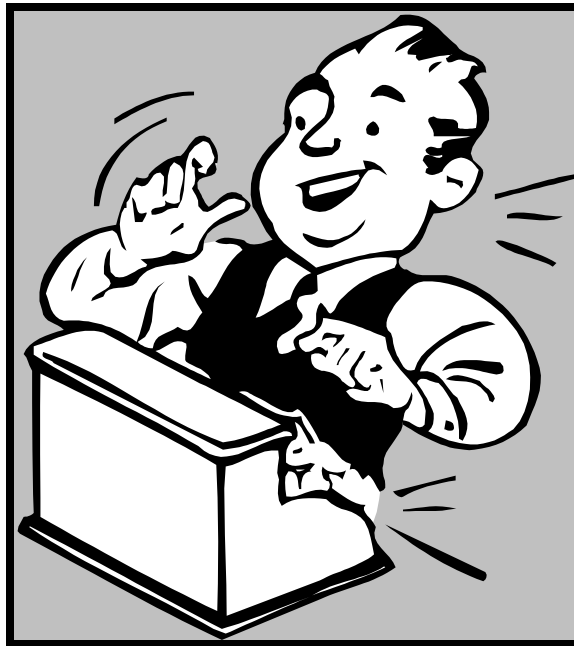


# ACC101 – CHAPTER 4

## Accounting for Merchandising Operations



## Key Terms and Concepts to Know

### **Income Statements:**

Single-step income statement

Multiple-step income statement

Gross Margin = Gross Profit = Net Sales – Cost of Goods Sold

Gross Margin ratio = Gross Margin / Net Sales

### **Operating Cycle:**

Purchase merchandise from vendors for inventory on account or for cash

Sell inventory to customers on account

Collect cash from customers

Pay cash to vendors

Repeat again and again

Note that these steps overlap so that the cash collections from customers may occur after the cash payments to vendors.

### **Merchandise Inventory:**

Merchandise Inventory (Inventory or MI) refers to the goods the company has purchased and intends to sell to others.

Inventory is a current asset since the company intends to sell it within one year.

### **Cost of Goods Sold:**

Inventory that has been sold becomes an expense, Cost of Goods Sold, in the period of sale.

### **Inventory Systems:**

Perpetual Inventory System records all inventory transactions as they occur in the Merchandise Inventory account.

Perpetual Inventory System records all purchase-related inventory transactions as they occur in separate accounts and records the cost of goods sold only at the end of the period.

Shrinkage is the cost of inventory not on hand and not sold. It is part of cost of goods sold under either inventory system.

### **Purchasing Transactions:**

Inventory account is increased for the cost of the merchandise purchased plus the freight cost necessary to transport the inventory to the buyer's place of business (FOB shipping point).

Inventory account is decreased for the cost of the merchandise returned to the seller, allowances received from the seller and any cash discounts taken.

Inventory is always recorded at the final cost to the buyer.

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Trade discounts are deducted as part of the initial purchase transaction; they are not a purchase discount.

### **Sales Transactions:**

Inventory account is decreased and cost of goods sold is increased for the cost of the merchandise sold.

Inventory account is increased and cost of goods sold is decreased for the cost of the merchandise returned by the seller.

The freight cost necessary to transport the inventory to the buyer's place of business is an expense in the period of sale (FOB Destination).

The selling price of the merchandise sold represents revenue to the seller and is recorded in a separate transaction.

Trade discounts are deducted as part of the initial sale transaction; they are not a sales discount.

### **Transportation Costs:**

**FOB Shipping Point** – Purchaser is responsible for paying the shipping charges. They are usually prepaid by the seller and added to the invoice. Buyer adds the shipping costs to inventory. If seller prepays, seller has a receivable from buyer.

**FOB Destination** – Seller is responsible for paying the shipping charges and they are recorded as the expense Transportation Out. Buyer does not make an entry.

### **Credit Terms:**

Generally take the form of 2/10, n/30 where

- 2 is the discount %
- 10 is the discount period in days
- n is the net (total) amount to pay
- 30 is the number of days after the invoice date that the net amount is due

Only purchases are subject to the discount; transportation or freight costs paid by the seller on behalf of the buyer are not subject to a discount.

Cash discounts reduce the cost of inventory for the buyer and reduce revenue for the seller.

### **Acid-Test ratio and Gross Margin ratio**

## Purchase Transactions

Example: Inventory is purchased for cash or on account. If the purchaser is required to pay shipping charges they are added on to the dollar amount. (\$700 purchase + \$100 shipping charge)

### FOB Shipping Point

|                |     |  |
|----------------|-----|--|
| Mdse Inventory | 800 |  |
| A/P (Cash)     | 800 |  |

### FOB Destination

|                |     |  |
|----------------|-----|--|
| Mdse Inventory | 700 |  |
| A/P (Cash)     | 700 |  |

2. \$200 of mdse is returned:

|  |                |     |  |
|--|----------------|-----|--|
|  | A/P (Cash)     | 200 |  |
|  | Mdse Inventory | 200 |  |

3. When paid within the discount period assuming credit terms of 2/10, n/30:  
 \$700 purchase - \$200 return = \$500 mdse \* 2% = \$10 discount  
 \$600 owed (\$500 + \$100 shipping) - \$10 discount = \$590 paid

### FOB Shipping Point

|                |     |            |
|----------------|-----|------------|
| A/P            | 600 |            |
| Cash           | 590 | (amt owed) |
| Mdse Inventory | 10  | (amt paid) |
|                |     | (discount) |

### FOB Destination

|                |     |  |
|----------------|-----|--|
| A/P            | 500 |  |
| Cash           | 490 |  |
| Mdse Inventory | 10  |  |

### Practice Problem #1

Journalize the following purchase related transactions:

- a. Jingle Co. purchased \$4,000 worth of merchandise on account, terms 2/10, n/30, FOB shipping point. Prepaid transportation charges of \$200 were added to the invoice.
- b. Returned \$500 of merchandise purchased in (a).
- c. Paid on account for purchases in (a), less return (b) and discount.

## Sales Transactions

1. Sales can be on account or for cash and require two entries. One entry records the revenue from the sale at the selling price; the second entry decreases the inventory account and records the expense of the sale at cost. (\$2,000 sale, cost of merchandise is \$1,200, shipping charges of \$100)

### **FOB Shipping Point**

|                                   |              |
|-----------------------------------|--------------|
| <b>Accounts Receivable (Cash)</b> | <b>2,100</b> |
| <b>Sales</b>                      | <b>2,000</b> |
| <b>Cash</b>                       | <b>100</b>   |

### **FOB Destination**

|                            |              |
|----------------------------|--------------|
| <b>Accounts Receivable</b> | <b>2,000</b> |
| <b>Sales</b>               | <b>2,000</b> |
| <b>Transportation Out</b>  | <b>100</b>   |
| <b>Cash</b>                | <b>100</b>   |

|                          |              |
|--------------------------|--------------|
| <b>Cost of Mdse Sold</b> | <b>1,200</b> |
| <b>Mdse Inventory</b>    | <b>1,200</b> |

|                          |              |
|--------------------------|--------------|
| <b>Cost of Mdse Sold</b> | <b>1,200</b> |
| <b>Mdse Inventory</b>    | <b>1,200</b> |

2. Nonbank credit card sales, such as American Express, are considered sales on account. Bank credit card sales are considered cash sales.
3. When merchandise is returned by the customer 2 entries are required. One entry records the reduction in revenue at the sales price; the second entry increases the inventory account and reduces the expense of the sale at cost. (\$800 return, cost of merchandise is \$480)

|                                       |            |
|---------------------------------------|------------|
| <b>Sales Returns &amp; Allowances</b> | <b>800</b> |
| <b>A/R (Cash)</b>                     | <b>800</b> |
| <b>Mdse Inventory</b>                 | <b>480</b> |
| <b>Cost of Mdse Sold</b>              | <b>480</b> |

4. When the customer pays within the discount period, assuming credit terms of 2/10, n/30:

$\$2,000 \text{ sale} - \$800 \text{ return} = 1,200 \text{ balance due} \times 2\% = \$24 \text{ discount}$   
 $(\$1,200 \text{ due} + \$100 \text{ shipping}) - \$24 \text{ discount} = \$1,276 \text{ cash to be received}$

### **FOB Shipping Point**

|                       |              |                          |
|-----------------------|--------------|--------------------------|
| <b>Cash</b>           | <b>1,276</b> | <i>(amount received)</i> |
| <b>Sales Discount</b> | <b>24</b>    | <i>(discount)</i>        |
| <b>A/R</b>            | <b>1,300</b> | <i>(amount due)</i>      |

### **FOB Destination**

|                       |              |
|-----------------------|--------------|
| <b>Cash</b>           | <b>1,176</b> |
| <b>Sales Discount</b> | <b>24</b>    |
| <b>A/R</b>            | <b>1,200</b> |

## **Practice Problem #2**

Journalize the following sales related transactions.

- a. Sold merchandise on account to Jangle Co., \$5,000, terms FOB Shipping Point, 2/10, n/30. The cost of the merchandise sold was \$3,000. Paid transportation charges of \$200, which were added to the invoice.
- b. Sold merchandise on account to Comet Co., \$10,000, terms FOB Destination, 1/10, n/30. The cost of the merchandise was \$6,000.
- c. Paid transportation charges of \$400 for delivery of merchandise sold to Comet Co.
- d. Issued credit memorandum for \$2,000 to Comet Co. for merchandise returned from sale in (b). The cost of the merchandise was \$1,200.
- e. Received amount due from Jangle Co. within the discount period.
- f. Received amount due, less return and discount from Comet Co.

## **The Multi-Step Income Statement**

### **Revenue from Sales:**

|       |  |         |
|-------|--|---------|
| Sales |  | 500,000 |
|-------|--|---------|

|                          |       |  |
|--------------------------|-------|--|
| - Sales Returns & allow. | 5,000 |  |
|--------------------------|-------|--|

|                   |              |              |
|-------------------|--------------|--------------|
| - Sales Discounts | <u>3,000</u> | <u>8,000</u> |
|-------------------|--------------|--------------|

|           |  |         |
|-----------|--|---------|
| Net Sales |  | 492,000 |
|-----------|--|---------|

|                                 |  |                |
|---------------------------------|--|----------------|
| <b>Cost of Merchandise Sold</b> |  | <u>294,000</u> |
|---------------------------------|--|----------------|

|                     |  |         |
|---------------------|--|---------|
| <b>Gross Profit</b> |  | 198,000 |
|---------------------|--|---------|

### **Operating Expenses:**

|                  |        |  |
|------------------|--------|--|
| Selling Expenses | 50,000 |  |
|------------------|--------|--|

|               |               |  |
|---------------|---------------|--|
| Admin Expense | <u>45,000</u> |  |
|---------------|---------------|--|

|                          |  |               |
|--------------------------|--|---------------|
| Total Operating Expenses |  | <u>95,000</u> |
|--------------------------|--|---------------|

|                               |  |         |
|-------------------------------|--|---------|
| <b>Income from Operations</b> |  | 103,000 |
|-------------------------------|--|---------|

### **Other Income:**

|                  |       |  |
|------------------|-------|--|
| Interest Revenue | 1,000 |  |
|------------------|-------|--|

### **Other Expenses:**

|                  |            |            |
|------------------|------------|------------|
| Interest Expense | <u>700</u> | <u>300</u> |
|------------------|------------|------------|

|                   |  |                |
|-------------------|--|----------------|
| <b>Net Income</b> |  | <b>102,700</b> |
|-------------------|--|----------------|

## **Inventory Shrinkage**

The balance in the Merchandise Inventory account in the general ledger was \$300,000 before adjustment. A Physical Inventory was taken and the value of the merchandise on hand was \$294,000.

Adjusting entry required:

|                          |                       |              |
|--------------------------|-----------------------|--------------|
| <b>Cost of Mdse Sold</b> | <b>6,000</b>          |              |
|                          | <b>Mdse Inventory</b> | <b>6,000</b> |

### **Practice Problem #3**

Using the format for the multi-step income statement, compute the following:

- Calculate Net Sales and Gross Profit** if, Sales are \$375,000, Sales Returns and Allowances are \$32,000, Sales Discounts are \$12,000 and Cost of Merchandise Sold is \$255,000.
- Calculate Sales Returns and Allowances and Cost of Merchandise Sold** if, Sales are \$750,000, Sales Discounts are \$9,000, Net Sales are \$736,000 and Gross Profit is \$310,000.
- Calculate Sales and Net Sales** if, Sales Returns and Allowances are \$25,000, Sales Discounts are \$15,000, Cost of Merchandise Sold is \$620,000 and Gross Profit is \$185,000.

### **Practice Problem #4**

Journalize the following related transactions.

- Purchased mdse on account from Blitzen Co., list price \$20,000, trade discount 25%, terms FOB shipping point, 2/10, n/30, with prepaid transportation costs of \$650 added to the invoice.
- Purchased merchandise on account from Cupid Co., \$8,000, terms FOB destination, 1/10, n/30.
- Sold merchandise on account to Donner Co., \$9,800, terms 2/10, n/30. The cost of the merchandise sold was \$5,800.
- Returned \$2,000 of merchandise purchased from Cupid Co. (b)
- Paid Blitzen Co. on account for purchase in (a) less discount.
- Received merchandise returned by Donner Co. from sale in (c), \$1,800. The cost of the merchandise returned was \$1,080.
- Paid Cupid Co. on account for purchase in (b) less return (d) and discount.
- Received cash on account from Donner Co. for sale in (c) less return (f) and discount.
- Perpetual inventory records indicate that \$85,000 of merchandise should be on hand. The physical inventory indicates that \$81,350 of merchandise is on hand.

## **SAMPLE MULTIPLE CHOICE QUESTIONS**

1. The difference between net sales and cost of merchandise sold for a merchandising business is:
  - a. Sales
  - b. Net Sales
  - c. Gross Profit
  - d. Gross Sales
  
2. When purchases of merchandise are made on account, the transaction would be recorded with the following entry:
  - a. Debit Accounts Payable, credit Merchandise Inventory
  - b. Debit Merchandise Inventory, credit Accounts Payable
  - c. Debit Merchandise Inventory, credit Cash
  - d. Debit Cash, credit Merchandise Inventory
  
3. When a corporation sells merchandise and the terms are FOB shipping point and pays the shipping costs, the seller would record the transportation costs with the following entry:
  - a. Debit Cash, credit Accounts Receivable
  - b. Debit Accounts Receivable, credit Sales
  - c. Debit Accounts Receivable, credit Cash
  - d. Debit Merchandise Inventory, credit Accounts Payable
  
4. Multiple-step income statements:
  - a. Show gross profit but not income from operations
  - b. Show both gross profit and income from operations
  - c. Show neither gross profit nor income from operations
  - d. Show income from operations but not gross profit
  
5. Which of the following would be reported on the retained earnings statement for the current year?
  - a. Dividends for the current year
  - b. Sales
  - c. Cost of merchandise sold
  - d. Merchandise inventory



6. A sales invoice included the following information: merchandise price, \$12,000; transportation, \$500; terms 2/10, n/eom, FOB shipping point. Assuming that a credit for merchandise returned of \$600 is granted prior to payment, that the transportation is prepaid by the seller, and that the invoice is paid within the discount period, what is the amount of cash received by the seller?
  - a. \$11,662
  - b. \$11,672
  - c. \$12,250
  - d. \$11,172
7. A net sales to asset ratio of 1.5 means
  - a. Assets are one and one-half times as large as sales.
  - b. That every \$1.50 of assets generates \$1.00 in sales.
  - c. That every \$1.00 of assets generates \$1.50 in sales.
  - d. Sales are half as large as assets.
8. Merchandise with an invoice price of \$7,000 is purchased with terms of 2/10, n/30, FOB shipping point. Transportation costs paid by the seller were \$125. What is the cost of the merchandise purchased if payment is made during the discount period?
  - a. \$6,860.00
  - b. \$6,982.50
  - c. \$7,000.00
  - d. \$6,985.00
9. Cost of Merchandise Sold would be classified as what type of account?
  - a. Asset
  - b. Expense
  - c. Liability
  - d. Revenue
10. Discount terms 2/10, n/30 mean that a 10% cash discount is available if payment is made within 30 days.
  - a. True
  - b. False
11. Sales Returns and Allowances is a contra-revenue account.
  - a. True
  - b. False

12. Ownership of the merchandise passes to the buyer when the merchandise is delivered to the shipper under F.O.B. Destination.
  - a. True
  - b. False
13. When credit terms of 1/10, n/30 are offered, the discount period is:
  - a. 1 day
  - b. 10 days
  - c. 20 days
  - d. 30 days
14. Freight costs incurred by the seller are recorded in the
  - a. Sales account
  - b. Cost of merchandise sold account
  - c. Transportation In account
  - d. Transportation Out account
15. Which of the following would be classified in an income statement as Other Income or Other Expense?
  - a. Advertising Expense
  - b. Interest Expense
  - c. Transportation Out
  - d. Cost of merchandise sold
16. The sales discount is based on
  - a. Invoice price plus transportation costs
  - b. Invoice price less discount
  - c. Invoice price plus transportation costs less returns and allowances
  - d. Invoice price less returns and allowances
17. Myers and Company sold \$1,800 of merchandise on account to Oscar, Inc. on March 1 with credit terms of 2/10, n/30. Oscar returned \$500 of the merchandise due to poor quality on March 3. If Oscar pays for the purchase on March 11, what entry does Myers make to record receipt of the payment?
  - a. Debit Cash, \$1,764; credit A/R, \$1,764
  - b. Debit Cash, \$1,800; credit Sales Returns and allowances, \$500; credit A/R, \$1,300
  - c. Debit Cash, \$1,274; debit Sales Discounts \$26; credit A/R, \$1,300
  - d. Debit Cash, \$1,800; credit Sales Discounts \$36; credit A/R, \$1,764

18. In a perpetual inventory system, what accounts are credited when a customer returns merchandise to the seller?
- Sales Returns and Allowances and Accounts Receivable
  - Accounts Receivable and Cost of Merchandise Sold
  - Merchandise Inventory and Cost of Merchandise Sold
  - Sales Returns and Allowances and Merchandise Inventory
19. Assume that sales are \$450,000, sales discounts are \$10,000, net income is \$35,000, and cost of merchandise sold is \$320,000. Gross profit and operating expenses are, respectively
- \$130,000 and \$95,000
  - \$120,000 and \$95,000
  - \$130,000 and \$85,000
  - \$120,000 and \$85,000
20. Which of the following accounts is credited when merchandise purchases are paid for within the discount period?
- Merchandise Inventory
  - Accounts Payable
  - Accounts Receivable
  - Sales Discounts

## SOLUTIONS TO PRACTICE PROBLEMS

### **Practice Problem #1**

|    |                       |       |       |
|----|-----------------------|-------|-------|
| a. | Merchandise Inventory | 4,200 |       |
|    | A/P                   |       | 4,200 |
| b. | A/P                   | 500   |       |
|    | Merchandise Inventory |       | 500   |
| c. | A/P                   | 3,700 |       |
|    | Cash                  |       | 3,630 |
|    | Merchandise Inventory |       | 70    |

### **Practice Problem #2**

|    |  |        |        |
|----|--|--------|--------|
| a. | Accounts Receivable/Jangle   | 5,200  |        |
|    | Sales  |        | 5,000  |
|    | Cash   |        | 200    |
|    | Cost of Merchandise Sold   | 3,000  |        |
|    | Merchandise Inventory  |        | 3,000  |
| b. | Accounts Receivable/Comet  | 10,000 |        |
|    | Sales  |        | 10,000 |
|    | Cost of Merchandise Sold   | 6,000  |        |
|    | Merchandise Inventory  |        | 6,000  |
| c. | Transportation Out   | 400    |        |
|    | Cash   |        | 400    |
| d. | Sales Returns & Allowances   | 2,000  |        |
|    | Accounts Receivable/Comet  |        | 2,000  |
|    | Merchandise Inventory  | 1,200  |        |
|    | Cost of Merchandise Sold   |        | 1,200  |
| e. | <i>\$5,000 sale * 2% = \$100 discount</i>  |        |        |
|    | <i>\$5,200 owed (\$5,000 + \$200 shipping) - \$100 discount = \$5,100 received</i> |        |        |
|    | Cash   | 5,100  |        |
|    | Sales Discounts  | 100    |        |
|    | Accounts Receivable/Jangle   |        | 5,200  |
| f. | <i>\$10,000 sale - \$2,000 return = \$8,000 balance due * 1% = \$80 discount</i>   |        |        |
|    | <i>\$8,000 owed - \$80 discount = \$7,920 received</i>                             |        |        |
|    | Cash   | 7,920  |        |
|    | Sales Discounts  | 80     |        |
|    | Accounts Receivable/Comet  |        | 8,000  |

### Practice Problem #3

|    |                              |                  |                                 |
|----|------------------------------|------------------|---------------------------------|
| a. | Sales                        |                  | \$375,000                       |
|    | - Sales Returns & Allowances | (32,000)         |                                 |
|    | - Sales Discounts            | <u>(12,000)</u>  |                                 |
|    | <b>Net Sales</b>             |                  | <b>331,000</b>                  |
|    | -Cost of Merchandise Sold    |                  | <u>(255,000)</u>                |
|    | <b>Gross Profit</b>          |                  | <b>\$76,000</b>                 |
| b. | Sales                        | \$750,000        | $750,000 - x - 9,000 = 736,000$ |
|    | - Sales Returns & Allowances | <b>x</b>         | $741,000 - x = 736,000$         |
|    | - Sales Discounts            | <u>(9,000)</u>   | <b>x = 5,000</b>                |
|    | Net Sales                    | 736,000          | $736,000 - y = 310,000$         |
|    | - Cost of Merchandise Sold   | <u>y</u>         | <b>y = 426,000</b>              |
|    | Gross Profit                 | \$310,000        |                                 |
| c. | <b>Sales</b>                 | <b>x</b>         | $x - 25,000 - 15,000 = y$       |
|    | - Sales Returns & Allowances | (25,000)         |                                 |
|    | - Sales Discounts            | <u>(15,000)</u>  | $y - 620,000 = 185,000$         |
|    | <b>Net Sales</b>             | <b>y</b>         | <b>y = 805,000</b>              |
|    | - Cost of Merchandise Sold   | <u>(620,000)</u> | <b>x = 845,000</b>              |
|    | Gross Profit                 | 185,000          |                                 |

### Practice Problem #4

|    |                                   |        |        |
|----|-----------------------------------|--------|--------|
| a. | Merchandise Inventory             | 15,650 |        |
|    | (20,000 * 25%) = \$5,000 discount |        |        |
|    | Accounts Payable/Blitzen          |        | 15,650 |
|    | (20,000 - 5,000 + 650 shipping)   |        |        |
| b. | Merchandise Inventory             | 8,000  |        |
|    | Accounts Payable/Cupid            |        | 8,000  |
| c. | Accounts Receivable/Donner        | 9,800  |        |
|    | Sales                             |        | 9,800  |
|    | Cost of Merchandise Sold          | 5,800  |        |
|    | Merchandise Inventory             |        | 5,800  |
| d. | Accounts Payable/Cupid            | 2,000  |        |
|    | Merchandise Inventory             |        | 2,000  |
| e. | Accounts Payable/Blitzen          | 15,650 |        |
|    | Cash                              |        | 15,350 |
|    | Merchandise Inventory             |        | 300    |
|    | (15,000 mdse * 2% = \$300 disc.)  |        |        |

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|    |                                     |       |       |
|----|-------------------------------------|-------|-------|
| f. | Sales Returns & Allowances          | 1,800 |       |
|    | A/R – Donner                        |       | 1,800 |
|    | Merchandise Inventory               | 1,080 |       |
|    | Cost of Merchandise Sold            |       | 1,080 |
| g. | Accounts Payable/Cupid              | 6,000 |       |
|    | (8,000 – 2,000 return = 6,000 bal.) |       |       |
|    | Cash                                |       | 5,940 |
|    | Merchandise Inventory               |       | 60    |
|    | (6,000 * 1% = \$60 discount)        |       |       |
| h. | Cash                                | 7,840 |       |
|    | Sales Discount                      | 160   |       |
|    | (8,000 * 2% = \$160 discount)       |       |       |
|    | A/R – Donner                        |       | 8,000 |
|    | (9,800 – 1,800 return = 8,000 bal.) |       |       |
| i. | Cost of Merchandise Sold            | 3,650 |       |
|    | (85,000 – 81,350 = 3,650)           |       |       |
|    | Merchandise Inventory               |       | 3,650 |

## SOLUTIONS TO MULTIPLE CHOICE QUESTIONS

1. C
2. B
3. C
4. B
5. A
6. B:  $12,000 - 600 \text{ return} = 11,400 \text{ balance due} * 2\% = \$228 \text{ discount}$   
 $11,400 \text{ due} + 500 \text{ shipping} - 228 \text{ discount} = \$11,672 \text{ cash received}$
7. C
8. D:  $7,000 * 2\% = \$140 \text{ discount}$   
 $7,000 + 125 \text{ shipping} - 140 \text{ disc.} = \$6,985$
9. B
10. B
11. A
12. B
13. B
14. D
15. B
16. D
17. C:  $1,800 - 500 \text{ return} = 1,300 \text{ balance due} * 2\% = \$26 \text{ discount}$   
 $1,300 - 26 \text{ discount} = \$1,274 \text{ cash received}$
18. B: Sales Returns & Allowances  
Accounts Receivable  
Merchandise Inventory  
Cost of Merchandise Sold
19. D  $450,000 - 10,000 = \$440,000 \text{ net sales}$   
 $\$440,000 \text{ net sales} - 320,000 \text{ coms} = \$120,000 \text{ gross profit}$   
 $120,000 \text{ gross profit} - 35,000 \text{ net income} = \$85,000 \text{ operating exp.}$
20. A Accounts Payable  
Cash  
Merchandise Inventory