25,141**

(c) **Sales revenue** = 450 units × $70 = **$31,500**

(d) **Gross profit** = Sales revenue − Cost of goods sold

$$= \$31,500 - \$25,141 = \textbf{\$6,359}$$

Requirement 4

	FIFO	LIFO	Weighted-average
Gross profit	**$6,530**	**$6,090**	**$6,359**

FIFO results in higher profitability when inventory costs are rising.

Exercise 6-5 (LO 6-3)
Requirement 1 FIFO
(a)

Date	Transaction	Number of units	Unit cost	**Ending Inventory**
Nov. 11	Purchase	24	$18	**$432**

(b)

Date	Transaction	Number of units	Unit cost	**Cost of Goods Sold**
Jan. 1	Beginning inventory	20	$22	**$ 440**
Mar. 4	Purchase	25	21	**525**
Jun. 9	Purchase	30	20	**600**
Nov. 11	Purchase	6	18	**108**
		81[a]		**$1,673**

[a] First 81 units purchased are assumed sold

(c) **Sales revenue** = 81 units × $30 = **$2,430**

(d) **Gross profit** = Sales revenue − Cost of goods sold

= $2,430 − $1,673 = **$757**

Exercise 6-5 (continued)
Requirement 2 LIFO

(a)

Date	Transaction	Number of units	Unit cost	Ending Inventory
Jan. 1	Beginning Inventory	20	$22	$440
Mar. 4	Purchase	4	21	84
		24		$524

(b)

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Mar. 4	Purchase	21	$21	$ 441
Jun. 9	Purchase	30	20	600
Nov. 11	Purchase	30	18	540
		81*		$1,581

    * Last 81 units purchased are assumed sold

(c) **Sales revenue** = 81 units × $30 = **$2,430**

(d) **Gross profit** = Sales revenue − Cost of goods sold

              = $2,430 − $1,581 = **$849**

Exercise 6-5 (concluded)
Requirement 3 Weighted average

Date	Transaction	Number of units	Unit cost	Total Cost
Jan. 1	Beginning Inventory	20	$22	$ 440
Mar. 4	Purchase	25	21	525
Jun. 9	Purchase	30	20	600
Nov. 11	Purchase	30	18	540
		105		$2,105

Weighted-average cost = $2,105 / 105 units = $20.04762

(a) **Ending inventory** = 24 units × $20.04762 = **$481.14**

(b) **Cost of goods sold** = 81 units × $20.04762 = **$1,623.86**

(c) **Sales revenue** = 81 units × $30 = **$2,430**

(d) **Gross profit** = Sales revenue − Cost of goods sold

= $2,430 − $1,623.86 = **$806.14**

Requirement 4

	FIFO	**LIFO**	**Weighted-average**
Gross profit	**$757**	**$849**	**$806.14**

LIFO results in higher profitability when inventory costs are declining.

Exercise 6-6 (LO 6-5)

	Debit	Credit
Inventory	**310,000**	
Accounts Payable		**310,000**
(*Purchase inventory on account*)		

	Debit	Credit
Accounts Receivable	**520,000**	
Sales Revenue		**520,000**
(*Sell inventory on account*)		
Cost of Goods Sold	**335,000**	
Inventory		**335,000**
(*Cost of inventory sold*)		

Exercise 6-7 (LO 6-5)

June 5	Debit	Credit
Inventory	**4,000**	
Accounts Payable		**4,000**
(*Purchase inventory on account*)		

June 9	Debit	Credit
Accounts Payable	**800**	
Inventory		**800**
(*Return inventory purchased on account*)		
(*$800 = 40 units × $20 unit cost*)		

June 16	Debit	Credit
Accounts Receivable	**5,600**	
Sales Revenue		**5,600**
(*Sell inventory on account*)		
(*$5,600 = 160 units × $35 unit price*)		
Cost of Goods Sold	**3,200**	
Inventory		**3,200**
(*Record cost of inventory sold*)		
(*$3,200 = 160 units × $20 unit cost*)		

Exercise 6-8 (LO 6-5)

Requirement 1

June 5	Debit	Credit
Inventory	**3,800**	
Accounts Payable		**3,800**
(*Purchase inventory on account*)		

June 12	Debit	Credit
Accounts Payable	**3,800**	
Inventory		**76**
Cash		**3,724**
(*Pay on account with 2% discount*)		
(*$76 = $3,800 × 2%*)		

Requirement 2

June 22	Debit	Credit
Accounts Payable	**3,800**	
Cash		**3,800**
(*Pay on account*)		

Exercise 6-9 (LO 6-5)

Requirement 1

May 2	Debit	Credit
Inventory	3,300	
Accounts Payable		3,300
(*Purchase inventory on account*)		

May 3		
Inventory	200	
Cash		200
(*Pay freight-in cost*)		

May 5		
Accounts Payable	400	
Inventory		400
(*Return inventory on account*)		

May 10		
Accounts Payable	2,900	
Inventory		29
Cash		2,871
(*Pay on account with 1% discount*)		
($29 = $2,900 × 1%)		

May 30		
Accounts Receivable	4,000	
Sales Revenue		4,000
(*Sell inventory on account*)		
Cost of Goods Sold	3,071	
Inventory		3,071[a]
(*Record cost of inventory sold*)		

[a] $3,300 (purchase) + $200 (freight-in) − $400 (return) − $29 (discount)

Requirement 2

May 24	Debit	Credit
Accounts Payable	2,900	
Cash		2,900

(*Pay cash on account*)

Exercise 6-10 (LO 6-5)

July 5	Debit	Credit
Inventory	**100,000**	
Accounts Payable		**100,000**
(*Purchase inventory on account*)		
July 8		
Accounts Payable	**5,000**	
Inventory		**5,000**
(*Return inventory on account*)		
July 13		
Accounts Payable	**95,000**	
Inventory		**2,850**
Cash		**92,150**
(*Pay on account with 3% discount*)		
(*$2,850 = $95,000 × 3%*)		
July 28		
Accounts Receivable	**114,000**	
Sales Revenue		**114,000**
(*Sell inventory on account*)		
Cost of Goods Sold	**92,150**	
Inventory		**92,150**[a]
(*Record cost of inventory sold*)		

[a] $100,000 (purchase) − $5,000 (return) − $2,850 (discount)

Exercise 6-11 (LO 6-5)

August 6	Debit	Credit
Inventory	**14,000**	
Accounts Payable		**14,000**
(*Purchase inventory on account*)		

August 7		
Inventory	**400**	
Cash		**400**
(*Pay freight-in cost*)		

August 10		
Accounts Payable	**1,200**	
Inventory		**1,200**
(*Return inventory on account*)		

August 14		
Accounts Payable	**12,800**	
Inventory		**128**
Cash		**12,672**
(*Pay cash on account with 1% discount*)		
(*$128 = $12,800 × 1%*)		

August 23		
Accounts Receivable	**11,000**	
Sales Revenue		**11,000**
(*Sell inventory on account*)		
Cost of Goods Sold	**10,212.50**	
Inventory		**10,212.50**
(*Record cost of inventory sold*)		

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Exercise 6-12 (LO 6-5)

<u>August 6</u>

Accounts Receivable	**14,000**	
Sales Revenue		**14,000**
(*Sell inventory on account*)		

Cost of Goods Sold	**12,600**	
Inventory		**12,600**
(*Record cost of inventory sold*)		

<u>August 10</u>

Sales Returns	**1,200**	
Accounts Receivable		**1,200**
(*Receive return on account*)		

<u>August 14</u>

Cash	**12,672**	
Sales Discounts	**128**	
Accounts Receivable		**12,800**
(*Receive cash on account with 1% discount*)		
(*$128 = $12,800 × 1%*)		

Exercise 6-13 (LO 6-6)

Requirement 1

Inventory	Quantity	Unit Cost	Total Recorded Cost
Furniture	200	$ 85	$17,000
Electronics	50	400	20,000
			$37,000

Requirement 2

Inventory	Quantity	Lower of Cost and NRV per unit	Ending Inventory
Furniture	200	$ 85	$17,000
Electronics	50	300	15,000
			$32,000

Requirement 3

	Debit	Credit
Cost of Goods Sold	5,000	
Inventory		5,000
(*Adjust inventory down to net realizable value*)		
(*50 units of electronics × $100*)		

Requirement 4

The write-down of inventory has the effect of reducing total assets (inventory), increasing expenses (cost of goods sold), decreasing net income, and decreasing retained earnings.

Exercise 6-14 (LO 6-6)

Requirement 1

Inventory	Quantity	Unit Cost	Total Recorded Cost
Shirts	35	$ 60	$ 2,100
MegaDriver	15	360	5,400
MegaDriver II	30	350	10,500
			$18,000

Requirement 2

Inventory	Quantity	Lower of Cost and NRV per unit	Ending Inventory
Shirts	35	$ 60	$ 2,100
MegaDriver	15	250	3,750
MegaDriver II	30	350	10,500
			$16,350

Requirement 3

	Debit	Credit
Cost of Goods Sold	**1,650**	
Inventory		**1,650**
(Adjust inventory down to net realizable value)		
(15 units of MegaDriver × $110)		

Requirement 4

The write-down of inventory has the effect of reducing total assets (inventory), increasing expenses (cost of goods sold), decreasing net income, and decreasing retained earnings.

Exercise 6-15 (LO 6-2, 6-7)

Requirement 1

	Lewis	Clark
Beginning inventory	$ 24,000	$ 50,000
Add: Purchases	261,000	235,000
Less: Purchase returns	(15,000)	(60,000)
Cost of goods available for sale	270,000	225,000
Less: Ending inventory	(18,000)	(60,000)
Cost of goods sold	**$252,000**	**$165,000**

Requirement 2

			Lewis	Clark
Inventory turnover ratio	=	$\dfrac{\text{Cost of goods sold}}{\text{Average inventory}}$	$\dfrac{\$252,000}{(\$24,000 + \$18,000)/2}$	$\dfrac{\$165,000}{(\$50,000 + \$60,000)/2}$
	=		**12.0 times**	**3.0 times**

Requirement 3

			Lewis	Clark
Average days in inventory	=	$\dfrac{365}{\text{Inventory turnover ratio}}$	$\dfrac{365}{12.0}$	$\dfrac{365}{3.0}$
	=		**30.4 days**	**121.7 days**

Requirement 4

Lewis seems to be managing its inventory more efficiently. For Lewis, inventory turns over 12 times per year. In other words, inventory sells every 30.4 days. For Clark, its inventory turns over only three times per year or every 121.7 days.

Exercise 6-16 (LO 6-2, 6-7)

Requirement 1

	Gross Profit[a]	Operating Income[b]	Income Before Income Taxes[c]	Net Income[d]
Henry	**$27,200**	**$22,200**	**$20,200**	**$18,200**
Grace	**10,500**	**(2,600)**	**(9,600)**	**(9,600)**
James	**15,200**	**12,200**	**12,200**	**9,200**

[a] Gross profit = Sales revenue − Cost of goods sold

[b] Operating income = Gross profit − Operating expenses

[c] Income before income taxes = Operating income − Nonoperating expenses

[d] Net income = Income before income taxes − Income tax expense

Requirement 2

			Henry	Grace	James
Gross profit ratio	=	Gross profit / Net sales	$27,200 / $32,000	$10,500 / $35,000	$15,200 / $40,000
	=		**0.85**	**0.30**	**0.38**

Henry has the most favorable gross profit ratio.

Exercise 6-17 (LO 6-8)

Requirement 1

May 2	Debit	Credit
Purchases	**3,300**	
Accounts Payable		**3,300**
(*Purchase inventory on account*)		

May 3		
Freight-In	**200**	
Cash		**200**
(*Pay freight-in cost*)		

May 5		
Accounts Payable	**400**	
Purchase Returns		**400**
(*Return inventory on account*)		

May 10		
Accounts Payable	**2,900**	
Purchase Discounts		**29**
Cash		**2,871**
(*Pay cash on account with 1% discount*)		
(*Purchase discount = $2,900 \times 1\%$*)		

May 30		
Accounts Receivable	**4,000**	
Sales Revenue		**4,000**
(*Sell inventory on account*)		

Requirement 2

May 31	Debit	Credit
Cost of Goods Sold	**3,071**	
Purchase Returns	**400**	
Purchase Discounts	**29**	
Purchases		**3,300**
Freight-In		**200**
(*Record period-end adjustment*)		

Note: Beginning and ending inventory amounts are zero; no entry required.

Exercise 6-18 (LO 6-8)

Requirement 1

July 5	Debit	Credit
Purchases	100,000	
Accounts Payable		100,000
(*Purchase inventory on account*)		

July 8		
Accounts Payable	5,000	
Purchase Returns		5,000
(*Return inventory on account*)		

July 13		
Accounts Payable	95,000	
Purchase Discounts		2,850
Cash		92,150
(*Pay cash on account with 3% discount*)		
($2,850 = $95,000 \times 3\%$)		

July 28		
Accounts Receivable	114,000	
Sales Revenue		114,000
(*Sell inventory on account*)		

Requirement 2

July 31	Debit	Credit
Cost of Goods Sold	92,150	
Purchase Returns	5,000	
Purchase Discounts	2,850	
Purchases		100,000
(*Record period-end adjustment*)		

Note: Beginning and ending inventory amounts are zero; no entry required.

Exercise 6-19 (LO 6-9)

August 6	Debit	Credit
Purchases	**14,000**	
Accounts Payable		**14,000**
(*Purchase inventory on account*)		

August 7		
Freight-In	**400**	
Cash		**400**
(*Pay freight-in cost*)		

August 10		
Accounts Payable	**1,200**	
Purchase Returns		**1,200**
(*Return inventory on account*)		

August 14		
Accounts Payable	**12,800**	
Purchase Discounts		**128**
Cash		**12,672**
(*Pay cash on account with 1% discount*)		
(*$128 = $12,800 \times 1\%$*)		

August 23		
Accounts Receivable	**11,000**	
Sales Revenue		**11,000**
(*Sell inventory on account*)		

Requirement 2

August 31	Debit	Credit
Inventory (ending)	**2,859.50**	
Cost of Goods Sold	**10,212.50**	
Purchase Returns	**1,200.00**	
Purchase Discounts	**128.00**	
Purchases		**14,000**
Freight-In		**400**
(*Record period-end adjustment*)		

Note: Beginning inventory was zero; no entry required.

Exercise 6-20 (LO 6-9)

Requirement 1

When goods are shipped FOB shipping point, title transfers from the seller to the buyer at the time of shipment. This means that Mulligan Corporation (buyer) receives title to the inventory when it is shipped on December 30, 2021. By not including this inventory in its 2021 ending inventory count, the company has made an error.

Requirement 2

| | Balance Sheet | | | Income Statement | | |
| | | | Stockholders' | | Cost of | Gross |
Year	Assets	Liabilities	Equity	Revenues	Goods Sold	Profit
Current	U	N	U	N	O	U
Following	N	N	N	N	U	O

Exercise 6-21
Requirement 1

January 3	Debit	Credit
Inventory	**126,000**	
Accounts Payable		**126,000**
(Purchase inventory on account)		

January 8	Debit	Credit
Inventory	**143,000**	
Accounts Payable		**143,000**
(Purchase inventory on account)		

January 12	Debit	Credit
Inventory	**161,000**	
Accounts Payable		**161,000**
(Purchase inventory on account)		

January 15	Debit	Credit
Accounts Payable	**11,500**	
Inventory		**11,500**
(Return defective inventory)		
($11,500 = 115×100 units)		

January 19	Debit	Credit
Accounts Receivable	**600,000**	
Sales Revenue		**600,000**
(Sell inventory on account)		
Cost of Goods Sold	**437,000**	
Inventory		**437,000**
(Record cost of inventory sold)		
($437,000 = [$100 \times 300$ units]+[$105 \times 1,200$ units]+ [$110 \times 1,300$ units]+[$115 \times 1,200$ units])		

January 22	Debit	Credit
Cash	**580,000**	
Accounts Receivable		**580,000**
(Receive cash on account)		

January 24	Debit	Credit
Accounts Payable	**410,000**	
Cash		**410,000**
(Pay cash on account)		

Exercise 6-21 (continued)
Requirement 1 (concluded)

January 27	Debit	Credit
Allowance for Uncollectible Accounts	**2,500**	
Accounts Receivable		**2,500**
(*Write off uncollectible accounts*)		

January 31	Debit	Credit
Salaries Expense	**128,000**	
Cash		**128,000**
(*Pay salaries for the current period*)		

Requirement 2

(a) January 31	Debit	Credit
Cost of Goods Sold	**1,500**	
Inventory		**1,500**
(*Adjust inventory for net realizable value*)		
($1,500 = ($115−$100)×100 units		

(b) January 31	Debit	Credit
Bad Debt Expense	**3,000**	
Allowance for Uncollectible Accounts		**3,000**
(*Adjust uncollectible accounts*)		

$3,000 = ($4,000×40\%)+($50,000^{a}×4\%)−$600^{b}$

$^{a} $50,000 =$

$36,500+$600,000−$580,000−$2,500−$4,000$

$^{b} $600 = $3,100−$2,500$

(c) January 31	Debit	Credit
Interest Expense	**200**	
Interest Payable		**200**
(*Adjust interest expense*)		
($200 = $30,000 × 8\% × 1/12$)		

(d) January 31	Debit	Credit
Income Tax Expense	**12,300**	
Income Tax Payable		**12,300**
(*Adjust income taxes*)		

Exercise 6-21 (continued)
Requirement 3

Big Blast Fireworks
Adjusted Trial Balance
January 31, 2021

Accounts	Debit	Credit
Cash	$ 63,900	
Accounts Receivable	54,000	
Inventory	10,000	
Land	61,600	
Allowance for Uncollectible Accounts		$ 3,600
Accounts Payable		40,900
Interest Payable		200
Income Tax Payable		12,300
Notes Payable		30,000
Common Stock		56,000
Retained Earnings		28,500
Sales Revenue		600,000
Cost of Goods Sold	438,500	
Salaries Expense	128,000	
Bad Debt Expense	3,000	
Interest Expense	200	
Income Tax Expense	12,300	
Totals	$771,500	$771,500

Exercise 6-21 (continued)
Requirement 3 (concluded)

Accounts	Ending Balance		Beginning balance in **bold**, entries during January in blue, and adjusting entries in red.
Cash	$ 63,900	=	**21,900**+580,000−410,000−128,000
Accounts Receivable	54,000	=	**36,500**+600,000−580,000−2,500
Inventory	10,000	=	**30,000**+126,000+143,000+161,000−437,000−11,500−1,500
Land	61,600	=	**61,600**
Allow for Uncoll Accts	3,600	=	**3,100**−2,500+3,000
Accounts Payable	40,900	=	**32,400**+126,000+143,000+161,000−410,000−11,500
Interest Payable	200	=	200
Income Tax Payable	12,300	=	12,300
Notes Payable	30,000	=	**30,000**
Common Stock	56,000	=	**56,000**
Retained Earnings	28,500	=	**28,500**
Sales Revenue	600,000	=	600,000
Cost of Goods Sold	438,500	=	437,000+1,500
Salaries Expense	128,000	=	128,000
Bad Debt Expense	3,000	=	3,000
Interest Expense	200	=	200
Income Tax Expense	12,300	=	12,300

Exercise 6-21 (continued)
Requirement 4

Big Blast Fireworks
Multiple-Step Income Statement
For the year ended January 31, 2021

Sales revenue	$600,000	
Cost of goods sold	438,500	
Gross profit		$161,500
Salaries expense	128,000	
Bad debt expense	3,000	
Total operating expenses		131,000
Operating income		30,500
Interest expense		200
Income before taxes		30,300
Income tax expense		12,300
Net income		$ 18,000

Requirement 5

Big Blast Fireworks
Classified Balance Sheet
January 31, 2021

__Assets__			__Liabilities__	
Cash		$ 63,900	Accounts payable	$ 40,900
Accounts receivable	54,000		Interest payable	200
Less: Allowance	(3,600)	50,400	Income tax payable	12,300
Inventory		10,000	Total current liabilities	53,400
Total current assets		124,300	Notes payable	30,000
			Total liabilities	83,400
Land		61,600	**Stockholders' Equity**	
			Common stock	56,000
			Retained earnings	46,500 *
			Total stockholders' eq.	102,500
			Total liabilities and	
Total assets		$185,900	stockholders' equity	$185,900

* Retained earnings = Beginning retained earnings + Net income − Dividends
  = $28,500 + $18,000 − $0
  = $46,500

Exercise 6-21 (continued)
Requirement 6

January 31, 2021	Debit	Credit
Sales Revenue	600,000	
Retained Earnings		600,000
(*Close revenue accounts*)		
Retained Earnings	582,000	
Cost of Goods Sold		438,500
Salaries Expense		128,000
Bad Debt Expense		3,000
Interest Expense		200
Income Tax Expense		12,300
(*Close expense accounts*)		

Exercise 6-21 (concluded)
Requirement 7
(a) The inventory turnover ratio is:

$$\frac{\text{Inventory}}{\text{Turnover}} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}} = \frac{\$438,500}{(\$30,000 + \$10,000)/2} = \textbf{21.9}$$

A ratio of 21.9 suggests that the average inventory balance is sold 21.9 times over the period. Typically, a higher ratio is good. Therefore, Big Blast Fireworks appears to be managing its inventory **more** efficiently than the average company in the same industry.

(b) The gross profit ratio is:

$$\frac{\text{Gross Profit}}{\text{Ratio}} = \frac{(\text{Sales} - \text{Cost of Goods Sold})}{\text{Sales}} = \frac{(\$600,000 - \$438,500)}{\$600,000} = \textbf{26.9\%}$$

A ratio of 26.9% suggests that for every $1 of sales, the company spends just over $0.73 on inventory ($1.00 − $0.269), resulting in a gross profit of almost $0.27. The industry average gross profit ratio, however, is higher at 33%, so Big Blast Fireworks is **less** profitable per dollar of sales than the average company in the same industry.

(c) Based on the inventory turnover ratio and the gross profit ratio, Big Blast Fireworks' business strategy appears to be selling a **higher volume of less expensive** items. In general, lower priced items sell more frequently.

PROBLEMS: SET A

Problem 6-1A (LO 6-3)

Requirement 1 Specific identification

Date	Transaction	Number of units	Unit cost	Ending Inventory
Oct. 1	Beginning inventory	1	$900	$ 900
Oct. 30	Purchase	7	930	6,510
		8		$7,410

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Oct. 1	Beginning inventory	4[a]	$900	$ 3,600
Oct. 1	Beginning inventory	1[b]	900	900
Oct. 10	Purchase	2[b]	910	1,820
Oct. 10	Purchase	3[c]	910	2,730
Oct. 20	Purchase	4[c]	920	3,680
		14		$12,730

[a] From the October 4 sale; [b] From the October 13 sale; [c] From the October 28 sale.

Requirement 2 FIFO

Date	Transaction	Number of units	Unit cost	Ending Inventory
Oct. 20	Purchase	1	$920	$ 920
Oct. 30	Purchase	7	930	6,510
		8		$7,430

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Oct. 1	Beginning inventory	6	$900	$ 5,400
Oct. 10	Purchase	5	910	4,550
Oct. 20	Purchase	3	920	2,760
		14[a]		$12,710

[a] First 14 units purchased are assumed sold

Problem 6-1A (concluded)
Requirement 3 LIFO

Date	Transaction	Number of units	Unit Cost	Ending Inventory
Oct. 1	Beginning inventory	6	$900	$5,400
Oct. 10	Purchase	2	910	1,820
		8		$7,220

Date	Transaction	Number of units	Unit Cost	Cost of Goods Sold
Oct. 10	Purchase	3	$910	$ 2,730
Oct. 20	Purchase	4	920	3,680
Oct. 30	Purchase	7	930	6,510
		14[a]		$12,920

[a] Last 14 units purchased are assumed sold

Requirement 4 Weighted average

Date	Transaction	Number of units	Unit cost	Total Cost
Oct. 1	Beginning inventory	6	$900	$ 5,400
Oct. 10	Purchase	5	910	4,550
Oct. 20	Purchase	4	920	3,680
Oct. 30	Purchase	7	930	6,510
		22		$20,140

Weighted-average cost = $20,140 / 22 units = $915.45 (rounded)

Ending inventory = 8 units × $915.45 = **$7,323.60**

Cost of goods sold = 14 units × $915.45 = **$12,816.30**

Problem 6-2A (LO 6-3, 6-4, 6-5)

Requirement 1 Specific identification

Date	Transaction	Number of units	Unit cost	Ending Inventory
Mar. 1	Beginning inventory	1	$250	$ 250
Mar. 9	Purchase	2	270	540
Mar. 22	Purchase	2	280	560
Mar. 30	Purchase	9	300	2,700
		14		$4,050

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Mar. 1	Beginning inventory	15[a]	$250	$3,750
Mar. 9	Purchase	8[b]	270	2,160
Mar. 1	Beginning inventory	4[c]	250	1,000
Mar. 22	Purchase	8[c]	280	2,240
		35		$9,150

[a] From the March 5 sale; [b] From the March 17 sale; [c] From the March 27 sale.

Requirement 2 FIFO

Date	Transaction	Number of units	Unit cost	Ending Inventory
Mar. 22	Purchase	5	$280	$1,400
Mar. 30	Purchase	9	300	2,700
		14		$4,100

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Mar. 1	Beginning inventory	20	$250	$5,000
Mar. 9	Purchase	10	270	2,700
Mar. 22	Purchase	5	280	1,400
		35[a]		$9,100

[a] First 35 units purchased are assumed sold

Problem 6-2A (continued)
Requirement 3 LIFO

Date	Transaction	Number of units	Unit cost	Ending Inventory
Mar. 1	Beginning inventory	14	$250	$3,500

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Mar. 1	Beginning inventory	6	$250	$1,500
Mar. 9	Purchase	10	270	2,700
Mar. 22	Purchase	10	280	2,800
Mar. 30	Purchase	9	300	2,700
		35[a]		$9,700

[a] Last 35 units purchased are assumed sold

Requirement 4 Weighted average

Date	Transaction	Number of units	Unit cost	Total Cost
Mar. 1	Beginning inventory	20	$250	$ 5,000
Mar. 9	Purchase	10	270	2,700
Mar. 22	Purchase	10	280	2,800
Mar. 30	Purchase	9	300	2,700
		49		$13,200

Weighted-average cost = $13,200 / 49 units = $269.3878 (rounded)

Ending inventory = 14 units × $269.3878 = **$3,771.43**

Cost of goods sold = 35 units × $269.3878 = **$9,428.57**

Problem 6-2A (concluded)
Requirement 5

	Specific Identification	FIFO	LIFO	Weighted-average Cost
Sales revenue	**$15,300**	**$15,300**	**$15,300**	**$15,300.00**
Cost of goods sold	9,150	9,100	9,700	9,428.57
Gross profit	**$ 6,150**	**$ 6,200**	**$ 5,600**	**$ 5,871.43**

Requirement 6

FIFO provides the more meaningful measure of ending inventory. The amount of ending inventory reported using FIFO ($4,100) compared to LIFO ($3,500) better approximates the current cost of inventory at the end of the period ($300 per unit $\times$ 14 units = $4,200).

Requirement 7

March 31	Debit	Credit
Cost of Goods Sold	**600**	
Inventory		**600***
(*Record the LIFO adjustment*)		

* The LIFO adjustment equals the difference in inventory reported using FIFO ($4,100) versus using LIFO ($3,500). The LIFO adjustment equals $600.

Problem 6-3A (LO 6-2, 6-5)

Requirement 1

July 3	Debit	Credit
Inventory	2,300	
Accounts Payable		2,300
(*Purchase inventory on account*)		

July 4		
Inventory	110	
Cash		110
(*Pay freight-in*)		

July 9		
Accounts Payable	200	
Inventory		200
(*Return inventory on account*)		

July 11		
Accounts Payable	2,100	
Inventory		21
Cash		2,079
(*Pay on account less 1% discount*)		
($21 = $2,100 × 1%)		

July 12		
Accounts Receivable	5,800	
Sales Revenue		5,800
(*Sell inventory on account*)		
Cost of Goods Sold	3,000	
Inventory		3,000
(*Record cost of inventory sold*)		

July 15		
Cash	5,800	
Accounts Receivable		5,800
(*Receive cash on account*)		

Problem 6-3A (concluded)

Requirement 1 (continued)

July 18	Debit	Credit
Inventory	**3,100**	
Accounts Payable		**3,100**
(*Purchase inventory on account*)		
July 22		
Cash	**4,200**	
Sales Revenue		**4,200**
(*Sell inventory for cash*)		
Cost of Goods Sold	**2,500**	
Inventory		**2,500**
(*Record cost of inventory sold*)		
July 28		
Accounts Payable	**300**	
Inventory		**300**
(*Return inventory on account*)		
July 30		
Accounts Payable	**2,800**	
Cash		**2,800**
(*Pay cash on account*)		

Requirement 2

CD City	
Multiple-step Income Statement (partial)	
For the month of July	
Net sales	$10,000
Cost of goods sold	5,500
Gross profit	$ 4,500

Problem 6-4A (LO 6-6)

Requirement 1

Inventory items	Quantity	Unit Cost	Total Cost
Vans	4	$27,000	$108,000
Trucks	7	18,000	126,000
2-door sedans	3	13,000	39,000
4-door sedans	5	17,000	85,000
Sports cars	1	37,000	37,000
SUVs	6	30,000	180,000
			$575,000

Requirement 2

Inventory items	Quantity	Unit Cost	Unit NRV	Lower of Cost and NRV per unit	Total
Vans	4	$27,000	$25,000	$25,000	$100,000
Trucks	7	18,000	17,000	17,000	119,000
2-door sedans	3	13,000	15,000	13,000	39,000
4-door sedans	5	17,000	20,000	17,000	85,000
Sports cars	1	37,000	40,000	37,000	37,000
SUVs	6	30,000	28,000	28,000	168,000
Total					$548,000

Requirement 3

Because the total of lower of cost and net realizable value ($548,000) is less than total cost ($575,000), inventory is written down for the difference ($27,000).

	Debit	Credit
Cost of Goods Sold	27,000	
Inventory		27,000
(*Write down inventory to net realizable value*)		

Requirement 4

The write-down of inventory from cost to net realizable value reduces total assets and increases total expenses, leading to lower net income and lower retained earnings.

Problem 6-5A (LO 6-3, 6-6)

Requirement 1 FIFO

Date	Transaction	Number of units	Unit cost	Ending Inventory
Mar. 12	Purchase	40	$16	$ 640
Sep. 17	Purchase	60	9	540
		100		$1,180

Date	Transaction	Number of units	Unit Cost	Cost of Goods Sold
Jan. 1	Beginning inventory	120	$21	$2,520
Mar. 12	Purchase	50	16	800
		170[a]		$3,320

[a] First 170 units purchased are assumed sold

Requirement 2 LIFO

Date	Transaction	Number of units	Unit cost	Ending Inventory
Jan. 1	Beginning inventory	100	$21	$2,100

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Jan. 1	Beginning inventory	20	$21	$ 420
Mar. 12	Purchase	90	16	1,440
Sep. 17	Purchase	60	9	540
		170[a]		$2,400

[a] Last 170 units purchased are assumed sold

Problem 6-5A (concluded)

Requirement 3

<div align="center">Ending Inventory</div>

	Cost	NRV	**Lower of Cost and NRV**
FIFO	$ 1,180[a]	$500	**$500**

[a] Ending inventory from Requirement 1 above.

FIFO	Debit	Credit
Cost of Goods Sold	**680**	
Inventory		**680**
(*Adjust inventory to net realizable value*)		

Problem 6-6A (LO 6-2, 6-3, 6-4, 6-5, 6-6)

Requirement 1

October 4	Debit	Credit
Inventory	**6,500**	
Accounts Payable		**6,500**
(*Purchase inventory on account*)		

October 5		
Inventory	**600**	
Cash		**600**
(*Pay freight-in*)		

October 9		
Accounts Payable	**500**	
Inventory		**500**
(*Return inventory on account*)		

October 12		
Accounts Payable	**6,000**	
Inventory		**120**
Cash		**5,880**
(*Pay on account less 2% discount*)		
($120 = $6,000 × 2%$)		

October 15		
Accounts Receivable	**12,800**	
Sales Revenue		**12,800**
(*Sell inventory on account*)		
Cost of Goods Sold	**8,440**	
Inventory		**8,440**
(*Record cost of inventory sold*)		
($8,440 = ($50 × 50 units) + ($54 × 110 units))$		

October 19		
Cash	**12,800**	
Accounts Receivable		**12,800**
(*Receive cash on account*)		

Problem 6-6A (continued)

Requirement 1 (continued)

October 20	Debit	Credit
Inventory	**7,000**	
Accounts Payable		**7,000**
(*Purchase inventory on account*)		

October 22		
Cash	**8,000**	
Sales Revenue		**8,000**
(*Sell inventory for cash*)		
Cost of Goods Sold	**6,840**	
Inventory		**6,840**
(*Record cost of inventory sold*)		
($6,840 = ($54 × 10 units) + ($70 × 90 units))		

Problem 6-6A (concluded)

Requirement 2

October 31	Debit	Credit
Cost of Goods Sold	**350**	
Inventory		**350***
(Adjust inventory down to net realizable value)		

* The net realizable value of ending inventory ($350 = $35 net realizable value × 10 units) is $350 less than FIFO ending inventory ($700 from Requirement 1).

Requirement 3

Bowser Co. **Multiple-step Income Statement (partial)** **For the month of October**	
Net sales	$20,800
Cost of goods sold*	15,630
Gross profit	$ 5,170

* Cost of goods sold equals the cost of the units sold ($15,280) + write down to net realizable value ($350).

Problem 6-7A (LO 6-2, 6-7)

Requirement 1

Baskin-Robbins		
Multiple-step Income Statement		
For the month of July, 2021		
Net sales:		
Total sales revenue	$69,800	
Less: Sales returns	(1,100)	
Net sales revenue		$68,700
Cost of goods sold		28,700
Gross profit		40,000
Operating expenses:		
Salaries	13,700	
Utilities	3,600	
Rent	6,700	
Total		24,000
Operating income		16,000
Non-operating items:		
Interest income	3,300	
Interest expense	(400)	
Total		2,900
Income before income taxes		18,900
Income tax expense		6,000
Net income		$12,900

Problem 6-7A (concluded)

Requirement 2

$$\text{Inventory turnover ratio} = \frac{\text{Cost of goods sold}}{\text{Average inventory}} = \frac{\$28,700}{(\$1,100 + \$2,300)\,/2}$$

$$= \quad \textbf{16.9 times}$$

This ratio will likely be lower in December when inventory is being sold at a much slower pace due to ice cream sales being less popular in colder months.

Requirement 3

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Net sales}} = \frac{\$40,000}{\$68,700}$$

$$\textbf{0.58}$$

Problem 6-8A (LO 6-7)

Requirement 1

				Company 1	Company 2
Inventory turnover ratio	=	$\dfrac{\text{Cost of goods sold}}{\text{Average inventory}}$	=	$\dfrac{\$180,000}{\$40,000}$	$\dfrac{\$330,000}{\$30,000}$
			=	**4.5**	**11**

Requirement 2

				Company 1	Company 2
Gross profit ratio	=	$\dfrac{\text{Gross profit}}{\text{Net sales}}$	=	$\dfrac{\$220,000}{\$400,000}$	$\dfrac{\$70,000}{\$400,000}$
			=	**0.55**	**0.175**

Requirement 3

Company 1 is likely St. Jude and Company 2 is likely Wawa. The reason is that convenience stores are likely to sell their inventory quickly, resulting in a higher inventory turnover ratio. In addition, competition among common goods (such as grocery-related items) reduces gross profit. Selling highly specialized medical equipment is likely to result in a higher gross profit ratio but lower inventory turnover.

Problem 6-9A (LO 6-8)

Requirement 1

July 3	Debit	Credit
Purchases	**2,300**	
Accounts Payable		**2,300**
(*Purchase inventory on account*)		

July 4		
Freight-In	**110**	
Cash		**110**
(*Pay freight-in*)		

July 9		
Accounts Payable	**200**	
Purchase Returns		**200**
(*Return inventory on account*)		

July 11		
Accounts Payable	**2,100**	
Purchase Discounts		**21**
Cash		**2,079**
(*Pay on account less 1% discount*)		
(*$21 = $2,100 \times 1\%$*)		

July 12		
Accounts Receivable	**5,800**	
Sales Revenue		**5,800**
(*Sell inventory on account*)		

July 15		
Cash	**5,800**	
Accounts Receivable		**5,800**
(*Receive cash on account*)		

July 18		
Purchases	**3,100**	
Accounts Payable		**3,100**
(*Purchase inventory on account*)		

Problem 6-9A (continued)

Requirement 1 (concluded)

July 22	Debit	Credit
Cash	**4,200**	
Sales Revenue		**4,200**
(*Sell inventory for cash*)		

July 28		
Accounts Payable	**300**	
Purchase Returns		**300**
(*Return inventory on account*)		

July 30		
Accounts Payable	**2,800**	
Cash		**2,800**
(*Pay cash on account*)		

Requirement 2

July 31	Debit	Credit
Inventory (ending)	**2,889**	
Cost of Goods Sold	**5,500**	
Purchase Returns	**500**	
Purchase Discounts	**21**	
Purchases		**5,400**
Freight-In		**110**
Inventory (beginning)		**3,400**
(*Record period-end adjustment*)		

Problem 6-9A (concluded)

Requirement 3

CD City		
Multiple-step Income Statement (partial)		
For the month of July		
Net sales		$10,000
Cost of goods sold:		
Beginning inventory	$3,400	
Add: Purchases	5,400	
Freight-in	110	
Less: Purchase returns	(500)	
Purchase discounts	(21)	
Cost of goods available for sale	8,389	
Less: Ending inventory	(2,889)	
Cost of goods sold		5,500
Gross profit		$4,500

Problem 6-10A (LO 6-7. 6-9)
Requirement 1

			2018	2019	2020	2021
Gross profit ratio	= Gross profit / Net sales	=	$28,000 / $60,000	$20,000 / $66,000	$46,000 / $74,000	$42,000 / $90,000
		=	**0.47**	**0.30**	**0.62**	**0.47**

Requirement 2

			2018	2019	2020	2021
Gross profit ratio	= Gross profit / Net sales	=	$28,000 / $60,000	$31,000[a] / $66,000	$35,000[a] / $74,000	$42,000 / $90,000
		=	**0.47**	**0.47**	**0.47**	**0.47**

[a] These amounts represent amounts that would have been reported had the $11,000 inventory error not occurred. The understatement of inventory in 2019 has the effect of understating gross profit in 2019 and overstating gross profit in 2020 by $11,000.

Using the corrected amounts, the trend in gross profit is much more stable over time, which is to be expected for most companies.

Requirement 3
Corrected gross profit from 2018-2021 = $28,000 + $31,000 + $35,000 + $42,000
$$= \$136,000$$

The cumulative gross profit over the four-year period is unaffected by the inventory error. That's because inventory errors have the effect of reversing in the year following the error.

PROBLEMS: SET B

Problem 6-1B (LO 6-3)

Requirement 1 Specific identification

Date	Transaction	Number of units	Unit cost	Ending Inventory
Jun. 1	Beginning inventory	1	$ 350	$ 350
Jun. 12	Purchase	1	340	340
Jun. 24	Purchase	3	330	990
Jun. 29	Purchase	9	320	2,880
		14		$4,560

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Jun. 1	Beginning inventory	11[a]	$350	$ 3,850
Jun. 1	Beginning inventory	3[b]	350	1,050
Jun. 12	Purchase	9[b]	340	3,060
Jun. 1	Beginning inventory	1[c]	350	350
Jun. 24	Purchase	7[c]	330	2,310
		31		$10,620

[a] From the June 7 sale; [b] From the June 15 sale; [c] From the June 27 sale.

Requirement 2 FIFO

Date	Transaction	Number of units	Unit cost	Ending Inventory
Jun. 24	Purchase	5	$330	$1,650
Jun. 29	Purchase	9	320	2,880
		14		$4,530

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Jun. 1	Beginning inventory	16	$350	$ 5,600
Jun. 12	Purchase	10	340	3,400
Jun. 24	Purchase	5	330	1,650
		31[a]		$10,650

[a] First 31 units purchased are assumed sold

Problem 6-1B (concluded)
Requirement 3 LIFO

Date	Transaction	Number of units	Unit cost	Ending Inventory
Jun. 1	Beginning inventory	14	$350	$4,900

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Jun. 1	Beginning inventory	2	$350	$ 700
Jun. 12	Purchase	10	340	3,400
Jun. 24	Purchase	10	330	3,300
Jun. 29	Purchase	9	320	2,880
		31*		$10,280

* Last 31 units purchased are assumed sold

Requirement 4 Weighted average

Date	Transaction	Number of units	Unit cost	Total Cost
Jun. 1	Beginning inventory	16	$350	$ 5,600
Jun. 12	Purchase	10	340	3,400
Jun. 24	Purchase	10	330	3,300
Jun. 29	Purchase	9	320	2,880
		45		$15,180

Weighted-average cost = $15,180 / 45 units = $337.3333 (rounded)

Ending inventory = 14 units × $337.3333 = **$4,722.67**

Cost of goods sold = 31 units × $337.3333 = **$10,457.33**

Problem 6-2B (LO 6-3, 6-4, 6-5)

Requirement 1 Specific identification

Date	Transaction	Number of units	Unit cost	Ending Inventory
Aug. 1	Beginning inventory	2	$160	$ 320
Aug. 11	Purchase	2	150	300
Aug. 29	Purchase	11	130	1,430
		15		$2,050

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Aug. 1	Beginning inventory	5[a]	$160	$ 800
Aug. 11	Purchase	8[b]	150	1,200
Aug. 1	Beginning inventory	1[c]	160	160
Aug. 20	Purchase	10[c]	140	1,400
		24		$3,560

[a] From the August 4 sale; [b] From the August 13 sale; [c] From the August 26 sale.

Requirement 2 FIFO

Date	Transaction	Number of units	Unit cost	Ending Inventory
Aug. 20	Purchase	4	$140	$ 560
Aug. 29	Purchase	11	130	1,430
		15		$1,990

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Aug. 1	Beginning inventory	8	$160	$1,280
Aug. 11	Purchase	10	150	1,500
Aug. 20	Purchase	6	140	840
		24*		$3,620

* First 24 units purchased are assumed sold

Problem 6-2B (continued)
Requirement 3 LIFO

Date	Transaction	Number of units	Unit cost	Ending Inventory
Aug. 1	Beginning inventory	8	$160	$1,280
Aug. 11	Purchase	7	150	1,050
		15		$2,330

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Aug. 11	Purchase	3	$150	$ 450
Aug. 20	Purchase	10	140	1,400
Aug. 29	Purchase	11	130	1,430
		24*		$3,280

* Last 24 units purchased are assumed sold

Requirement 4 Weighted average

Date	Transaction	Number of units	Unit cost	Total Cost
Aug. 1	Beginning inventory	8	$160	$1,280
Aug. 11	Purchase	10	150	1,500
Aug. 20	Purchase	10	140	1,400
Aug. 29	Purchase	11	130	1,430
		39		$5,610

Weighted-average cost = $5,610 / 39 units = $143.8462 (rounded)

Ending inventory = 15 units × $143.8462 = **$2,157.69**

Cost of goods sold = 24 units × $143.8462 = **$3,452.31**

Problem 6-2B (concluded)
Requirement 5

	Specific Identification	FIFO	LIFO	Weighted-average Cost
Sales revenue	$5,795	$5,795	$5,795	$5,795.00
Cost of goods sold	3,560	3,620	3,280	3,452.31
Gross profit	$2,235	$2,175	$2,515	$2,342.69

Requirement 6
FIFO provides the more meaningful measure of ending inventory. The amount of ending inventory reported using FIFO ($1,990) compared to LIFO ($2,330) better approximates the current cost of inventory at the end of the period ($130 per unit × 15 units = $1,950).

Requirement 7

August 31	Debit	Credit
Inventory	**340**	
Cost of Goods Sold		340*
(*Record the LIFO adjustment*)		

The LIFO reserve equals the difference in inventory reported using FIFO ($1,990) versus using LIFO ($2,330). The LIFO reserve equals −$340.

Problem 6-3B (LO 6-2, 6-5)

Requirement 1

June 2	Debit	Credit
Inventory	2,700	
Accounts Payable		2,700
(*Purchase inventory on account*)		

June 4		
Inventory	400	
Cash		400
(*Pay freight-in*)		

June 8		
Accounts Payable	400	
Inventory		400
(*Return inventory on account*)		

June 10		
Accounts Payable	2,300	
Inventory		23
Cash		2,277
(*Pay on account less 1% discount*)		
(*$23 = $2,300 × 1\%$*)		

June 11		
Accounts Receivable	5,000	
Sales Revenue		5,000
(*Sell inventory on account*)		

Cost of Goods Sold	3,200	
Inventory		3,200
(*Record cost of inventory sold*)		

June 18		
Cash	4,000	
Accounts Receivable		4,000
(*Receive cash on account*)		

Problem 6-3B (concluded)

Requirement 1 (continued)

June 20	Debit	Credit
Inventory	**3,800**	
Accounts Payable		**3,800**
(*Purchase inventory on account*)		

June 23		
Cash	**5,300**	
Sales Revenue		**5,300**
(*Sell inventory for cash*)		
Cost of Goods Sold	**3,600**	
Inventory		**3,600**
(*Record cost of inventory sold*)		

June 26		
Accounts Payable	**500**	
Inventory		**500**
(*Return inventory on account*)		

June 28		
Accounts Payable	**3,300**	
Cash		**3,201**
Inventory		**99**
(*Pay cash on account*)		
(*$99 = $3,300 \times 3\%$*)		

Requirement 2

Circuit Country	
Multiple-step Income Statement (partial)	
For the month of June	
Net sales	$10,300
Cost of goods sold	6,800
Gross profit	$ 3,500

Problem 6-4B (LO 6-6)

Requirement 1

Inventory items	Quantity	Unit Cost	Total Cost
Hammers	110	$ 8.00	$ 880
Saws	60	11.00	660
Screwdrivers	140	3.00	420
Drills	50	26.00	1,300
1-gallon paint cans	170	6.50	1,105
Paint brushes	190	7.00	1,330
			$5,695

Requirement 2

Inventory items	Quantity	Unit Cost	Unit NRV	Lower of Cost and NRV per unit	Total
Hammers	110	$ 8.00	$ 8.50	$ 8.00	$ 880
Saws	60	11.00	10.00	10.00	600
Screwdrivers	140	3.00	3.60	3.00	420
Drills	50	26.00	24.00	24.00	1,200
1-gallon paint cans	170	6.50	6.00	6.00	1,020
Paint brushes	190	7.00	7.50	7.00	1,330
Total					$5,450

Requirement 3

Because the total of lower of cost and net realizable value ($5,450) is less than total cost ($5,695), inventory is written down for the difference ($245).

	Debit	Credit
Cost of Goods Sold	245	
Inventory		245
(*Write down inventory to net realizable value*)		

Requirement 4
The write-down of inventory from cost to net realizable value reduces total assets and

increases total expenses, leading to lower net income and lower retained earnings.

Problem 6-5B (LO 6-3, 6-6)

Requirement 1 FIFO

Date	Transaction	Number of units	Unit cost	Ending Inventory
Oct. 4	Purchase	9	$550	$4,950

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Jan. 1	Beginning inventory	20	$500	$10,000
Apr. 9	Purchase	30	520	15,600
Oct. 4	Purchase	2	550	1,100
		52[a]		$26,700

[a] First 52 units purchased are assumed sold

Requirement 2 LIFO

Date	Transaction	Number of units	Unit cost	Ending Inventory
Jan. 1	Beginning inventory	9	$500	$4,500

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Jan. 1	Beginning inventory	11	$500	$ 5,500
Apr. 9	Purchase	30	520	15,600
Oct. 4	Purchase	11	550	6,050
		52[a]		$27,150

[a] Last 52 units purchased are assumed sold

Problem 6-5B (concluded)

Requirement 3

Ending Inventory

	Cost	NRV	**Lower of Cost and NRV**
FIFO	$4,950[a]	$3,150	**$3,150**

[a] Ending inventory from Requirement 1 above.

FIFO	Debit	Credit
Cost of Goods Sold	**1,800**	
Inventory		**1,800**
(*Adjust inventory to net realizable value*)		

Problem 6-6B (LO 6-2, 6-3, 6-4, 6-5, 6-6)

Requirement 1

November 2	Debit	Credit
Inventory	**9,000**	
Accounts Payable		**9,000**
(*Purchase inventory on account*)		

November 3		
Inventory	**231**	
Cash		**231**
(*Pay freight-in*)		

November 9		
Accounts Payable	**1,300**	
Inventory		**1,300**
(*Return inventory on account*)		

November 11		
Accounts Payable	**7,700**	
Inventory		**231**
Cash		**7,469**
(*Pay on account less 3% discount*)		
($231 = $7,700 \times 3\%$)		

November 16		
Accounts Receivable	**14,000**	
Sales Revenue		**14,000**
(*Sell inventory on account*)		
Cost of Goods Sold	**9,640**	
Inventory		**9,640**
(*Cost of inventory sold*)		
($9,640 = ($94 \times 60$ units) + (100×40 units))		

November 20		
Cash	**14,000**	
Accounts Receivable		**14,000**
(*Receive cash on account*)		

     Financial Accounting, 5e

Problem 6-6B (continued)

Requirement 1 (continued)

November 21	Debit	Credit
Inventory	**7,280**	
Accounts Payable		**7,280**
(*Purchase inventory on account*)		

November 24	Debit	Credit
Cash	**12,600**	
Sales Revenue		**12,600**
(*Sell inventory for cash*)		
Cost of Goods Sold	**9,212**	
Inventory		**9,212**
(*Record cost of inventory sold*)		
[*$9,160 = ($100 × 37 units) + ($104 × 53 units)*]		

Problem 6-6B (concluded)

Requirement 2

November 30	Debit	Credit
Cost of Goods Sold	**391**	
Inventory		**391***
(*Adjust inventory down to net realizable value*)		

* The net realizable value of ending inventory ($1,377 = $81 net realizable value × 17 units) is $391 less than FIFO ending inventory ($1,768 from Requirement 1).

Requirement 3

Yoshi Inc. Multiple-step Income Statement (partial) For the month of November	
Net sales	$26,600
Cost of goods sold*	19,243
Gross profit	$ 7,357

* Cost of goods sold equals the cost of the units sold ($18,852) + write down to net realizable value ($391).

Problem 6-7B (LO 6-2, 6-7)

Requirement 1

Toys "R" Us Multiple-step Income Statement For the month of March, 2021		
Net sales:		
Total sales revenue	$77,300	
Less: Sales discounts	(3,000)	
Net sales revenue		$74,300
Cost of goods sold		35,800
Gross profit		38,500
Operating expenses:		
Advertising	6,400	
Rent	4,300	
Insurance	2,300	
Salaries	9,400	
Total		22,400
Operating income		16,100
Non-operating items:		
Gain on sale of building		7,500
Income before income taxes		23,600
Income tax expense		4,200
Net income		$19,400

Problem 6-7B (concluded)

Requirement 2

$$\text{Inventory turnover ratio} = \frac{\text{Cost of goods sold}}{\text{Average inventory}} = \frac{\$35,800}{(\$2,800 + \$1,000)/2}$$

$$= \textbf{18.8}$$

This ratio will likely be higher in December when inventory is being sold at a much faster pace due to the holiday season.

Requirement 3

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Net sales}} = \frac{\$38,500}{\$74,300}$$

$$\textbf{0.52}$$

Problem 6-8B (LO 6-7)

Requirement 1

				Company 1	Company 2
Inventory turnover ratio	=	Cost of goods sold / Average inventory	=	$130,000 / $35,000	$165,000 / $20,000
			=	**3.71**	**8.25**

Requirement 2

				Company 1	Company 2
Gross profit ratio	=	Gross profit / Net sales	=	$70,000 / $200,000	$35,000 / $200,000
			=	**0.35**	**0.175**

Requirement 3

Company 1 is likely Dillard's and Company 2 is likely Payless. The reason is that common, lower-to-middle priced footwear is likely to sell more quickly than is more specialized, higher-end footwear. In addition, higher-end footwear is likely to be more profitable due to less competition.

Problem 6-9B (LO 6-8)

Requirement 1

June 2	Debit	Credit
Purchases	**2,700**	
Accounts Payable		**2,700**
(Purchase inventory on account)		

June 4		
Freight-In	**400**	
Cash		**400**
(Pay freight-in)		

June 8		
Accounts Payable	**400**	
Purchase Returns		**400**
(Return inventory on account)		

June 10		
Accounts Payable	**2,300**	
Purchase Discounts		**23**
Cash		**2,277**
(Pay on account less 1% discount)		
($23 = $2,300 × 1%)		

June 11		
Accounts Receivable	**5,000**	
Sales Revenue		**5,000**
(Sell inventory on account)		

June 18		
Cash	**4,000**	
Accounts Receivable		**4,000**
(Receive cash on account)		

Problem 6-9B (concluded)

Requirement 1 (continued)

June 20	Debit	Credit
Purchases	**3,800**	
Accounts Payable		**3,800**
(Purchase inventory on account)		

June 23		
Cash	**5,300**	
Sales Revenue		**5,300**
(Sell inventory for cash)		

June 26		
Accounts Payable	**500**	
Purchase Returns		**500**
(Return inventory on account)		

June 28		
Accounts Payable	**3,300**	
Cash		**3,201**
Purchase Discounts		**99**
(Pay on account less 3% discount)		
($99 = $3,300 × 3%)		

Requirement 2

June 30	Debit	Credit
Inventory (ending)	**2,078**	
Cost of Goods Sold	**6,800**	
Purchase Returns	**900**	
Purchase Discounts	**122**	
Purchases		**6,500**
Freight-In		**400**
Inventory (beginning)		**3,000**
(Record period-end adjustment)		

Problem 6-9B (concluded)

Requirement 3

Circuit Country Multiple-step Income Statement (partial) For the month of June		
Net sales		$10,300
Cost of goods sold:		
Beginning inventory	$3,000	
Add: Purchases	6,500	
Freight-in	400	
Less: Purchase returns	(900)	
Purchase discounts	(122)	
Cost of goods available for sale	8,878	
Less: Ending inventory	(2,078)	
Cost of goods sold		6,800
Gross profit		$ 3,500

Problem 6-10B (LO 6-3, 6-9)

Requirement 1

Date	Transaction	Number of units	Unit cost	Ending Inventory
Oct. 29	Purchase	60	$46	$2,760

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Jan. 1	Beginning inventory	35	$40	$ 1,400
Apr. 14	Purchase	80	42	3,360
Aug. 22	Purchase	130	44	5,720
Oct. 29	Purchase	35	46	1,610
		280[a]		$12,090

[a] First 280 units purchased are assumed sold

Requirement 2

Date	Transaction	Number of units	Unit cost	Ending Inventory
Oct. 29	Purchase	50	$46	$2,300

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Jan. 1	Beginning inventory	35	$40	$ 1,400
Apr. 14	Purchase	80	42	3,360
Aug. 22	Purchase	130	44	5,720
Oct. 29	Purchase	45	46	2,070
		290*		$12,550

* First 290 units purchased are assumed sold (including the 10 lost units)

Requirements 3 and 4

	2021	2022
(a) ending inventory	Overstate	No Effect
(b) retained earnings	Overstate	No Effect
(c) cost of goods sold	Understate	Overstate
(d) net income	Overstate	Understate

ADDITIONAL PERSPECTIVES

AP6-1
Requirement 1 (a)

Sales Revenue

Date	Number of units	Sale price	Total sales
Jul. 31	40	$500	$20,000
Aug. 22	30	500	15,000
Nov. 20	90	500	45,000
Dec. 8	40	500	20,000
Total	200		$100,000

Cost of Goods Sold*

Date	Number of units	Unit cost	Total cost
Jul. 17	50	$150	$ 7,500
Aug. 12	40	160	6,400
Oct. 27	80	170	13,600
Dec. 4	30**	180	5,400
Total	200[a]		$32,900

[a] First 200 units purchased are assumed sold. Only 30 of the 100 units purchased on December 4 are sold, as this makes the total number of units sold equal 200. The remaining 70 units are in ending inventory.

Ending Inventory

Date	Number of units	Unit cost	Total cost
Dec. 4	70	$180	$12,600

AP6-1 (continued)
Requirement 1 (b)

Great Adventures, Inc.
Partial Income Statement
For the year ended December 31, 2022

Sales revenue	**$100,000**
Cost of goods sold	**(32,900)**
Gross profit	**$ 67,100**

Requirement 2 (a)

Inventory items	Cost per unit	NRV per unit	Lower of Cost and NRV per unit	Quantity	Lower of Cost and NRV
MU watches	$180	$100	$100	70	$7,000

Dec. 31, 2022	Debit	Credit
Cost of Goods Sold	**5,600**	
Inventory		**5,600ᵃ**
(Adjust inventory down to net realizable value)		

ᵃ The amount of the inventory write-down equals the difference between the cost of the 70 MU watches ($12,600) and their net realizable value ($7,000)

Requirement 2 (b)
Great Adventures reports its inventory in the balance sheet at the lower of cost and net realizable value, which equals $7,000, as demonstrated in requirement 2(a).

AP6-1 (concluded)
Requirement 2 (c)

Great Adventures, Inc. Partial Income Statement For the year ended December 31, 2022	
Sales revenue	$100,000
Cost of goods sold	(38,500) [a]
Gross profit	$ 61,500

[a] Cost of goods sold includes the write-down of inventory of $5,600 calculated in requirement 2(a). This amount is added to the original cost of goods sold of $32,900. The additional cost of goods sold reduces gross profit by $5,600.

Additional Perspective 6-1 *(in General Ledger)*

Students will be given the following existing trial balance.

Great Adventures, Inc.
Trial Balance
December 31, 2022

Accounts	Debit	Credit
Cash	$ 36,770	
Accounts Receivable	24,000	
Allowance for Uncollectible Accounts		$ 2,400
Inventory	-0-	
Equipment	45,000	
Accumulated Depreciation		24,000
Accounts Payable		2,800
Interest Payable		750
Income Tax Payable		14,500
Notes Payable		30,000
Common Stock		20,000
Retained Earnings		33,450
Service Revenue		44,500
Sales Revenue		-0-
Interest Revenue		120
Sales Discounts	350	
Cost of Goods Sold	-0-	
Depreciation Expense	16,000	
Insurance Expense	4,800	
Rent Expense	2,400	
Salaries Expense	24,000	
Supplies Expense	500	
Bad Debt Expense	2,400	
Interest Expense	1,800	
Income Tax Expense	14,500	
Totals	$172,520	$172,520

Additional Perspective 6-1 (in General Ledger, continued)

Jul. 17, 2022	Debit	Credit
Inventory	**7,500**	
Accounts Payable		**7,500**
(*Purchase inventory on account*)		

Jul. 31, 2022		
Cash	**20,000**	
Sales Revenue		**20,000**
(*Sell inventory on account*)		
Cost of Goods Sold	**6,000**	
Inventory		**6,000**
(*Record cost of inventory sold*)		
($6,000 = 40 watches × $150)		

Aug. 12, 2022		
Inventory	**6,400**	
Cash		**6,400**
(*Purchase inventory with cash*)		

Aug. 22, 2022		
Accounts Receivable	**15,000**	
Sales Revenue		**15,000**
(*Sell inventory on account*)		
Cost of Goods Sold	**4,700**	
Inventory		**4,700**
(*Record cost of inventory sold*)		
[$4,700 = (10 watches × $150) + (20 watches × $160)]		

Sep. 19, 2022		
Accounts Payable	**7,500**	
Cash		**7,500**
(*Pay on account*)		

Sep. 27, 2022		
Cash	**9,000**	
Accounts Receivable		**9,000**
(*Receive on account*)		

Oct. 27, 2022		
Inventory	**13,600**	
Cash		**13,600**
(*Purchase inventory with cash*)		

Nov. 20, 2022		
Cash	**45,000**	
Sales Revenue		**45,000**
(*Sell inventory for cash*)		
Cost of Goods Sold	**15,100**	
Inventory		**15,100**
(*Record cost of inventory sold*)		
[$15,100 = (20 \text{ watches} \times \$160) + (70 \text{ watches} \times \$170)$]		

Dec. 4, 2022		
Inventory	**18,000**	
Accounts Payable		**18,000**
(*Purchase inventory on account*)		

Dec. 8, 2022		
Accounts Receivable	**20,000**	
Sales Revenue		**20,000**
(*Sell inventory on account*)		
Cost of Goods Sold	**7,100**	
Inventory		**7,100**
(*Record cost of inventory sold*)		
[$7,100 = (10 \text{ watches} \times \$170) + (30 \text{ watches} \times \$180)$]		

Dec. 31, 2022		
Cost of Goods Sold	**5,600**	
Inventory		**5,600**[a]
(*Adjust inventory down to net realizable value*)		

[a] The amount of the inventory write-down equals the difference between the cost of the 70 MU watches ($12,600) and their net realizable value ($7,000)

Additional Perspective 6-1 (in General Ledger, continued)

Great Adventures, Inc. Income Statement For the period ended December 31, 2022		
Service revenue	$ 44,500	
Sales revenue	100,000	
Sales Discounts	(350)	
Net sales	144,150	
Cost of goods sold	38,500	
Gross profit		$105,650
Depreciation Expense	16,000	
Insurance Expense	4,800	
Rent Expense	2,400	
Salaries Expense	24,000	
Supplies Expense	500	
Bad Debt Expense	2,400	
Total operating expenses		50,100
Operating income (loss)		55,550
Interest revenue		120
Interest expense		(1,800)
Income before income taxes		53,870
Income tax expense		14,500
Net income		$ 39,370

Additional Perspective 6-1 (in General Ledger, continued)

Great Adventures, Inc.
Balance Sheet
December 31, 2022

Assets		Liabilities	
Current assets:		Current liabilities:	
Cash	$ 83,270	Accounts payable	$ 20,800
Accounts receivable	50,000	Interest payable	750
Allow for Uncoll Accts	(2,400)	Income tax payable	14,500
Inventory	7,000	Total current liabilities	36,050
Total current assets	137,870	Notes payable	30,000
		Total liabilities	66,050
Long-term assets:			
Equipment	45,000	**Stockholders' Equity**	
Accumulated depreciation	(24,000)	Common stock	20,000
		Retained earnings	72,820
		Total stockholders' equity	92,820
		Total liabilities and	
Total assets	$158,870	stockholders' equity	$158,870

Additional Perspective 6-1 (in General Ledger, concluded)

Dec. 31, 2022	Debit	Credit
Service Revenue	**44,500**	
Sales Revenue	**100,000**	
Interest Revenue	**120**	
Sales Discounts		**350**
Retained Earnings		**144,270**
(*Close revenue accounts*)		
Dec. 31, 2022		
Retained Earnings	**104,900**	
Cost of Goods Sold		**38,500**
Depreciation Expense		**16,000**
Insurance Expense		**4,800**
Rent Expense		**2,400**
Salaries Expense		**24,000**
Supplies Expense		**500**
Bad Debt Expense		**2,400**
Interest Expense		**1,800**
Income Tax Expense		**14,500**
(*Close expense accounts*)		

Additional Perspective 6-2
($ in thousands)

Requirement 1
The amount of inventory reported in the balance sheet is $398,213. This amount represents the cost, less any write-downs, of inventory that has not been sold by the end of the year.

Requirement 2
The company refers to cost of goods sold as cost of sales.

Requirement 3
The amount of cost of goods sold reported in the income statement is $2,425,044. This amount represents the cost of inventory sold during the year.

Requirement 4

$$\text{Inventory turnover ratio} = \frac{\text{Cost of goods sold}}{\text{Average inventory}} = \frac{\$2,425,044}{\$378,329.5} = 6.4$$

$$\text{Average days in inventory} = \frac{365}{\text{Inventory turnover ratio}} = \frac{365}{6.4} = 57.0$$

Requirement 5

		2018	2017	2016
$\text{Gross profit ratio} = \dfrac{\text{Gross profit}}{\text{Net sales}} =$		36.1%	37.9%	37.0%

There is **no trend** across the three years.

Requirement 6

$$\frac{\text{Operating expenses}}{\text{Net sales}} = \frac{\$1,067,717}{\$3,795,549} = 28.1\%$$

Additional Perspective 6-3

($ in thousands)

Requirement 1

The amount of inventory reported in the balance sheet is $118,007. This amount represents the cost, less any write-downs, of inventory that has not been sold by the end of the year.

Requirement 2

The company refers to cost of goods sold as cost of sales.

Requirement 3

The amount of cost of goods sold reported in the income statement is $533,357. This amount represents the cost of inventory sold during the year.

Requirement 4

$$\frac{\text{Inventory}}{\text{turnover ratio}} = \frac{\text{Cost of goods sold}}{\text{Average inventory}} = \frac{\$533,357}{\$121,850.5} = 4.4$$

$$\frac{\text{Average days}}{\text{in inventory}} = \frac{365}{\text{Inventory turnover ratio}} = \frac{365}{4.4} = 83.0$$

Requirement 5

			2018	2017	2016
$\frac{\text{Gross profit}}{\text{ratio}}$	=	$\frac{\text{Gross profit}}{\text{Net sales}}$ =	41.6%	40.7%	43.0%

There is **no trend** over the three years.

Requirement 6

$$\frac{\text{Operating expenses}}{\text{Net sales}} = \frac{\$245,945}{\$913,380} = 26.9\%$$

Additional Perspective 6-4

Requirement 1
American Eagle's percentage of inventory to total assets is 21.9%. Buckle's percentage of inventory to total assets is 21.9%.

Requirement 2

			American Eagle	Buckle
Inventory turnover ratio	=	$\dfrac{\text{Cost of goods sold}}{\text{Average inventory}}$ =	6.4	4.4
Average days in inventory	=	$\dfrac{365}{\text{Inventory turnover ratio}}$ =	57.0	83.0

American Eagle has a higher inventory turnover ratio and lower days in inventory.

Requirement 3

			American Eagle	Buckle
Gross profit ratio	=	$\dfrac{\text{Gross profit}}{\text{Net sales}}$ =	36.1%	41.6%

Buckle shows greater profitability.

Requirement 4

		American Eagle	Buckle
$\dfrac{\text{Operating expenses}}{\text{Net sales}}$ =		28.1%	26.9%

No. From Requirement 3, Buckle shows greater profitability. From Requirement 4, Buckle shows a lower expense ratio, which again supports its greater profitability.

Additional Perspective 6-5

1. Increase in income before taxes.

By recording the fictitious sale, income before taxes will increase by the amount of the selling price above the cost of the inventory. In addition, the company avoids reporting a loss that would further reduce income. When the net realizable value of inventory falls below its cost, companies are required to write down inventory, resulting in a loss being reported in the income statement.

2. Decrease in total assets and decrease in income before taxes.

The company's assets (inventory) will be reported for lower amounts and a loss will be reported.

3. Yes.

Reporting the sale would lead to misstated financial statements. Even if creditors are fooled for a short while, the company's lack of profitability will eventually be discovered and likely lead to bankruptcy. The longer the company stays in business, the more money it could lose and the less creditors would be paid in bankruptcy proceedings. Therefore, not reporting accurately in 2021 could easily cause larger losses to creditors in the future. New investors could potentially suffer as well if their decision to invest in the business is based on financial reports prepared using misstated amounts.

4. No.

Under generally accepted accounting principles, the sale does not transfer control or risk of ownership of the inventory, so it should not be recorded. However, the decision is difficult. If profits are too low, Jim will lose his job and so will all of his coworkers. Jim doesn't want to be the one to blame for everyone losing their job. If he allows the "fake" sale to be reported, he and his coworkers will have time to start looking for other jobs. He will also please his boss, and if the company somehow is able to continue its existence, this could mean promotions and pay raises.

However, as the person responsible for preparing financial statements, Jim has an ethical responsibility to investors and creditors to accurately report the financial position of the company. Jim may face legal penalties for fraudulent reporting. In addition, by refusing to issue misleading financial statements, Jim sends a strong signal to upper management that he is someone who can be trusted. This could prove useful if the company maintains its business or in his career with another employer.

Additional Perspective 6-6

(Note to instructor: Amounts are based on annual reports filed December 31, 2016)

Requirement 1

($ in millions)

			Coca-Cola	**PepsiCo**
Gross profit ratio	=	Gross profit / Net sales	$25,398 / $41,863	$34,590 / $62,799
		=	60.7%	55.1%

			Coca-Cola	**PepsiCo**
Inventory turnover ratio	=	Cost of goods sold / Average inventory	$16,465 / ($2,625+$2,902)/2	$28,209 / ($2,723+$2,720)/2
		=	6.0 times	10.4 times

			Coca-Cola	PepsiCo
Average days in inventory	=	365 / Inventory turnover ratio	365 / 6.0	365 / 10.4
		=	60.8 days	35.1 days

Requirement 2

As indicated by the higher gross profit ratio, Coca-Cola is able to generate more profit selling its inventory (beverages) than PepsiCo is selling its inventory (beverages and snack foods). However, PepsiCo's inventory turns over much faster. On average, PepsiCo sell its inventory 10.4 times per year compared to only 6.0 times per year for Coca-Cola. This is an average difference of about 26 days, which likely reflects the shorter shelf-life of snack foods compared to beverages.

Additional Perspective 6-7

Students should discuss the following issues.

For FIFO,
- FIFO assumes that the first units purchased are sold first.
- It is likely that FIFO more closely matches the actual flow of inventory.
- By more closely matching actual flow, FIFO results in a better approximate value of inventory being reported in the balance sheet.
- If inventory costs are rising, which is typically the case for most businesses, FIFO results in a higher amount being reported for assets and net income.

For LIFO,
- LIFO assumes that the last units purchased are sold first.
- LIFO may better match current inventory costs with current inventory sales, resulting in a more accurate measure of profitability in the income statement.
- If inventory costs are rising, which is typically the case for most businesses, LIFO generally results in a lower amount being reported for assets and net income. The lower amount being reported for net income will reduce the amount of income taxes payable.
- If inventory costs are declining, LIFO results in a higher amount being reported for assets and net income.

Additional Perspective 6-8

Requirement 1

Date	Transaction	Number of units	Unit cost	Ending Inventory
Aug. 22	Purchase	30	$600	$18,000
Oct. 29	Purchase	80	640	51,200
		110		$69,200

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Jan. 1	Beginning inventory	150	$540	$ 81,000
Mar. 8	Purchase	120	570	68,400
Aug. 22	Purchase	70	600	42,000
		340*		$191,400

* First 340 units purchased are assumed sold

Requirement 2

Date	Transaction	Number of units	Unit cost	Ending Inventory
Oct. 29	Purchase	50	$640	$32,000

Date	Transaction	Number of units	Unit cost	Cost of Goods Sold
Jan. 1	Beginning inventory	150	$540	$ 81,000
Mar. 8	Purchase	120	570	68,400
Aug. 22	Purchase	100	600	60,000
Oct. 29	Purchase	30	640	19,200
		400*		$228,600

* First 400 units purchased are assumed sold

Requirements 3 and 4

	2021	2022
(a) ending inventory	Overstatement	No Effect
(b) retained earnings	Overstatement	No Effect
(c) cost of goods sold	Understatement	Overstatement
(d) net income	Overstatement	Understatement