# SOLUTIONS Learning Goal 13

## Multiple Choice

1. b
2. d A purchase discount is recorded when payment is made.
3. a The payment is within the discount period, so $5,000 × .02 = $100.
4. b The discount is ($1,000/.98) = $1,020.41 – $1,000 = $20.41 discount.
5. d ($2,500 × .99) + $150 = $2,625
6. c
7. d The return of the inventory increases inventory and reduces cost of goods sold.
8. c 9. a 10. b 11. a
12. b Consignment of inventory does not change the ownership of the inventory.
13. d

## Reinforcement Problems

### LG 13-1.

a. The new contra accounts are sales returns and allowances and sales discounts. They reduce net sales, thereby reducing net income.

b. FOB means "free on board" and for most merchants refers to the location during the shipping process at which title (ownership) of the merchandise transfers to the buyer. It is also used to refer to the location, up to which the seller is responsible for the shipping costs and after which the buyer is responsible for shipping costs (if no other shipping arrangement is made between them). FOB is especially important to determine exactly when a sale may properly be recorded and when a buyer must claim ownership of the merchandise.

c. The following are income statement accounts, and therefore affect retained earnings in the stockholders' equity part of the equation. An increase in retained earnings increases stockholders' equity and a decrease in retained earnings decreases stockholders' equity: sales discounts, (decrease SE); sales returns and allowances, (decrease SE); and freight-out, (decrease SE).

Freight-in increases the asset merchandise inventory.

Cost of goods sold is not part of the accounting equation. It is a calculation on the income statement. (The same is true for gross profit and net income.)

d. The buyer will pay $1,000 × .8 × .98 = $784. A trade discount is an adjustment to the list price of merchandise, often given for large quantity or special-situation purchases. A purchase discount (the 2/10, n/30 terms) is given for quick payment; in this case, within 10 days. The trade discount is always calculated first and is generally not recorded as a separate item.

e. A purchase return and allowance is recorded by the *buyer*. It records the amount of credit received from the seller for unsatisfactory merchandise. The same credit recorded on the books of the *seller* is a sales return and allowance.

f. The $500 cash payment may or may not result in a greater reduction in accounts payable, depending on when it is paid. If the payment is made within a discount period, it is usually considered to be a net amount, after a discount has been applied, For example, a 2% discount applied to a $500 cash payment within a discount period results in a $510.20 decrease in accounts payable that was recorded at the gross (invoice) amount. (Stated differently, we are asking: "$500 is 98% of what amount?" This is $500/.98 = $510.20). A $500 cash payment after the discount period simply results in a $500 decrease in accounts payable.

## SOLUTIONS

## Learning Goal 13, continued

### LG 13-1, *continued*

An invoice amount is the gross amount of a purchase before any discount is applied. Therefore a $500 payment on the invoice amount will require $500 cash if paid after the discount period or $490 cash if paid within the discount period. (Stated differently, "What is 98% of a $500 invoice?" Answer: $500 × .98 = $490 if paid within the discount period.)

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### LG 13-2.

a. $3,970 b. $14,911 c. $3,000 ($147,000/.98 = $150,000 – $147,000) d. $5,769
e. $169,444 f. $3,180 ($159,000 × .02 = $3,180) g. $155,820 h. $13,470
i. $220,500 ($4,410/.02 = $220,500) j. $845 (calculate k first) k. $215,010

| | Merchandise Inventory | | | Cost of Goods Sold | |
|---|---|---|---|---|---|
| Beginning inventory | –0– | | | | |
| Purchases | 220,500 | 4,410 | Purchase discounts | | |
| Freight-in | 845 | 1,925 | Purchase returns | | |
| Cost of goods available | 215,010 | | | | |
| Ending inventory | 11,200 | 203,810 | Cost of goods sold | 203,810 | |

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### LG 13-3. See the table on page XXX for the solution.

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## SOLUTIONS Learning Goal 13, continued

### LG 13-4.

**Buyer Company**

| | | | | |
|---|---|---|---|---|
| June 11 | Merchandise Inventory | | 15,000 | |
| | Accounts Payable | | | 15,000 |
| | | | | |
| 12 | Merchandise Inventory | | 9,200 | |
| | Accounts Payable | | | 9,200 |
| | | | | |
| 15 | Accounts Payable | | 5,000 | |
| | Merchandise Inventory | | | 5,000 |
| | | | | |
| 17 | Merchandise Inventory | | 5,000 | |
| | Accounts Payable | | | 5,000 |
| | | | | |
| 20 | Accounts Payable | | 10,000 | |
| | Merchandise Inventory | | | 200 |
| | Cash | | | 9,800 |
| | ($10,000 × .98 = $9,800) | | | |
| | | | | |
| 22 | Accounts Payable | | 9,200 | |
| | Merchandise Inventory | | | 90 |
| | Cash | | | 9,110 |
| | ($9,000 × .99) + $200 = $9,110 | | | |
| | | | | |
| 27 | Accounts Payable | | 4,000 | |
| | Merchandise Inventory | | | 80 |
| | Cash | | | 3,920 |
| | ($3,920/.98 = $4,000 invoice amount) | | | |
| | | | | |
| 29 | Merchandise Inventory | | 150 | |
| | Cash | | | 150 |
| | | | | |

## SOLUTIONS

## Learning Goal 13, continued

### LG 13-4, *continued*

**Seller Company**

| | | | | |
|---|---|---|---|---|
| June 11 | Accounts Receivable | | 15,000 | |
| | Sales | | | 15,000 |
| | Cost of Goods Sold | | 12,000 | |
| | Merchandise Inventory | | | 12,000 |
| | | | | |
| 12 | Accounts Receivable | | 9,200 | |
| | Cash | | | 200 |
| | S ales | | | 9,000 |
| | Cost of Goods Sold | | 7,500 | |
| | Merchandise Inventory | | | 7,500 |
| | | | | |
| 15 | Sales Returns and Allowances | | 5,000 | |
| | Accounts Receivable | | | 5,000 |
| | Merchandise Inventory | | 4,000 | |
| | Cost of Goods Sold | | | 4,000 |
| | | | | |
| 17 | Accounts Receivable | | 5,000 | |
| | Sales | | | 5,000 |
| | Cost of Goods Sold | | 3,000 | |
| | Merchandise Inventory | | | 3,000 |
| | | | | |
| 20 | Cash | | 9,800 | |
| | Sales Discounts | | 200 | |
| | Accounts Receivable | | | 10,000 |
| | | | | |
| 22 | Cash | | 9,110 | |
| | Sales Discounts | | 90 | |
| | Accounts Receivable | | | 9,200 |
| | | | | |
| 27 | Cash | | 3,920 | |
| | Sales Discounts | | 80 | |
| | Accounts Receivable | | | 4,000 |
| | | | | |
| 29 | (No entry by seller) | | | |
| | | | | |

## SOLUTIONS Learning Goal 13, continued

### LG 13-5.

a.

| General Journal | | | | |
|---|---|---|---|---|
| **Date** | **Account** | **Ref.** | **Dr.** | **Cr.** |
| April | | | | |
| 2 | Accounts Receivable | | 10,000 | |
| | Sales | | | 10,000 |
| | | | | |
| | Cost of Goods Sold | | 6,500 | |
| | Merchandise Inventory | | | 6,500 |
| | | | | |
| 4 | Merchandise Inventory | | 12,000 | |
| | Accounts Payable | | | 12,000 |
| | | | | |
| 7 | Cash | | 2,226 | |
| | Sales | | | 2,100 |
| | Sales Tax Payable | | | 126 |
| | | | | |
| | Cost of Goods Sold | | 1,000 | |
| | Merchandise Inventory | | | 1,000 |
| | | | | |
| 8 | Accounts Receivable | | 5,000 | |
| | Sales | | | 5,000 |
| | | | | |
| | Cost of Goods Sold | | 3,250 | |
| | Merchandise Inventory | | | 3,250 |
| | | | | |
| 12 | Accounts Receivable | | 8,500 | |
| | Sales | | | 8,500 |
| | | | | |
| | Cost of Goods Sold | | 5,250 | |
| | Merchandise Inventory | | | 5,250 |
| | | | | |
| 14 | Sales Returns and Allowances | | 200 | |
| | Sales Tax Payable | | 12 | |
| | Cash | | | 212 |
| | | | | |
| | Merchandise Inventory | | 100 | |
| | Cost of Goods Sold | | | 100 |
| | | | | |
| 15 | Cash | | 4,900 | |
| | Sales Discounts | | 100 | |
| | Accounts Receivable | | | 5,000 |
| | | | | |

## SOLUTIONS Learning Goal 13, continued

**LG 13-5,** *continued*

| General Journal | | | | |
|---|---|---|---|---|
| Date | Account | Ref. | Dr. | Cr. |
| April | | | | |
| 18 | Accounts Receivable | | 18,000 | |
| | Sales | | | 18,000 |
| | | | | |
| | Cost of Goods Sold | | 11,700 | |
| | Merchandise Inventory | | | 11,700 |
| | | | | |
| 21 | Cash | | 5,000 | |
| | Sales Discounts | | 102 | |
| | Accounts Receivable | | | 5,102 |
| | ($5,000/.98 = $5,102 rounded) | | | |
| | | | | |
| 23 | Cash | | 4,664 | |
| | Sales | | | 4,400 |
| | Sales Tax Payable | | | 264 |
| | | | | |
| | Cost of Goods Sold | | 2,220 | |
| | Merchandise Inventory | | | 2,220 |
| | | | | |
| 24 | Cash | | 10,000 | |
| | Accounts Receivable | | | 10,000 |
| | | | | |
| 27 | Cash | | 17,640 | |
| | Sales Discounts | | 360 | |
| | Accounts Receivable | | | 18,000 |
| | ($18,000 × .98 = $17,640 rounded) | | | |
| | | | | |
| 29 | Sales Returns and Allowances | | 18,000 | |
| | Sales Discounts | | | 360 |
| | Cash | | | 17,640 |
| | | | | |
| | Merchandise Inventory | | 11,700 | |
| | Cost of Goods Sold | | | 11,700 |
| | | | | |
| 30 | Cash | | 3,398 | |
| | Accounts Receivable | | | 3,398 |
| | | | | |
| 30 | Sales Tax Payable | | 378 | |
| | Cash | | | 378 |

## SOLUTIONS Learning Goal 13, continued

### LG 13-5, *continued*

b.

| General Journal | | | | |
|---|---|---|---|---|
| Date | Account | Ref. | Dr. | Cr. |
| April | | | | |
| 7 | Cash | | 2,226 | |
| | Sales | | | 2,226 |
| | | | | |
| 14 | Sales Returns and Allowances | | 212 | |
| | Cash | | | 212 |
| | | | | |
| 23 | Cash | | 4,664 | |
| | Sales | | | 4,664 |
| | | | | |
| 30 | Sales | | 378 | |
| | Cash | | | 378 |

($2,226 – $212 + $4,664) = Net $6,678 retail sales plus sales tax. Returned merchandise is not subject to sales tax. $6,678/1.06 = $6,300 taxable retail sales before sales tax. $6,678 – $6,300 = $378 sales tax. (After the Oct. 31 entry, the Sales account contains sales plus sales tax of ($2,226 + $4,664) = $6,890 – $378 = $6,512 . This is offset by $212 in Sales Returns and Allowances ($200 sales plus $12 sales tax), resulting in net sales with no sales tax, in other words, net sales before sales tax of $6,300.)

## SOLUTIONS Learning Goal 13, continued

### LG 13-6.

a.

| Date | Account | Post. Ref. | Dr. | Cr. |
|---|---|---|---|---|
| March 2 | Accounts Receivable | | 5,200 | |
| | Sales | | | 5,200 |
| | | | | |
| 2 | Cost of Goods Sold | | 3,380 | |
| | Merchandise Inventory | | | 3,380 |
| | | | | |
| 5 | Accounts Receivable | | 7,000 | |
| | Sales | | | 7,000 |
| | | | | |
| 5 | Cost of Goods Sold | | 4,550 | |
| | Merchandise Inventory | | | 4,550 |
| | | | | |
| 8 | Sales Returns and Allowances | | 900 | |
| | Accounts Receivable | | | 900 |
| | | | | |
| 8 | Merchandise Inventory | | 585 | |
| | Cost of Goods Sold | | | 585 |
| | | | | |
| 11 | Accounts Receivable | | 4,150 | |
| | Sales | | | 4,000 |
| | Cash | | | 150 |
| | | | | |
| | Cost of Goods Sold | | 2,600 | |
| | Merchandise Inventory | | | 2,600 |
| | | | | |
| 12 | Cash | | 2,940 | |
| | Sales Discounts | | 60 | |
| | Accounts Receivable | | | 3,000 |
| | | | | |
| 15 | Cash | | 5,880 | |
| | Sales Discounts | | 120 | |
| | Accounts Receivable | | | 6,000 |
| | | | | |
| 17 | Accounts Receivable | | 15,000 | |
| | Sales | | | 15,000 |
| | | | | |

## SOLUTIONS Learning Goal 13, continued

**LG 13-6,** *continued*

| Date | Account | Post. Ref. | Dr. | Cr. |
|---|---|---|---|---|
| March 17 | Cost of Goods Sold | | 9,750 | |
| | Merchandise Inventory | | | 9,750 |
| | | | | |
| 17 | Freight-out Expense | | 350 | |
| | Cash | | | 350 |
| | | | | |
| 21 | Cash | | 4,070 | |
| | Sales Discounts | | 80 | |
| | Accounts Receivable | | | 4,150 |
| | | | | |
| 26 | Sales Returns and Allowances | | 1,000 | |
| | Accounts Receivable | | | 1,000 |
| | | | | |
| 31 | Cash | | 14,000 | |
| | Accounts Receivable | | | 14,000 |
| | | | | |
| 31 | Cash | | 1,000 | |
| | Accounts Receivable | | | 1,000 |
| | | | | |

*Comments:*

**March 15:** This is a cash receipt within the discount period, so it is considered to be net of the discount—in other words, after a discount has been applied to a larger amount of the Accounts Receivable. This amount is calculated: \$5,880/.98 = \$6,000.

**March 24:** This sale is FOB *destination*, and there is no indication that the merchandise has arrived. Therefore, no sale can be recorded because ownership has not yet transferred to the buyer.

**March 26:** Notice that with an allowance, there is no return of inventory.

## SOLUTIONS Learning Goal 13, continued

### LG 13-6, *continued*

b. A T account for Accounts Payable for Brooklyn Enterprises would look like this:

| Accounts | Payable |
|---|---|
| | 5,200 |
| 900 | |
| 3,000 | |
| | 1,300 |

The $2,940 cash payment resulted in a $3,000 debit to Accounts Payable because the payment was made within the discount period. This means that the $2,940 is 98% of the part of the invoice amount that is being paid. The part of the invoice amount that is being paid is calculated as: $2,940/.98 = $3,000.

### LG 13-7.

| Date | Account | Post. Ref. | Dr. | Cr. |
|---|---|---|---|---|
| August 1 | Merchandise Inventory | | 12,000 | |
| | Accounts Payable | | | 12,000 |
| | | | | |
| 2 | Merchandise Inventory | | 4,100 | |
| | Accounts Payable | | | 4,100 |
| | | | | |
| 7 | Accounts Receivable | | 8,000 | |
| | Sales | | | 8,000 |
| | | | | |
| 7 | Cost of Goods Sold | | 4,500 | |
| | Merchandise Inventory | | | 4,500 |
| | | | | |
| 9 | Accounts Receivable | | 4,000 | |
| | Sales | | | 4,000 |
| | | | | |
| 9 | Cost of Goods Sold | | 2,100 | |
| | Merchandise Inventory | | | 2,100 |
| | | | | |
| 10 | Accounts Payable | | 2,000 | |
| | Merchandise Inventory | | | 2,000 |
| | | | | |

## SOLUTIONS Learning Goal 13, continued

**LG 13-7,** *continued*

| Date | Account | Post. Ref. | Dr. | Cr. |
|---|---|---|---|---|
| August 11 | Accounts Payable | | 10,000 | |
| | Merchandise Inventory | | | 200 |
| | Cash | | | 9,800 |
| | | | | |
| | Merchandise Inventory | | 150 | |
| | Cash | | | 150 |
| | | | | |
| 12 | Accounts Payable | | 4,100 | |
| | Merchandise Inventory | | | 40 |
| | Cash | | | 4,060 |
| | | | | |
| 15 | Sales Returns and Allowances | | 500 | |
| | Accounts Receivable | | | 500 |
| | | | | |
| | Merchandise Inventory | | 275 | |
| | Cost of Goods Sold | | | 275 |
| | | | | |
| 16 | Accounts Receivable | | 10,000 | |
| | Sales | | | 10,000 |
| | | | | |
| 16 | Cost of Goods Sold | | 6,500 | |
| | Merchandise Inventory | | | 6,500 |
| | | | | |
| 17 | Cash | | 2,425 | |
| | Sales Discounts | | 75 | |
| | Accounts Receivable | | | 2,500 |
| | | | | |
| 18 | Cash | | 3,880 | |
| | Sales Discounts | | 120 | |
| | Accounts Receivable | | | 4,000 |
| | | | | |
| 24 | Merchandise Inventory | | 25,000 | |
| | Accounts Payable | | | 25,000 |
| | | | | |

## SOLUTIONS Learning Goal 13, continued

**LG 13-7,** *continued*

| Date | Account | Post. Ref. | Dr. | Cr. |
|---|---|---|---|---|
| August 25 | Cash | | 2,910 | |
| | Sales Discounts | | 90 | |
| | Accounts Receivable | | | 3,000 |
| | | | | |
| 31 | Cash | | 24,500 | |
| | Notes Payable | | | 24,500 |
| | | | | |
| 31 | Accounts Payable | | 25,000 | |
| | Merchandise Inventory | | | 500 |
| | Cash | | | 24,500 |
| | | | | |
| 31 | Cost of Goods Sold | | 1,800 | |
| | Merchandise Inventory | | | 1,800 |

*Comments:*

**August 17:** The payment received from Baton Rouge Corporation is $2,500 of the *invoice* (gross) amount, so the discount is based on this amount.

**August 25:** The payment received from St. Petersburg Company is the amount of *cash received*. Because this is within the discount period, the cash is considered to be the amount after applying the discount percent, which means that it is 97% of the larger amount. So, $2,910/.97 = $3,000 determines the amount of the receivable to credit.

**August 27:** The purchase from Orlando Company is FOB *destination*, and there is no indication that the goods have arrived, so title has not transferred to buyer. If title of goods has not transferred to buyer, there is no purchase to record yet.

**August 31:** The $1,800 is inventory shrinkage.