6

Accounting for Merchandising Activities

A Look Back

Chapter 5 focused on the final steps of the accounting process. We described the closing process, and showed how to prepare financial statements from accounting records.

A Look at This Chapter

This chapter emphasizes merchandising activities. We explain how reporting merchandising activities differs from reporting service activities. Both the perpetual and periodic inventory systems are described. We also analyze and record merchandise purchases and sales transactions and explain the adjustments and closing process for merchandisers.

A Look Ahead

Chapter 7 extends our analysis of merchandising activities and focuses on the valuation of inventory. Topics include the items in inventory, costs assigned, costing methods used, and inventory estimation techniques.

"We constantly seek the input of our retailers and the buying public"—
Mark Donovan

Casual Success

HOBOKEN, NJ—Paola Buendia was studying English and Mark Donovan was preparing for a career in business when they met at college. Buendia and Donovan became best friends and were soon married. Following graduation, they both landed good jobs. But something was missing. "I needed a creative outlet," says Buendia. "I started designing things I'd always wanted—pretty simple, basic things, and lots of hats, because I'd always worn them." Then Donovan got involved. With just $5,000, they launched a clothing company, **Wooden Ships of Hoboken** (**Wooden-Ships.com**).

Inspired by their travels to Indonesia and the corporate trend toward casual clothing, they targeted women's casual wear. Working out of their apartment for the first year and a half, they sold clothing outdoors off a blanket at concerts, street fairs, and other events. Soon afterward, they began supplying retailers. A crucial part of their business success is tracking merchandising activities. Buendia says they spend a lot of time "figuring out how to supply customers." This includes setting prices and making policies for discounts, allowances, and returns on both sales and purchases.

Managing their inventory is equally crucial, "We constantly seek the input of our retailers and the buying public," Donovan says. Buendia adds that Wooden Ships's Web site allows "us to establish an open line of communication with our ultimate consumer . . . and receive direct feedback on styles, colors and other consumer preferences." This information helps them keep the right type and amount of merchandise to avoid the costs of both out-of-stock items and excess inventory.

Buendia and Donovan still enjoy attending a concert or strolling through a street fair. But to their delight, their business no longer depends on selling at such events. Their annual sales are soon expected to top $15 million, with sales to more than 1,800 boutiques. Not bad for a company that began as a creative whim. [Sources: *Entrepreneur,* November 12, 1998; *Wooden Ships Web Site,* May 2001; *Sunday Star-Ledger,* 1998; *Hudson Current,* August–September 1998.]

Learning Objectives

Conceptual

C1 Describe merchandising activities and identify business examples.

C2 Identify and explain the components of income for a merchandising company.

C3 Identify and explain the inventory asset of a merchandising company.

C4 Describe both perpetual and periodic inventory systems.

C5 Analyze and interpret cost flows and operating activities of a merchandising company.

Analytical

A1 Analyze and interpret accruals and cash flows for merchandising activities.

A2 Compute the acid-test ratio and explain its use to assess liquidity.

A3 Compute the gross margin ratio and explain its use to assess profitability.

Procedural

P1 Analyze and record transactions for merchandise purchases using a perpetual system.

P2 Analyze and record transactions for sales of merchandise using a perpetual system.

P3 Prepare adjustments and close accounts for a merchandising company.

P4 Define and prepare multiple-step and single-step income statements.

Chapter Preview

Merchandising activities are a major part of modern business. Consumers expect a wealth of products, discount prices, inventory on demand, and high quality. This chapter introduces the business and accounting practices used by companies engaged in merchandising activities. These companies buy products and then resell them to customers. We show how financial statements reflect these merchandising activities and explain the new financial statement elements created by merchandising activities. We analyze and record merchandise purchases and sales. We also explain adjustments and the closing process for merchandising companies.

Merchandising Activities

Previous chapters emphasized the accounting and reporting activities of service companies such as **JobDirect**, **Creative Assets**, and **CrossWorlds**. In return for services provided to its customers, a service company receives commissions, fares, or fees as revenue. Its net income is the difference between its revenues and the expenses incurred in providing those services.

C1 Describe merchandising activities and identify business examples.

A merchandising company's activities differ from those of a service company. A **merchandiser** earns net income by buying and selling merchandise. **Merchandise** consists of products, also called *goods,* that a company acquires to resell to customers. Merchandisers are often identified as either wholesalers or retailers. A **wholesaler** is an *intermediary* that buys products from manufacturers or other wholesalers and sells them to retailers or other wholesalers. Wholesalers provide promotion, market information, and financial assistance to retailers. They also provide a sales force, reduced inventory costs, less risk, and market information to manufacturers. Wholesalers include companies such as **Fleming**, **SuperValu**, **McKesson**, and **Sysco**. Another type of intermediary is a **retailer** that buys products from manufacturers or wholesalers and sells them to consumers. Examples of retailers include **Gap**, **Oakley**, **CompUSA**, **Wal-Mart**, and **MusicLand**. Many retailers such as **Best Buy** sell both products and services.

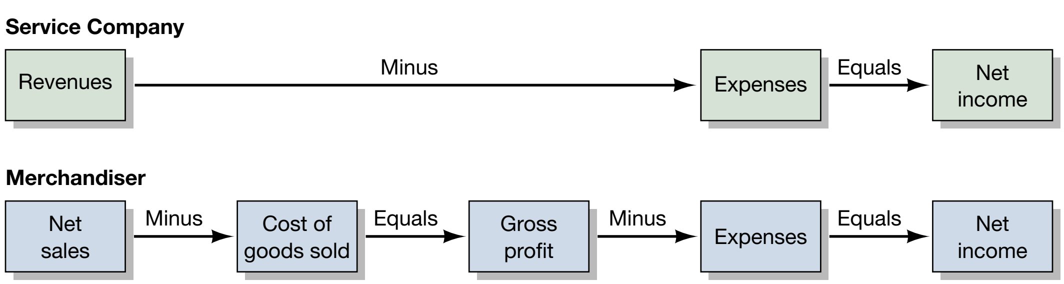
Reporting Financial Performance

C2 Identify and explain the components of income for a merchandising company.

Net income to a merchandiser implies that revenue from selling merchandise exceeds both the cost of merchandise sold to customers and the cost of other expenses for the period (see Exhibit 6.1). The usual accounting term for revenues from selling merchandise is *sales,* and the term used for the cost of buying and preparing the merchandise is *cost of goods sold.*[1] A merchandiser's expenses are often called *operating expenses.*

Exhibit 6.1

Computing Income for a Merchandising Company versus a Service Company



The condensed income statement for Z-Mart in Exhibit 6.2 shows important components of net income. This statement shows Z-Mart acquired products at a cost of $230,400 and sold them to customers for $314,700. This yields an $84,300 gross profit. **Gross profit,** also called **gross margin,** equals net sales less cost of goods sold. Gross profit is important to merchandisers' profitability. Changes in gross profit often greatly impact a merchandiser's

Point: Analysis of gross profit is important to effective business decisions. We describe such analysis later in this chapter.

[1] Many service companies use the term *sales* in their income statements to describe revenues. **Marriott** is one example. Cost of goods sold is also called *cost of sales* and is reported as an operating expense.

operations since gross profit must cover all other expenses plus yield a return for the owner. Z-Mart, for instance, used its gross profit to cover $71,400 of other expenses. This left $12,900 in net income.

Exhibit 6.2

Condensed Income Statement for a Merchandiser

Z-MART Condensed Income Statement For Year Ended December 31, 2002	
Net sales	$314,700
Cost of goods sold	**(230,400)**
Gross profit	**$ 84,300**
Operating expenses	(71,400)
Net income	$ 12,900

Reporting Financial Condition

A merchandising company's balance sheet includes a current asset called *merchandise inventory,* an item not on a service company's balance sheet. **Merchandise inventory** refers to products a company owns to sell to customers. Exhibit 6.3 shows the classified balance sheet for Z-Mart, including merchandise inventory of $21,000. The cost of this asset includes the cost incurred to buy the goods, ship them to the store, and make them ready for sale. Many companies simply refer to merchandise inventory as *inventory.*

C3 Identify and explain the inventory asset of a merchandising company.

Exhibit 6.3

Classified Balance Sheet for a Merchandiser

Z-MART Balance Sheet December 31, 2002			
Assets			
Current assets			
Cash		$ 8,200	
Accounts receivable		11,200	
Merchandise inventory		**21,000**	
Prepaid expenses		1,100	
Total current assets			$41,500
Plant assets			
Office equipment	$ 4,200		
Less accumulated depreciation	1,400	2,800	
Store equipment	30,000		
Less accumulated depreciation	6,000	24,000	
Total plant assets			26,800
Total assets			$68,300
Liabilities			
Current liabilities			
Accounts payable		$ 6,000	
Salaries payable		800	
Total current liabilities			$ 6,800
Long-term note payable			10,000
Equity			
K. Marty, Capital			$51,500
Total liabilities and equity			$68,300

Operating Cycle

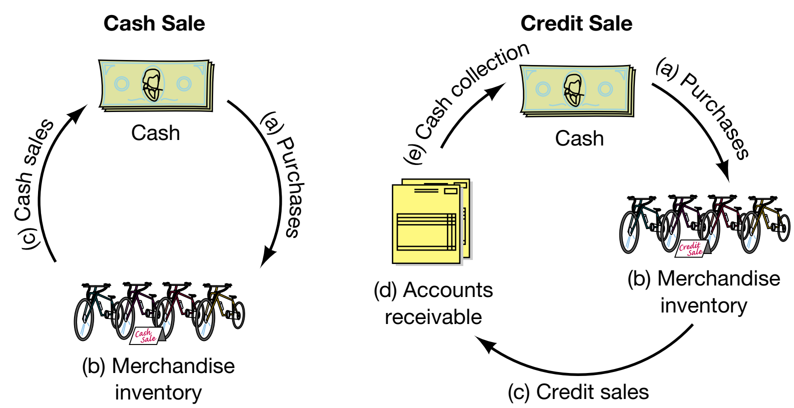
A merchandising company's operating cycle begins by purchasing merchandise and ends by collecting cash from selling the merchandise. An example is a merchandiser who buys products at wholesale and distributes and sells them to consumers at retail. The length of an operating cycle differs across the types of businesses. Department stores such as **The Limited** and **Dayton Hudson** commonly have operating cycles from three to five months.

Operating cycles for grocery merchants such as **Kroger** and **Safeway** usually range from three to eight weeks.

Exhibit 6.4 illustrates an operating cycle for a merchandiser with (1) cash sales and (2) credit sales. The cash sales cycle moves from (a) merchandise purchases to (b) inventory for sale to (c) cash sales. The credit sales cycle moves from (a) merchandise purchases to (b) inventory for sale to (c) credit sales to (d) accounts receivable to (e) cash. Credit sales delay the receipt of cash until the receivable is paid by the customer. Companies try to shorten their operating cycles because assets tied up in inventory or receivables are not productive.

Exhibit 6.4

Operating Cycle of a Merchandiser*



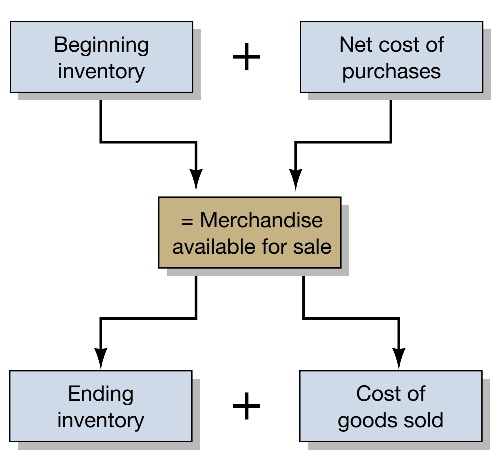
* This exhibit assumes cash purchases. Credit purchases would involve inserting (a) credit purchases, (b) accounts payable, and (c) cash payment in the cycle.

Inventory Systems

We explained that a merchandising company's income statement includes an item called *cost of goods sold* and its balance sheet includes a current asset called *inventory.* **Cost of goods sold** is the cost of merchandise sold to customers during a period. It is often the largest single deduction on a merchandiser's income statement. **Inventory** refers to products a company owns and expects to sell in its normal operations. Inventory items are part of merchandising activities captured in Exhibit 6.5. This exhibit shows that a company's merchandise available for sale is a combination of what it begins with (beginning inventory) and what it purchases (net cost of purchases). The merchandise available is either sold (cost of goods sold) or kept for future sales (ending inventory).

Exhibit 6.5

Merchandising Cost Flow



Two alternative inventory accounting systems can be used to collect information about cost of goods sold and cost of inventory available: *periodic system* or *perpetual system.*

Periodic Inventory System

C4 Describe both perpetual and periodic inventory systems.

A **periodic inventory system** requires updating the inventory account only at the *end of a period* to reflect the quantity and cost of goods both available and sold. It does not require continual updating of the inventory account. The cost of merchandise is recorded in a temporary *Purchases* account. When a company sells merchandise, it records revenue but not the cost of the merchandise sold. Instead, when it prepares financial statements, the company takes a *physical count of inventory* by counting the quantities of merchandise available. The cost of merchandise available is computed by linking the quantities counted to the purchase records that show each item's original cost. The cost of merchandise available is then used to compute cost of goods sold. The inventory account is then adjusted to reflect the amount computed from the physical count of inventory. Companies such as hardware, drug, and department stores that sell large quantities of low-value items historically used periodic systems. Without today's computers and scanners, it was not feasible for accounting systems to track numerous, low-cost items such as pens, toothpaste, candy bars, socks, and magazines through inventory and into customers' hands.

Perpetual Inventory System

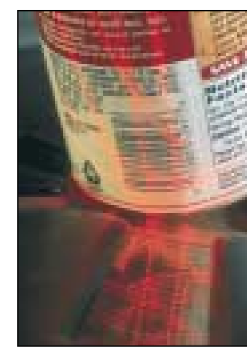
A **perpetual inventory system** keeps a continual record of the amount of inventory available. A perpetual system accumulates the net cost of merchandise purchases in the inventory account and subtracts the cost of each sale from the same inventory account. When a company sells an item, it records its cost in the *Cost of Goods Sold* account. With a perpetual system we can learn the cost of merchandise available at any time by looking at the balance of the inventory account. We can also learn the current balance of cost of goods sold anytime during a period by looking in the Cost of Goods Sold account.

Point: Growth of super stores such as Price Club and Costco is fed by the efficient use of perpetual inventory techniques and technology.

Before advancements in computing technology, a perpetual system was often limited to businesses making a small number of daily sales such as automobile dealers and major appliance stores. Because transactions were relatively few, a perpetual system was feasible. In today's information age, with widespread use of computing technology, the use of a perpetual system has dramatically increased. A perpetual inventory system gives users more timely information. Accordingly, this chapter emphasizes a perpetual system. However, we analyze and record merchandising transactions using *both* periodic and perpetual inventory systems in the appendix to this chapter.

Did You Know?

Perpetual Info Technology and perpetual inventory systems are taking the guesswork out of purchasing, slashing inventory cycles, keeping popular items in stock, and cutting return rates. These advances "totally changed the industry from a push industry to a pull industry," says the chairman of **Western Merchandisers**, a supplier of more than 1,000 **Wal-Marts**. A recent study says grocers can cut prices by 11% or more with similar changes.



Quick Check

1. Describe a merchandiser's cost of goods sold.
2. What is gross profit for a merchandising company?
3. Explain why use of the perpetual inventory system has dramatically increased.

Answers—p. 244

Merchandise Purchases

With a perpetual inventory system, the cost of merchandise bought for resale is recorded in the Merchandise Inventory asset account. To illustrate, Z-Mart records a $1,200 cash purchase of merchandise on November 2 with this entry:

Nov. 2	Merchandise Inventory	1,200	
	Cash		1,200
	Purchased merchandise for cash.		

Assets = Liabilities + Equity
+1,200
−1,200

P1 Analyze and record transactions for merchandise purchases using a perpetual system.

The invoice for this merchandise is shown in Exhibit 6.6. The buyer usually receives the original, and the seller keeps a copy. This *source document* serves as the purchase invoice of Z-Mart (buyer) and the sales invoice for Trex (seller). The amount recorded for merchandise inventory includes its purchase cost, shipping fees, taxes, and any other costs necessary to make it ready for sale.

To compute the total cost of merchandise purchases, we must adjust the invoice cost for (1) any discounts a supplier gives a purchaser, (2) any returns and allowances for unsatisfactory items received from a supplier, and (3) any required freight costs paid by a purchaser. This section explains how these items affect the recorded cost of merchandise purchases.

Concept 6-1

Exhibit 6.6

Invoice

(1) TREX
W9797 Cherry Rd.
Antigo, WI 54409

Sold to

Firm Name *Z-Mart* (3)
Attention of *Tom Novak,* Purchasing Agent
Address *10 Michigan Street*
Chicago *Illinois* *60521*
City State Zip

Invoice	
Date	Number
11/2/02 (2)	4657-2

P.O. Date (4)	Salesperson	Terms (5)	Freight (6)		Ship
10/30/02	#141	2/10, n/30	FOB Destination		Via FedEx
Model No.	**Description**		**Quantity**	**Price**	**Amount**
(7) *CH015*	*Challenger X7*		*1*	*490*	*490*
SD099	*Speed Demon*		*1*	*710*	*710*

See reverse for terms of sale and returns.

SubTotal	1,200
Ship. Chg.	—
Tax	—
(8) Total	1,200

Key: (1) Seller (2) Invoice date (3) Purchaser (4) Order date (5) Credit terms (6) Freight terms (7) Goods (8) Total invoice amount

Trade Discounts

Point: The Merchandise Inventory account reflects the cost of goods available for resale.

When a manufacturer or wholesaler prepares a catalog of items it has for sale, it usually gives each item a **list price,** also called a *catalog price.* List price usually is not the item's intended selling price. Instead, its intended selling price equals list price minus a given percent called a **trade discount.**

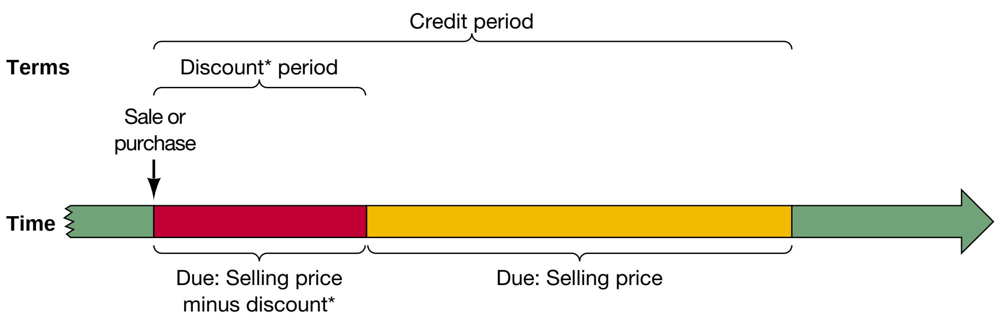
The amount of trade discount usually depends on whether a buyer is a wholesaler, retailer, or final consumer. A wholesaler buying in large quantities is often granted a larger discount than a retailer buying in smaller quantities. Manufacturers and wholesalers commonly use trade discounts to change selling prices without republishing their catalogs. When a seller wants to change selling prices, it can notify its customers merely by sending them a new table of trade discounts that they can apply to catalog prices.

A buyer does *not* enter list prices and trade discounts in its accounts. Instead, a buyer records the net amount of list price minus trade discount. For example, in the November 2 purchase of merchandise by Z-Mart, the merchandise was listed in the seller's catalog at \$2,000 and Z-Mart received a 40% trade discount. This means that Z-Mart's purchase price is \$1,200, computed as \$2,000 − (40% × \$2,000).

Purchase Discounts

Point: Since both the buyer and seller know the invoice date, this date is useful in determining the end of the credit period. Alternatively, the date shipped or received is not known by both parties.

The purchase of goods on credit requires a clear statement of expected amounts and dates of future payments to avoid misunderstandings. **Credit terms** for a purchase include the amounts and timing of payments from a buyer to a seller. Credit terms usually reflect an industry's practices. In some industries, purchasers expect terms requiring payment within 10 days after the end of the month when purchases occur. These credit terms are entered on sales invoices as "n/10 EOM." The **EOM** refers to *end of month.* In other industries, invoices are often due and payable within 30 calendar days after the invoice date. These credit terms are entered as "n/30," expressed as *net 30.* The 30-day period in this case is called the **credit period.** Exhibit 6.7 portrays credit terms.



*Discount refers to either purchase or sales discounts.

Exhibit 6.7

Credit Terms

Sellers often grant a **cash discount** when the credit period is long and buyers pay within a certain period. A buyer views a cash discount as a **purchase discount.** A seller views a cash discount as a **sales discount.** If cash discounts for early payment exist, they are described as credit terms on the invoice. For example, credit terms of "2/10, n/60" imply that a 60-day credit period occurs before full payment is due. The seller allows the buyer to deduct 2% of the invoice amount if payment is made within 10 days of the invoice date. Sellers do this to encourage early payment. The reduced payment can be made during the **discount period.**

To illustrate how a buyer accounts for a purchase discount, let's assume that Z-Mart's purchase of merchandise for $1,200 is on credit with terms of 2/10, n/30. Z-Mart's entry to record this credit purchase is[2]

(*a*) Nov. 2	Merchandise Inventory	1,200	
	Accounts Payable		1,200
	Purchased merchandise on credit, invoice dated Nov. 2, terms 2/10, n/30.		

Assets = Liabilities + Equity
+1,200 +1,200

If Z-Mart takes advantage of the discount and pays the amount due on November 12, the entry to record payment is

(*b*) Nov. 12	Accounts Payable	1,200	
	Merchandise Inventory		24
	Cash		1,176
	Paid for the $1,200 purchase of Nov. 2 less the discount of $24(2% × $1,200).		

Assets = Liabilities + Equity
−24 −1,200
−1,176

Z-Mart's Merchandise Inventory account after this entry reflects the net cost of merchandise purchased. Its Accounts Payable account shows a zero balance, meaning the debt is satisfied. Both accounts, in T-account form, follow here:

Merchandise Inventory			
Nov. 2	1,200	Nov. 12	24
Balance	1,176		

Accounts Payable			
Nov. 12	1,200	Nov. 2	1,200
		Balance	0

Managing Discounts

A buyer's failure to pay within a discount period is often expensive. In the preceding example, if Z-Mart does not pay within the 10-day discount period, it can delay payment by 20 more days. This delay costs Z-Mart an added 2% to the cost of merchandise. Most buyers

[2] Appendix 6A repeats journal entries *a* through *f* using a periodic inventory system.

> **You Make the Call**
>
> **Entrepreneur** You purchase a batch of products on terms of 3/10, n/90, but your company has limited cash and you must borrow funds at an 11% annual rate if you are to pay within the discount period. Do you take advantage of the purchase discount?

Answer—p. 243

try to take advantage of a purchase discount because of the usually high interest rate implied from not taking it. We can approximate the annual rate of interest attached to not paying within the discount period. For Z-Mart's terms of 2/10, n/30, missing the 2% discount for an additional 20 days is equal to an annual interest rate of 36.5%. This is computed as (365 days/20 additional days) × 2% discount rate.[3]

Most companies set up a system to pay invoices with favorable discounts within the discount period. Careful cash management means that no invoice is paid until the last day of a discount period. One technique to achieve this goal is to file each invoice so that it automatically comes up for payment on the last day of its discount period. A simple filing system uses up to 31 folders, one for each day in a month. After an invoice is recorded, it is placed in the folder matching the last day of its discount period. If the last day of an invoice's discount period is November 12, it is filed in folder 12. This and other invoices in the same folder are removed and paid on November 12.

> **Did You Know?**
>
> **Clout!** Merchandising companies are unleashing a barrage of demands on suppliers. These include special discounts for new stores, payment of fines for shipping errors, and free samples. One merchandiser warned **Totes** it would impose a $30,000 fine for errors in bar-coding on products Totes shipped. Merchandisers' goals are to slash inventories, shorten lead times, and eliminate error.

Purchase Returns and Allowances

Purchase returns refer to merchandise a purchaser receives but then returns to the supplier. A *purchase allowance* is a reduction in the cost of defective or unacceptable merchandise that a purchaser receives from a supplier. Purchasers often keep defective but still marketable merchandise if the supplier grants an acceptable allowance.

The purchaser usually informs the supplier in writing of any returns and allowances, often with a **debit memorandum,** a document the purchaser issues to inform the supplier of a debit made to the supplier's account, including the reason for the return or allowance. Exhibit 6.8 shows a debit memorandum prepared by Z-Mart requesting an allowance from Trex for the defective *SpeedDemon* mountain bike. The November 15 entry by Z-Mart to update the Merchandise Inventory account to reflect the purchase allowance requested in the debit memorandum is

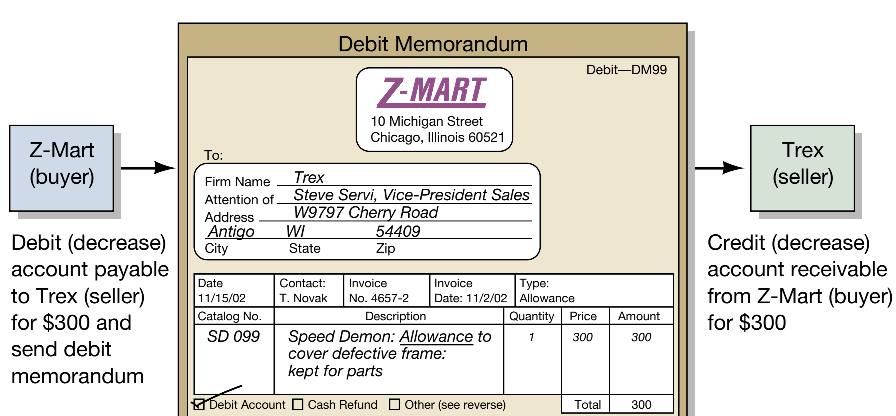
Assets	=	Liabilities	+	Equity
−300		−300		

(c) Nov. 15	Accounts Payable	300	
	Merchandise Inventory		300
	Allowance for defective merchandise.		

Exhibit 6.8

Debit Memorandum

Case: Z-Mart (buyer) proposes $300 allowance for defective merchandise from Trex (seller)



[3] The implied interest rate formula is: (365 days ÷ [Credit period − Discount period]) × Cash discount rate.

If this had been a return, then the total recorded cost of the defective merchandise would have been entered.[4] Z-Mart's agreement with this supplier says the cost of returned and defective merchandise is offset against Z-Mart's next purchase or its current account payable balance. Some agreements with suppliers involve refunding the cost to a buyer. When cash is refunded, the Cash account is debited for $300 instead of Accounts Payable.

Discounts and Returns

When goods are returned within the discount period, a buyer can take the discount on only the remaining balance of the invoice. As an example, suppose Z-Mart purchases $1,000 of merchandise offered with a 2% cash discount. Two days later, Z-Mart returns $100 of goods before paying the invoice. When Z-Mart later pays within the discount period, it can take the 2% discount only on the $900 remaining balance. The discount is $18 (2% × $900), and the cash payment is $882 ($900 − $18).

You Make the Call—Ethics

Credit Manager As the new credit manager, you are being trained by the outgoing manager. She explains that the system prepares checks for amounts net of favorable cash discounts, and the checks are dated the last day of the discount period. She also tells you that checks are not mailed until five days later, adding that "the company gets free use of cash for an extra five days, and our department looks better. When a supplier complains, we blame the computer system and the mailroom." Do you continue this payment policy?

Answer—p. 243

Transportation Costs

Depending on terms negotiated with suppliers, a merchandiser is sometimes responsible for paying shipping costs on purchases, often called *transportation-in* or *freight-in* costs. Z-Mart's $1,200 purchase on November 2 is on terms of FOB destination. This means Z-Mart is not responsible for paying transportation costs. When a merchandiser is responsible for paying transportation costs, they are sometimes made to an independent carrier but other times are made directly to the seller. Transportation costs are often included on the invoice when owed to the seller, whereas transportation costs owed to an independent carrier usually are not included on the invoice. The cost principle requires transportation costs be included as part of the cost of purchased merchandise. This means a separate entry is necessary when they are *not* listed on the invoice. For example, Z-Mart's entry to record a $75 freight charge from an independent carrier for merchandise purchased FOB shipping point would be

Example: Suppose Z-Mart pays for $1,000 of merchandise acquired within the discount period and receives a 2% discount. Later, when Z-Mart returns $100 of the original $1,000 merchandise, what amount of cash refund does it receive? How are the return and cash receipt recorded? *Answers:* Cash refund = Net paid for $100 of goods = 98% × $100 = $98. The entry to record this is

Cash	98	
Merchandise Inventory .		98

(*d*) Nov. 24	Merchandise Inventory	75	
	Cash		75
	Paid freight charges on purchased merchandise.		

Assets = Liabilities + Equity
+75
−75

Transportation-in costs differ from the costs of shipping goods to customers. Transportation-in costs are included in the cost of merchandise inventory, but the costs of shipping goods to customers are not. The costs of shipping goods to customers are recorded in a delivery expense account when the merchandiser (seller in this case) is responsible for these costs. Delivery expense, also called *freight-out* or *transportation-out,* is reported as a selling expense in the income statement.

Point: When CompUSA purchases merchandise and then distributes it among its stores, the cost of shipping merchandise to the stores is included in the costs of the store inventories according to the cost principle.

Transfer of Ownership

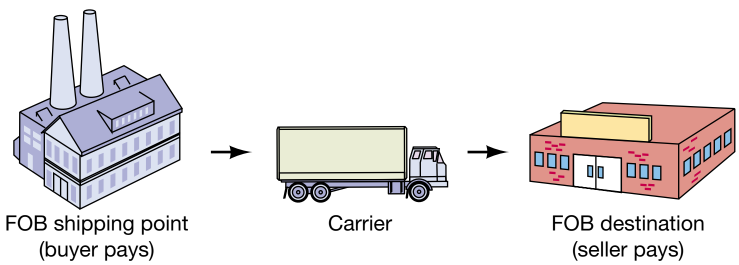
The buyer and seller must agree on who is responsible for paying any freight costs and who bears the risk of loss during transit for merchandising transactions. This is essentially the same as asking at what point ownership transfers from the seller to the buyer. The point of transfer is called the **FOB** (*free on board*) point. The point when ownership transfers from the seller to the buyer determines who pays transportation costs (and other incidental costs of transit such as insurance).

[4] *Recorded cost* is the cost reported in the account minus any discounts.

Exhibit 6.9 identifies two alternative points of transfer. The first is FOB shipping point. *FOB shipping point,* also called *FOB factory,* means the buyer accepts ownership at the seller's place of business. The buyer is then responsible for paying shipping costs and bearing the risk of damage or loss when goods are in transit. The goods are part of the buyer's inventory when they are in transit since ownership has transferred to the buyer. **Midway Games** is a leader in entertainment software and uses FOB shipping point. Midway has released many popular games including Mortal Kombat, Cruis'n USA, Cruis'n World, NBA Jam, Joust, Defender, and Pacman.

Exhibit 6.9

Identifying Transfer of Ownership



	Ownership Transfers when Goods Passed to	Transportation Costs Paid by
FOB shipping point	Carrier	Buyer
FOB destination	Buyer	Seller

The second means of transfer is *FOB destination,* which means ownership of the goods transfers to the buyer at the buyer's place of business. The seller is responsible for paying shipping charges and bears the risk of damage or loss in transit. The seller does not record revenue from this sale until the goods arrive at the destination because this transaction is not complete before that point. **Compaq Computer** at one time shipped its products FOB shipping point, but it found delivery companies to be unreliable in picking up shipments at scheduled times, causing backups and missing deliveries. This resulted in unhappy consumers. Compaq then changed its agreements to FOB destination, took control of shipping, and eliminated its problems.

In some situations, the party not responsible for shipping costs pays the carrier. In these cases, the party paying these costs either bills the party responsbile or, more commonly, adjusts its account payable or account receivable with the other party. For example, a buyer paying a carrier when terms are FOB destination can decrease its account payable to the seller by the amount of shipping cost. Similarly, a seller who pays a carrier when terms are FOB shipping point can increase its account receivable from the buyer by the amount of shipping cost.

Recording Purchases Information

We explained that purchase discounts, purchase returns and allowances, and transportation-in are included in computing the total cost of merchandise inventory. Purchases are initially recorded as debits to Merchandise Inventory. Any later purchase discounts, returns, and allowances are credited (decreases) to Merchandise Inventory. Transportation-in is debited (added) to Merchandise Inventory. Z-Mart's itemized costs of merchandise purchases for year 2002 are in Exhibit 6.10. The Merchandise Inventory account reflects the net cost of purchased merchandise according to the *cost principle.* Recall that the Merchandise Inventory account is updated after each transaction that affects the cost of goods either purchased or sold. These timely updates of the Merchandise Inventory account reflect a perpetual inventory system.

Z-MART Itemized Costs of Merchandise Purchases For Year Ended December 31, 2002	
Invoice cost of merchandise purchases	$235,800
Less: Purchase discounts received	(4,200)
Purchase returns and allowances	(1,500)
Add: Costs of transportation-in	2,300
Total cost of merchandise purchases	**$232,400**

Exhibit 6.10

Itemized Costs of Merchandise Purchases

The accounting system described here does not provide separate records for total purchases, total purchase discounts, total purchase returns and allowances, and total transportation-in. Managers usually need this information, however, to evaluate and control each of these cost elements. Nearly all companies collect this information in supplementary records. **Supplementary records,** also called *supplemental records,* refer to information outside the usual accounting records and ledger accounts.

Point: Some companies have separate accounts for purchase discounts, returns and allowances, and transportation-in. Balances of these accounts are then transferred to Merchandise Inventory at the end of each period. This is a hybrid system of perpetual and periodic. That is, Merchandise Inventory is updated on a perpetual basis but only for purchases and cost of goods sold.

Quick Check

4. How long are the credit and discount periods when credit terms are 2/10, n/60?

5. Identify items subtracted from the *list* amount and not recorded when computing purchase price: (a) freight-in; (b) trade discount; (c) purchase discount; (d) purchase return.

6. Explain the meaning of *FOB*. What does *FOB destination* mean?

Answers—p. 244

Merchandise Sales

We explained that companies buying merchandise for resale need to account for purchases, purchase discounts, and purchase returns and allowances. Merchandising companies also must account for sales, sales discounts, sales returns and allowances, and cost of goods sold. A merchandising company such as Z-Mart reports these items in the gross profit section of its income statement as shown in Exhibit 6.11.

Z-MART Computation of Gross Profit For Year Ended December 31, 2002		
Sales		$321,000
Less: Sales discounts	$4,300	
Sales returns and allowances	2,000	6,300
Net sales		$314,700
Cost of goods sold		(230,400)
Gross profit		**$ 84,300**

Exhibit 6.11

Gross Profit Section of Income Statement

Concept 6-2

This section explains how information in this computation is derived from transactions involving sales, sales discounts, and sales returns and allowances.

Sales Transactions

P2 Analyze and record transactions for sales of merchandise using a perpetual system.

Each sales transaction for a seller of merchandise involves two parts. One part is the revenue received in the form of an asset from a customer. The second part is the recognition of the cost of merchandise sold to a customer. Accounting for a sales transaction means capturing information about both parts. Moreover, sales transactions of merchandisers usually include both sales for cash and sales on credit. Whether a sale is for cash or on credit, it requires two entries: one for revenue and one for cost. To illustrate, Z-Mart sold \$2,400 of merchandise on credit on November 3. The revenue part of this transaction is recorded as

Assets = Liabilities + Equity
+2,400 +2400

(e) Nov. 3	Accounts Receivable	2,400	
	Sales		2,400
	Sold merchandise on credit.		

This entry reflects an increase in Z-Mart's assets in the form of an account receivable. It also shows the revenue (Sales) from the credit sale.[5] If the sale is for cash, the debit is to Cash instead of Accounts Receivable. The cost of the merchandise Z-Mart sold on November 3 is \$1,600. (In Chapter 7 we explain the computation of the cost of merchandise.) The entry to record the cost part of this sales transaction (under a perpetual inventory system) is

Assets = Liabilities + Equity
−1,600 −1,600

(e) Nov. 3	Cost of Goods Sold	1,600	
	Merchandise Inventory		1,600
	To record the cost of Nov. 3 sale.		

Since the cost part is recorded each time a sale occurs, the Merchandise Inventory account will reflect the cost of the remaining merchandise available for sale.

Sales Discounts

Selling goods on credit demands that the amounts and dates of future payments be made clear to avoid misunderstandings. We explained earlier in this chapter that credit terms often include a discount to encourage early payment. Companies granting cash discounts to customers refer to these as *sales discounts.* Sales discounts can benefit a seller by decreasing the delay in receiving cash. Prompt payments also reduce future efforts and costs of billing customers.

At the time of a credit sale, a seller does not know whether a customer will pay within the discount period and take advantage of a cash discount. This means the seller usually does not record a sales discount until a customer actually pays within the discount period. To illustrate, Z-Mart completes a credit sale for \$1,000 on November 12, subject to terms of 2/10, n/60. The entry to record the revenue part of this sale is

Assets = Liabilities + Equity
+1,000 +1,000

Nov. 12	Accounts Receivable	1,000	
	Sales		1,000
	Sold merchandise under terms of 2/10, n/60.		

This entry records the receivable and the revenue as if the customer will pay the full amount. The customer has two options, however. One is to wait 60 days until January 11 and pay the full \$1,000. In this case, Z-Mart records the payment as

Assets = Liabilities + Equity
+1,000
−1,000

Jan. 11	Cash	1,000	
	Accounts Receivable		1,000
	Received payment for Nov. 12 sale.		

The customer's second option is to pay \$980 within a 10-day period running through November 22. If the customer pays on or before November 22, Z-Mart records the payment as

[5] We describe in Chapter 10 the accounting for sales to customers who use third-party credit cards such as those issued by banks and other organizations.

Nov. 22	Cash	980	
	Sales Discounts	20	
	Accounts Receivable		1,000
	Received payment for Nov. 12 sale less the discount.		

Assets = Liabilities + Equity
+980 −20
−1,000

Sales Discounts is a contra-revenue account. Management monitors Sales Discounts to assess the effectiveness and cost of its discount program. The Sales Discounts account is deducted from the Sales account when computing a company's net sales (see Exhibit 6.11). Information about sales discounts is seldom reported on income statements distributed to external users.

Did You Know?

Discount Targeting **Catalina Supermarkets** uses bar codes, software, and the Web to help execs keep tabs on who buys what foods, how often, and at what price. Its high-profit customer rate is up because most discounts and services, such as coupons and free delivery, are given almost exclusively to its best customers.

Sales Returns and Allowances

Sales returns refer to merchandise that customers return to the seller after a sale. Many companies allow customers to return merchandise for a full refund. *Sales allowances* refer to reductions in the selling price of merchandise sold to customers. This can occur with damaged merchandise that a customer is willing to purchase with a decrease in selling price. Sales returns and allowances involve dissatisfied customers and the possibility of lost future sales, and managers need information about returns and allowances to monitor these problems. Many accounting systems record returns and allowances in a separate contra-revenue account.

To illustrate, recall Z-Mart's sale of merchandise on November 3 for $2,400 that had cost $1,600. Assume that the customer returns part of the merchandise on November 6, and the returned items sell for $800 and cost $600. The revenue part of this transaction must reflect the decrease in sales from the customer's return of merchandise:

(f) Nov. 6	Sales Returns and Allowances	800	
	Accounts Receivable		800
	Customer returns merchandise of Nov. 3 sale.		

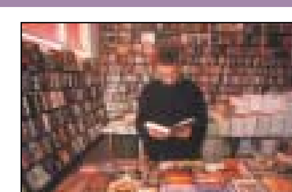
Assets = Liabilities + Equity
−800 −800

Managers monitor the Sales Returns and Allowances contra account for quality purposes. Published income statements usually omit this detail and show only net sales.

If merchandise returned to Z-Mart is not defective and can be resold to another customer, Z-Mart returns these goods to its inventory. The entry necessary to restore the cost of these goods to the Merchandise Inventory account is

Did You Know?

MegaReturns Book merchandisers such as **Barnes & Noble** and **Borders Books** can return unsold books to publishers at purchase price. Publishers say returns of new hardcover books run between 35% and 50%. This compares with 15% to 25% ten years ago.



Nov. 6	Merchandise Inventory	600	
	Cost of Goods Sold		600
	Returned goods to inventory.		

Assets = Liabilities + Equity
+600 +600

But if the merchandise returned is defective, the seller may discard it. In this case, the cost of returned merchandise is not restored to the Merchandise Inventory account but is left in the Cost of Goods Sold account.[6]

[6] When managers want to monitor the cost of defective merchandise, a better method is to remove the cost from (credit) Cost of Goods Sold and charge it to (debit) a Loss from Defective Merchandise account.

Another possibility is that $800 of the merchandise Z-Mart sold on November 3 is defective but the customer decides to keep it because Z-Mart offers a $500 price reduction. The only entry Z-Mart must make in this case is to decrease expected revenue and assets:

Nov. 6	Sales Returns and Allowances	500	
	Accounts Receivable		500
	To record sales allowance of Nov. 3 sale.		

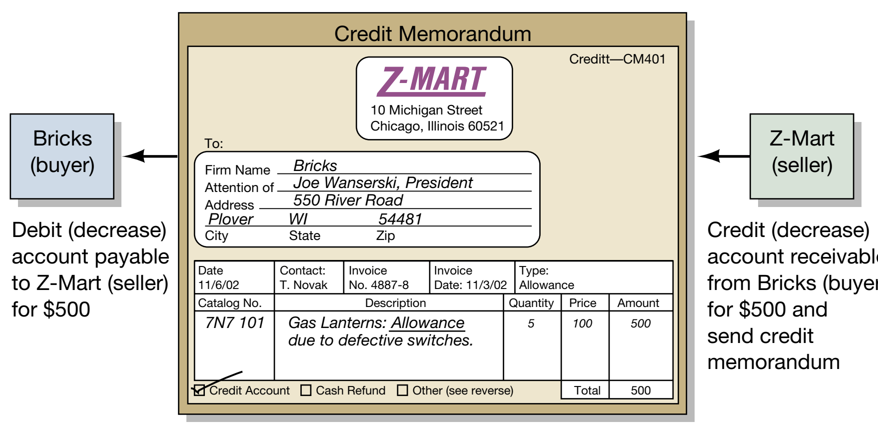
Assets = Liabilities + Equity
−500 −500

The seller usually prepares a credit memorandum to confirm a customer's return or allowance. A **credit memorandum** informs a customer of a credit to its Account Receivable account from a sales return or allowance. The information in a credit memorandum is similar to that of a debit memorandum. Z-Mart's credit memorandum issued to the customer for the $500 sales allowance on November 6 is shown in Exhibit 6.12.

Exhibit 6.12

Credit Memorandum

Case: Z-Mart (seller) approves $500 sales allowance to Bricks (buyer)



Quick Check

7. Why are sales discounts and sales returns and allowances recorded in contra-revenue accounts instead of directly in the Sales account?
8. Under what conditions are two entries necessary to record a sales return?
9. When merchandise is sold on credit and the seller notifies the buyer of a price reduction, does the seller send a credit memorandum or a debit memorandum?

Answers—p. 244

Additional Merchandising Issues

This section explains merchandising activities' effect on other accounting processes. We address cost and price adjustments, preparation of adjusting and closing entries, and relations between important accounts.

Cost and Price Adjustments

Buyers and sellers sometimes need to adjust the amount owed between them. Such adjustments can occur when purchased merchandise does not meet specifications, unordered goods are received, quantities different than were ordered and billed are received, or errors occur in billing. The buyer can sometimes adjust the balance without negotiation. For example, when a seller makes an error on an invoice and the buyer discovers it, the buyer can make an adjustment and notify the seller by sending a debit or a credit memorandum. Sometimes adjustments can be made only after negotiations between the buyer and seller, for example, when a buyer claims that some merchandise does not meet specifications. In this case, the amount of allowance given by the seller is usually arrived at only after discussion.

Adjusting Entries

P3 Prepare adjustments and close accounts for a merchandising company.

Most adjusting entries are the same for merchandising companies and service companies. In all cases, the adjustments are limited to prepaid expenses (including depreciation), accrued expenses, unearned revenues, and accrued revenues. However, a merchandising company using a perpetual inventory system is usually required to make a special adjustment to update the Merchandise Inventory account to reflect any loss of merchandise. Companies can lose merchandise in several ways, including theft and deterioration. **Shrinkage** is the term used to refer to the loss of inventory. While a perpetual inventory system tracks all goods as they move in and out of the company, it is unable to directly measure shrinkage. Instead, we compute shrinkage by comparing a physical count of inventory with recorded quantities. A physical count is usually performed at least once annually to verify the Merchandise Inventory account. Most companies record any necessary adjustment due to shrinkage by charging it to Cost of Goods Sold if shrinkage is not abnormally large.

Did You Know?

Wanted for Shrinkage Shrinkage can be a sizable cost for many merchandisers. Recent annual losses due to shrinkage are

MusicLand	$22 Million
Sports Authority	9 Million

Companies often invest considerable resources to reduce shrinkage.

To illustrate, Z-Mart's Merchandise Inventory account at the end of year 2002 has a balance of $21,250. A physical count of inventory reveals only $21,000 of inventory available.

Point: Two-thirds of shoplifting losses are thefts by employees.

Exhibit 6.13

Adjusted Trial Balance for a Merchandiser

Z-MART
Adjusted Trial Balance
December 31, 2002

	Debit	Credit
Cash	$ 8,200	
Accounts receivable	11,200	
Merchandise inventory	**21,000**	
Office supplies	550	
Store supplies	250	
Prepaid insurance	300	
Office equipment	4,200	
Accumulated depreciation—Office equipment		$ 1,400
Store equipment	30,000	
Accumulated depreciation—Store equipment		6,000
Accounts payable		16,000
Salaries payable		800
K. Marty, Capital		42,600
K. Marty, Withdrawals	4,000	
Sales		**321,000**
Sales discounts	**4,300**	
Sales returns and allowances	**2,000**	
Cost of goods sold	**230,400**	
Depreciation expense—Store equipment	3,000	
Depreciation expense—Office equipment	700	
Office salaries expense	25,300	
Sales salaries expense	18,500	
Insurance expense	600	
Rent expense, office space	900	
Rent expense, selling space	8,100	
Office supplies expense	1,800	
Store supplies expense	1,200	
Advertising expense	11,300	
Totals	$387,800	$387,800

The adjusting entry to record this $250 shrinkage is

Assets = Liabilities + Equity
−250 −250

Dec. 31	Cost of Goods Sold	250	
	Merchandise Inventory		250
	To adjust for $250 shrinkage revealed by a physical count of inventory.		

Closing Entries

Closing entries are similar for merchandising companies and service companies using a perpetual system. One difference is that we must close additional temporary accounts that arise from merchandising activities. We use Z-Mart's adjusted trial balance in Exhibit 6.13 to show its four-step closing process in Exhibit 6.14.

Exhibit 6.14

Closing Entries for a Merchandiser

Step 1: Close Credit Balances in Temporary Accounts to Income Summary.

Z-Mart has one temporary account with a credit balance; it is closed with this entry:

Dec. 31	**Sales**	**321,000**	
	Income Summary		321,000
	To close credit balances in temporary accounts.		

Step 2: Close Debit Balances in Temporary Accounts to Income Summary.

The second entry closes temporary accounts having debit balances such as Cost of Goods Sold, Sales Discounts, and Sales Returns and Allowances and is shown here:

Dec. 31	Income Summary	308,100	
	Sales Discounts		**4,300**
	Sales Returns and Allowances		**2,000**
	Cost of Goods Sold		**230,400**
	Depreciation Expense—Store Equipment		3,000
	Depreciation Expense—Office Equipment		700
	Office Salaries Expense		25,300
	Sales Salaries Expense		18,500
	Insurance Expense		600
	Rent Expense—Office Space		900
	Rent Expense—Selling Space		8,100
	Office Supplies Expense		1,800
	Store Supplies Expense		1,200
	Advertising Expense		11,300
	To close debit balances in temporary accounts.		

Step 3: Close Income Summary to Owner's Capital.

The third closing entry is exactly the same for a merchandising company and a service company. It updates the owner's capital account for income or loss and is shown here:

Dec. 31	Income Summary	12,900	
	K. Marty, Capital		12,900
	To close the Income Summary account.		

The $12,900 amount in the entry is net income reported on the income statement in Exhibit 6.2.

Step 4: Close Withdrawals Account to Owner's Capital.

The fourth closing entry is exactly the same for a merchandising company and a service company. It closes the withdrawals account and adjusts the owner's capital account balance to the amount shown on the balance sheet. This entry for Z-Mart is

Dec. 31	K. Marty, Capital	4,000	
	K. Marty, Withdrawals		4,000
	To close the withdrawals accounts.		

When these entries are posted, all temporary accounts are set to zero and are ready to record events for next year. Also, the capital account now is updated to reflect all prior transactions.

Z-Mart's trial balance includes several accounts unique to merchandising companies: Merchandise Inventory, Sales (of goods), Sales Discounts, Sales Returns and Allowances, and Cost of Goods Sold. Their existence in the ledger means the first two closing entries for a merchandiser are slightly different from the ones described in Chapter 5 for a service company. These differences are bolded in the closing entries of Exhibit 6.14.

Merchandising Cost Flows

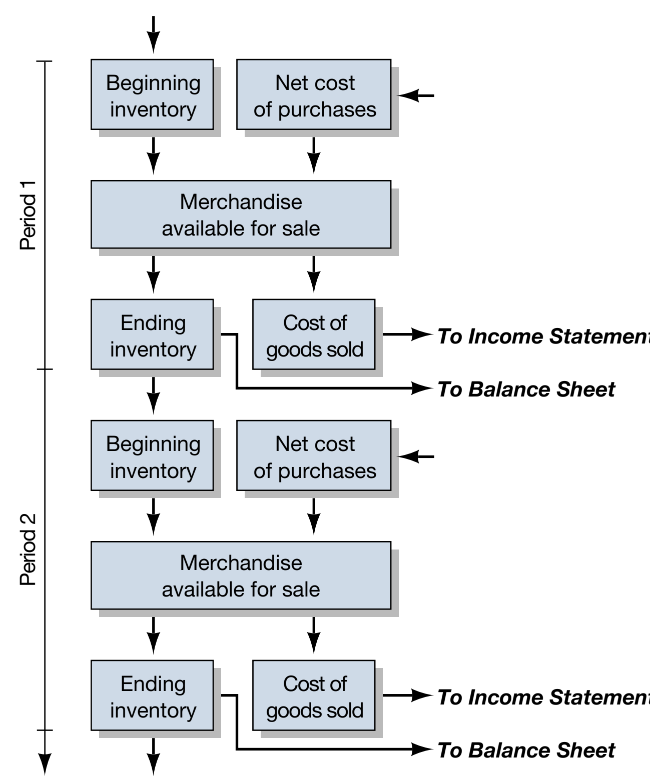
C5 Analyze and interpret cost flows and operating activities of a merchandising company.

Exhibit 6.15 shows the relations between inventory, merchandise purchases, and cost of goods sold across periods. We already explained that the net cost of purchases reflects trade discounts, purchase discounts, and purchase returns and allowances. These items constituting the cost of purchases are recorded in the Merchandise Inventory account under a perpetual system. When each sale occurs, the cost of items sold is transferred from Merchandise Inventory to the Cost of Goods Sold account. Cost of goods sold is reported on the income statement. The ending balance in Merchandise Inventory is reported on the balance sheet.

The Merchandise Inventory account balance at the end of one period is the amount of beginning inventory for the next period. The cost of each purchase is added to the Merchandise Inventory account, and the cost of each sale is transferred from Merchandise Inventory to Cost of Goods Sold. At the end of the period, the Merchandise Inventory balance is reported on the balance sheet.

Exhibit 6.15

Merchandising Cost Flow Across Periods*



* Cost of goods sold is reported on the income statement. Ending inventory is reported on the balance sheet. One period's ending inventory is the next period's beginning inventory.

Merchandising Cost Accounts

To explain how merchandising transactions affect the Merchandise Inventory and Cost of Goods Sold accounts, we summarize Z-Mart's merchandising activities for year 2002 using T-accounts in Exhibit 6.16. Most amounts are summary representations of several entries made during the year.

We explained that the perpetual inventory accounting system does not include separate accounts for purchases, purchase discounts, purchase returns and allowances, and transportation-in. But Z-Mart, like most companies, keeps supplementary records of these items. These supplementary records are used to accumulate the information in Exhibit 6.16. Z-Mart also keeps a separate record for the cost of merchandise returned by customers and restored in inventory.

The Cost of Goods Sold ending balance of $230,400 is the amount reported on the income statement in Exhibit 6.2. The Merchandise Inventory ending balance of $21,000 is the amount reported as a current asset on the balance sheet in Exhibit 6.3. These amounts also appear on Z-Mart's adjusted trial balance in Exhibit 6.13.

Quick Check

10. When a merchandiser uses a perpetual inventory system, why is it sometimes necessary to adjust the Merchandise Inventory balance with an adjusting entry?

11. What temporary accounts do you expect to find in a merchandising business but not in a service business?

12. Describe the closing entries normally made by a merchandising company.

Answers—p. 244

Exhibit 6.16

Merchandising Transactions Reflected in T-Accounts

Merchandise Inventory			
Jan. 1, balance	19,000		
Purchases of merchandise	235,800	Purchase discounts received	4,200
Merchandise returned by customers and restored to inventory	1,400	Purchase returns and allowances	1,500
Transportation-in costs	2,300	Cost of sales to customers	231,550
Dec. 31, unadjusted balance	21,250		
		Dec. 31, shrinkage	250
Dec. 31, adjusted balance	21,000		

Cost of Goods Sold			
Cost of sales	231,550	Merchandise returned by customers and restored to inventory	1,400
Inventory shrinkage adjusting entry	250		
Dec. 31, balance (before closing)	230,400		

Income Statement Formats

P4 Define and prepare multiple-step and single-step income statements.

Generally accepted accounting principles do not require companies to use any one format for financial statements, and we see many different formats in practice. The main part of this section describes two common income statement formats using Z-Mart's data: multiple step and single step. The final part of this section compares accrual and cash flow measures of gross profit.

Multiple-Step Income Statement

A **multiple-step income statement** contains more detail than simply a list of revenues and expenses. Exhibit 6.17 shows a multiple-step income statement for Z-Mart. This format shows detailed computations of net sales and other costs and expenses, and reports subtotals for various classes of items. Z-Mart's sales section is the same as shown earlier in the chapter. The cost of goods sold section draws on Exhibit 6.16. The difference between net sales and cost of goods sold is Z-Mart's gross profit. Further, its operating expenses are classified into two categories. **Selling expenses** include the expenses of promoting sales by displaying and advertising merchandise, making sales, and delivering goods to customers. **General and administrative expenses** support a company's overall operations and include expenses related to accounting, human resource management, and financial management. Also, expenses are often allocated between categories when they contribute to more than one activity. Exhibit 6.17 shows that Z-Mart allocates rent expense of $9,000 from its store building between two categories: $8,100 to selling expense and $900 to general and administrative expense.

Single-Step Income Statement

A **single-step income statement** is another widely used format, and is shown in Exhibit 6.18 for Z-Mart. It includes cost of goods sold as an operating expense and shows only one subtotal for total expenses. Operating expenses are grouped into very few categories. For example, **Reebok**'s income statement in Appendix A shows a single line item titled *Selling, general and administrative expenses*. Its annual report does, however, include management's discussion and analysis on various details of these expenses. Many companies use formats that combine features of both the single- and multiple-step statements. As long as income statement items are shown sensibly, management can choose the format it wants.[7] Similar options are available for the statement of changes in owner's equity and statement of cash flows.

Point: Many companies report interest expense and interest income in a separate category after income from operations and before subtracting income taxes expense. As one example, see Gap's income statement in Appendix A.

[7] In later chapters, we describe some items, such as extraordinary gains and losses, that must be shown in certain locations on the income statement.

Exhibit 6.17

Multiple-Step Income Statement

Z-MART
Income Statement
For Year Ended December 31, 2002

Sales			$321,000
Less: Sales discounts		$ 4,300	
Sales returns and allowances		2,000	6,300
Net sales			$314,700
Cost of goods sold			230,400
Gross profit			$ 84,300
Operating expenses			
Selling expenses			
Depreciation expense—Store equipment	$ 3,000		
Sales salaries expense	18,500		
Rent expense, selling space	8,100		
Store supplies expense	1,200		
Advertising expense	11,300		
Total selling expenses		42,100	
General and administrative expenses			
Depreciation expense—Office equipment	700		
Office salaries expense	25,300		
Insurance expense	600		
Rent expense, office space	900		
Office supplies expense	1,800		
Total general and administrative expenses		29,300	
Total operating expenses			71,400
Net income			$ 12,900

Exhibit 6.18

Single-Step Income Statement

Z-MART
Income Statement
For Year Ended December 31, 2002

Net sales		$314,700
Cost of goods sold	$230,400	
Selling expenses	42,100	
General and administrative expenses	29,300	
Total expenses		301,800
Net income		$ 12,900

Merchandising Cash Flows

A1 Analyze and interpret accruals and cash flows for merchandising activities.

Another aspect of merchandising activities relates to their cash flow impacts. Merchandising sales and costs reported in the income statement usually differ from their cash receipts and payments for a specific period. This is because an income statement is prepared using accrual accounting, not cash flows. Recognition of sales earned rarely equals cash received from customers. Also, recognition of cost of goods sold incurred rarely equals cash paid to suppliers for a given period.

We use Z-Mart's data in Exhibit 6.19 to illustrate this point. Z-Mart's net sales in the income statement total $314,700, yet cash receipts from customers are only $309,200 (shown on the right side of Exhibit 6.19). This difference reflects a $5,500 *increase* in the Accounts Receivable balance during this period for Z-Mart.

Exhibit 6.19

Analysis of Merchandising Cash Flows

Z-MART For Year Ended December 31, 2002			
Income Statement		**Statement of Cash Flows**	
Net sales	$314,700	Receipts from customers	$309,200
Cost of goods sold	230,400	Payments to suppliers	240,900
Gross profit	$ 84,300	Net cash flows from customers and suppliers	$ 68,300

An increase in accounts receivable means both a delay in receipt of cash from customers and that cash received from customers this period is less than net sales. To see this, recall that net sales and cash received are the same if all net sales are cash sales. But when some or all net sales are credit sales, the amounts for net sales and cash likely differ. Since Accounts Receivable increased during the period, we know cash received is less than net sales. But if Accounts Receivable had decreased, then cash received would be greater than net sales.

We apply similar analysis to cost of goods sold. Z-Mart's cost of goods sold reported in its income statement totals $230,400, but cash paid to suppliers is $240,900. The difference between cost of goods sold and cash paid to suppliers reflects *two* items: (1) change in inventory and (2) change in accounts payable.

Buying and selling merchandise is the most important activity for a merchandiser such as Z-Mart. We need to analyze both accrual measures and cash flows of this activity for signs of opportunities or problems. Z-Mart is trying to expand its sales by extending credit to more customers. However, extending credit to customers who do not pay their bills can backfire. For effective decision making, we must always analyze important differences in accrual and cash flow figures and assess their future implications. We analyze the relation between accrual and cash flows in more detail in Chapter 17.

Did You Know?

Entrepreneur Incubators Hundreds of entrepreneur incubators provide startups a space plus services for a fee. Services typically include management advice, office support, and financial, legal, and technical help. Entrepreneurs usually leave an incubator after two to three years. Nearly 90% of entrepreneurs that "hatch" from incubators are still in business six years later, which is more than double the usual success rate.

Using the Information — Acid-Test and Gross Margin

Companies with merchandising activities have at least two major differences from service companies. First, merchandise inventory often makes up a large part of a merchandiser's assets, especially current assets. Second, merchandising activities result in cost of goods sold, which is often the largest cost for these companies. Companies with merchandising activities alter our ratio analysis. This is especially the case with the current ratio and the profit margin ratio (see Chapters 4 and 5). This section describes adjustments to these ratios to help us analyze merchandising companies.

Acid-Test Ratio

A2 Compute the acid-test ratio and explain its use to assess liquidity.

For many merchandising companies, inventory makes up a large portion of current assets. This means a large part of current assets is not readily available for paying liabilities. This happens because inventory must be sold and any resulting accounts receivable must be collected before cash is available. Information about current assets is important since we use it to assess a company's ability to pay its current liabilities. We explained in Chapter 5 that the current ratio, defined as current assets divided by current liabilities, is useful in assessing a company's ability to pay current liabilities. Since it is sometimes unreasonable to assume that inventories are a source of payment for current liabilities, we look to another measure.

One measure to help us assess a company's ability to pay its current liabilities (called *liquidity*) is the acid-test ratio. It differs from the current ratio by excluding less liquid current assets such as inventory. The less liquid assets or liabilities are those that will take longer to be converted to or paid in cash. The **acid-test ratio,** also called *quick ratio,* is defined as *quick assets* (cash, short-term investments, and current receivables) divided by current liabilities—see Exhibit 6.20. This is similar to the current ratio except that the numerator omits inventory and prepaid expenses.

$$\textbf{Acid-test ratio} = \frac{\textbf{Cash and equivalents + Short-term investments + Short-term receivables}}{\textbf{Current liabilities}}$$

Exhibit 6.20

Acid-Test (Quick) Ratio

Exhibit 6.21 shows both the acid-test and current ratios of **JCPenney** for 1998 through 2000. Penney's acid-test ratio recently declined. While the industry acid-test ratio also declined, it did not decrease to the extent that Penney's ratio did. Penney's current ratio suggests its short-term obligations can be covered with short-term assets. Still, the acid-test ratio raises some concern. An acid-test ratio less than 1.0 means that Penney's current liabilities exceed its quick assets. A rule of thumb is that the acid-test ratio should have a value of at least 1.0 to conclude that a company is unlikely to face liquidity problems in the near future. A value less than 1.0 suggests a liquidity problem unless a company can generate enough cash from sales or if its accounts payable are not due until late in the next period. Similarly, a value greater than 1.0 can hide a liquidity problem if payables are due shortly and receivables will not be collected until late in the next period. Our analysis of Penney emphasizes that one ratio is seldom enough to reach a conclusion as to strength or weakness. The power of a ratio is often its ability to identify areas for detailed analysis.

Point: Successful use of a just-in-time inventory system can narrow the gap between the acid-test ratio and the current ratio.

You Make the Call

Supplier A retail store requests to purchase supplies on credit from your company. You have no prior experience with this store. The store's current ratio is 2.1, its acid-test ratio is 0.5, and inventory makes up most of its current assets. Do you extend credit to this store?

Answer—p. 244

($ in millions)	2000	1999	1998
Total quick assets	$2,371	$ 4,779	$ 5,179
Total current assets	$8,472	$11,007	$11,484
Total current liabilities	$4,465	$ 5,912	$ 6,137
Acid-test ratio	**0.53**	**0.81**	**0.84**
Current ratio	**1.90**	**1.86**	**1.87**
Industry acid-test ratio	0.7	0.8	1.0
Industry current ratio	3.0	3.1	3.5

Exhibit 6.21

JCPenney's Acid-Test and Current Ratios

Gross Margin Ratio

A3 Compute the gross margin ratio and explain its use to assess profitability.

Cost of goods sold makes up much of the costs of merchandising companies. This means that success for merchandising companies often depends on the relation between sales and cost of goods sold. Without sufficient gross profit, a merchandising company will likely fail. To help understand this important relation, users often compute the gross margin ratio. It differs from the profit margin ratio in that it excludes all costs except cost of goods sold. The **gross margin ratio** is defined as *gross margin* (net sales minus cost of goods sold) divided by net sales—see Exhibit 6.22.

$$\textbf{Gross margin ratio} = \frac{\textbf{Net sales} - \textbf{Cost of goods sold}}{\textbf{Net sales}}$$

Exhibit 6.22

Gross Margin Ratio

Exhibit 6.23 shows the gross margin ratio of **JCPenney** for 1998–2000. The ratio reflects the gross margin in each dollar of sales. In the case of JCPenney, each $1 of sales

Exhibit 6.23

JCPenney's Gross Margin Ratio

($ in millions)	2000	1999	1998
Gross margin	$ 9,136	$ 8,819	$ 9,116
Net sales	$32,510	$30,461	$30,410
Gross margin ratio	**28.1%**	**29.0%**	**30.0%**

in 2000 yielded about 28¢ in gross margin to cover all other expenses and still produce a profit. This 28¢ margin is down from 29¢ in 1999 and from 30¢ in 1998. This decline is an important (and negative) development. Success for merchandisers such as JCPenney depends on maintaining an adequate gross margin. Data in this exhibit reveal that Penney's net sales increase over this period while its gross margin ratio decreases.

You Make the Call

Financial Officer Your merchandising company has a 36% gross margin ratio and a 17% net profit margin ratio. Industry averages are 44% for gross margin and 16% for net profit margin. Do these results concern you?

Answer—p. 244

Demonstration Problem

Use the following adjusted trial balance and additional information to complete the requirements:

KC ANTIQUES
Adjusted Trial Balance
December 31, 2002

	Debit	Credit
Cash	$ 20,000	
Merchandise inventory	60,000	
Store supplies	1,500	
Equipment	45,600	
Accumulated depreciation—Equipment		$ 16,600
Accounts payable		9,000
Salaries payable		2,000
Kyle Carter, Capital		79,000
Kyle Carter, Withdrawals	10,000	
Sales		343,250
Sales discounts	5,000	
Sales returns and allowances	6,000	
Cost of goods sold	159,900	
Depreciation expense—Store equipment	4,100	
Depreciation expense—Office equipment	1,600	
Sales salaries expense	30,000	
Office salaries expense	34,000	
Insurance expense	11,000	
Rent expense (70% is store, 30% is office)	24,000	
Store supplies expense	5,750	
Advertising expense	31,400	
Totals	$449,850	$449,850

KC Antiques' *supplementary records* for 2002 reveal the following itemized costs for merchandising activities:

Invoice cost of merchandise purchases	$150,000
Purchase discounts received	2,500
Purchase returns and allowances	2,700
Cost of transportation-in	5,000

Required

1. Use the supplementary records to compute the total cost of merchandise purchases for 2002.
2. Prepare a 2002 multiple-step income statement. Inventory at December 31, 2001 is $70,100.
3. Prepare a single-step income statement for 2002.
4. Prepare closing entries for KC Antiques at December 31, 2002.
5. Compute the acid-test ratio and the gross margin ratio. Explain the meaning of each ratio and interpret them for KC Antiques.

Planning the Solution

- Compute the total cost of merchandise purchases for 2002.
- To prepare the multiple-step statement, first compute net sales. Then, to compute cost of goods sold, add the net cost of merchandise purchases for the year to beginning inventory and subtract the cost of ending inventory. Subtract cost of goods sold from net sales to get gross profit. Then classify operating expenses as selling expenses or general and administrative expenses.
- To prepare the single-step income statement, begin with net sales. Then list and subtract the operating expenses.
- The first closing entry debits all temporary accounts with credit balances and opens the Income Summary account. The second closing entry credits all temporary accounts with debit balances. The third entry closes the Income Summary account to the owner's capital account, and the fourth closing entry closes the withdrawals account to the capital account.
- Identify the quick assets on the adjusted trial balance. Compute the acid-test ratio by dividing quick assets by the amount of current liabilities. Compute the gross margin ratio by dividing the gross profit from requirement (2) by net sales.

Solution to Demonstration Problem

1.

Invoice cost of merchandise purchases	$150,000
Less: Purchases discounts received	(2,500)
Purchase returns and allowances	(2,700)
Add: Cost of transportation-in	5,000
Total cost of merchandise purchases	$149,800

2. Multiple-step income statement

KC ANTIQUES
Income Statement
Year Ended December 31, 2002

Sales			$343,250
Less: Sales discounts		$ 5,000	
Sales returns and allowances		6,000	11,000
Net sales			$332,250
Cost of goods sold*			159,900
Gross profit			$172,350
Operating expenses			
Selling expenses			
Depreciation expense—Store equipment	$ 4,100		
Sales salaries expense	30,000		
Rent expense—Selling space	16,800		
Store supplies expense	5,750		
Advertising expense	31,400		
Total selling expenses		88,050	

[continued on next page]

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General and administrative expenses:			
Depreciation expense—Office equipment	$ 1,600		
Office salaries expense	34,000		
Insurance expense	11,000		
Rent expense—Office space	7,200		
Total general and administrative expenses		53,800	
Total operating expenses			141,850
Net income			$ 30,500

* Cost of goods sold computation:

Merchandise inventory, December 31, 2001	$ 70,100
Total cost of merchandise purchases (from part *1*)	149,800
Goods available for sale	$219,900
Merchandise inventory, December 31, 2002	60,000
Cost of goods sold	$159,900

3. Single-step income statement

KC ANTIQUES
Income Statement
For Year Ended December 31, 2002

Net sales		$332,250
Cost of goods sold	$159,900	
Selling expenses	88,050	
General and administrative expenses	53,800	301,750
Net income		$ 30,500

4.

Dec. 31	Sales	343,250	
	Income Summary		343,250
	To close credit balances in temporary accounts.		
Dec. 31	Income Summary	312,750	
	Sales Discounts		5,000
	Sales Returns and Allowances		6,000
	Cost of Goods Sold		159,900
	Depreciation Expense—Store Equipment		4,100
	Depreciation Expense—Office Equipment		1,600
	Sales Salaries Expense		30,000
	Office Salaries Expense		34,000
	Insurance Expense		11,000
	Rent Expense		24,000
	Store Supplies Expense		5,750
	Advertising Expense		31,400
	To close debit balances in temporary accounts.		
Dec. 31	Income Summary	30,500	
	Kyle Carter, Capital		30,500
	To close the Income Summary account.		
Dec. 31	Kyle Carter, Capital	10,000	
	Kyle Carter, Withdrawals		10,000
	To close the withdrawals account.		

5. Acid test ratio = Cash/(Accounts payable + Salaries payable)
= $20,000/($9,000 + $2,000) = $20,000/$11,000 = 1.82

Gross margin ratio = Gross profit/Net sales = $172,350/$332,250 = 0.52

KC Antiques has a healthy acid-test ratio of 1.82. This means it has more than $1.80 in liquid assets to satisfy each $1.00 in current liabilities. (With this ratio, neither supplies nor inventory are considered liquid assets readily convertible into cash for use in satisfying short-term obligations.) The gross margin of 0.52 shows that KC Antiques spends 48¢ ($1.00 − $0.52) of every dollar of net sales on the costs of acquiring the merchandise it sells. This leaves 52¢ of every dollar of net sales to cover other expenses incurred in the business and to provide a profit.

APPENDIX

6A Comparing Periodic and Perpetual Inventory Systems

Recall that under a perpetual system, the Merchandise Inventory account is updated after each purchase and each sale. The Cost of Goods Sold account also is updated after each sale so that during the period its account balance reflects the period's total cost of goods sold to date. Under a periodic inventory system, the Merchandise Inventory account is updated only once each accounting period. This update occurs at the *end* of the period. During the period, the Merchandise Inventory balance remains unchanged. It reflects the beginning inventory balance until it is updated at the end of the period. Similarly, in a periodic inventory system, cost of goods sold is not recorded as each sale occurs. Instead, the total cost of goods sold during the period is computed at the end of the period.

Recording Merchandise Transactions

P5 Record and compare merchandising transactions using both periodic and perpetual inventory systems.

Under a perpetual system, each purchase, purchase return and allowance, purchase discount, and transportation-in transaction is recorded in the Merchandise Inventory account. Under a periodic system, a separate temporary account is set up for *each* of these items. At period-end, each of these temporary accounts is closed and the Merchandise Inventory account is updated. To illustrate the differences, we use parallel columns to show journal entries for the most common transactions using both periodic and perpetual inventory systems (codes (***a***) through (***f***) link these transactions to those in the chapter, and we drop explanations for simplicity).

Purchases

The periodic system uses a temporary *Purchases* account that accumulates the cost of all purchase transactions during the period. Z-Mart purchases merchandise for $1,200 on credit with terms of 2/10, n/30. Z-Mart's entry to record this credit purchase is

(***a***)

Periodic			*Perpetual*		
Purchases	1,200		Merchandise Inventory	1,200	
Accounts Payable . .		1,200	Accounts Payable		1,200

Purchase Discounts

The periodic system uses a temporary *Purchase Discounts* account that accumulates discounts taken on purchase transactions during the period. If payment in (*a*) is delayed until after the discount period expires, the entry under both methods is to debit Accounts Payable and credit Cash for $1,200 each. However, when Z-Mart pays the supplier for the previous purchase in (*a*) within the discount period, the required payment is $1,176 ($1,200 × 98%) and is recorded as

(*b*)

Periodic			Perpetual		
Accounts Payable	1,200		Accounts Payable	1,200	
Purchase Discounts .		24	Merchandise Inventory .		24
Cash		1,176	Cash		1,176

Purchase Returns and Allowances

Z-Mart returns merchandise purchased on November 2 because of defects. In the periodic system, the temporary *Purchase Returns and Allowances* account accumulates the cost of all returns and allowances during a period. If the recorded cost (including discounts) of the defective merchandise is $300, Z-Mart records the return with this entry:

(*c*)

Periodic			Perpetual		
Accounts Payable	300		Accounts Payable	300	
Purchase Returns and Allowances . .		300	Merchandise Inventory .		300

Transportation-In

Z-Mart paid a $75 freight charge to haul merchandise to its store. In the periodic system, this cost is charged to a temporary *Transportation-In* account.

(*d*)

Periodic			Perpetual		
Transportation-In	75		Merchandise Inventory	75	
Cash		75	Cash		75

Sales

Under the periodic system, the cost of goods sold is not recorded at the time of sale. (We later show how to compute total cost of goods sold at the end of a period.) Z-Mart sold $2,400 of merchandise on credit, and its cost of this merchandise is $1,600:

(*e*)

Periodic			Perpetual		
Accounts Receivable . . .	2,400		Accounts Receivable	2,400	
Sales		2,400	Sales		2,400
			Cost of Goods Sold	1,600	
			Merchandise Inventory .		1,600

Sales Returns

A customer returns part of the merchandise from the previous transaction in (*e*), where returned items sell for $800 and cost $600. (*Recall:* The periodic system records only the revenue effect, not the cost effect, for sales transactions.) Z-Mart restores the merchandise to inventory and records the return as

(*f*)

Periodic			Perpetual		
Sales Returns and Allowances	800		Sales Returns and Allowances	800	
Accounts Receivable		800	Accounts Receivable . .		800
			Merchandise Inventory	600	
			Cost of Goods Sold . . .		600

Adjusting and Closing Entries

The periodic and perpetual inventory systems have slight differences in adjusting and closing entries. Z-Mart's adjusted trial balances (except for shrinkage) under each system are shown in Exhibit 6A.1.

The Merchandise Inventory balance is $19,000 under the periodic system and $21,250 under the perpetual system. Because the periodic system does not revise the Merchandise Inventory balance during the period, the $19,000 amount is the beginning inventory. However, the $21,250 balance un-

Exhibit 6A.1

Comparison of Adjusted Trial Balances (absent shrinkage)—Periodic and Perpetual

Z-MART
Adjusted Trial Balance (Periodic System)
December 31, 2002

	Debit	Credit
Cash	$ 8,200	
Accounts receivable	11,200	
Merchandise inventory	**19,000**	
Office supplies	550	
Store supplies	250	
Prepaid insurance	300	
Office equipment	4,200	
Accum. depreciation—Office eq.		$ 1,400
Store equipment	30,000	
Accum. depreciation—Store eq.		6,000
Accounts payable		16,000
Salaries payable		800
K. Marty, Capital		42,600
K. Marty, Withdrawals	4,000	
Sales		321,000
Sales discounts	4,300	
Sales returns and allowances	2,000	
Purchases	**235,800**	
Purchase discounts		**4,200**
Purchase returns and allowances		**1,500**
Transportation-in	**2,300**	
Depreciation expense—Store eq.	3,000	
Depreciation expense—Office eq.	700	
Office salaries expense	25,300	
Sales salaries expense	18,500	
Insurance expense	600	
Rent expense—Office space	900	
Rent expense—Selling space	8,100	
Office supplies expense	1,800	
Store supplies expense	1,200	
Advertising expense	11,300	
Totals	$393,500	$393,500

Z-MART
Adjusted Trial Balance (Perpetual System)
December 31, 2002

	Debit	Credit
Cash	$ 8,200	
Accounts receivable	11,200	
Merchandise inventory	**21,250**	
Office supplies	550	
Store supplies	250	
Prepaid insurance	300	
Office equipment	4,200	
Accum. depreciation—Office eq.		$ 1,400
Store equipment	30,000	
Accum. depreciation—Store eq.		6,000
Accounts payable		16,000
Salaries payable		800
K. Marty, Capital		42,600
K. Marty, Withdrawals	4,000	
Sales		321,000
Sales discounts	4,300	
Sales returns and allowances	2,000	
Cost of goods sold	**230,150**	
Depreciation expense—Store eq.	3,000	
Depreciation expense—Office eq.	700	
Office salaries expense	25,300	
Sales salaries expense	18,500	
Insurance expense	600	
Rent expense—Office space	900	
Rent expense—Selling space	8,100	
Office supplies expense	1,800	
Store supplies expense	1,200	
Advertising expense	11,300	
Totals	$387,800	$387,800

der the perpetual system is the recorded ending inventory before adjusting for any inventory shrinkage. A physical count of inventory taken at the end of the period reveals $21,000 of merchandise available. We know then that inventory shrinkage is $21,250 − $21,000 = $250.

The adjusting entry for shrinkage and the closing entries for the two systems are shown in Exhibit 6A.2. The periodic system does not require an adjusting entry to record inventory shrinkage. Instead, it puts the ending inventory of $21,000 in the Merchandise Inventory account (which is net of shrinkage) in the first closing entry and removes the $19,000 beginning inventory balance from the account in the second closing entry.

Exhibit 6A.2

Comparison of Adjusting and Closing Entries—Periodic and Perpetual

Periodic			Perpetual		
Adjusting Entry—Shrinkage			**Adjusting Entry—Shrinkage**		
None			Cost of Goods Sold	250	
			Merchandise Inventory		250
Closing Entries			**Closing Entries**		
(1) Sales	321,000		**(1)** Sales	321,000	
Merchandise Inventory	**21,000**		Income Summary		321,000
Purchase Discounts	**4,200**				
Purchase Returns and Allowances	**1,500**				
Income Summary		347,700			
(2) Income Summary	334,800		**(2)** Income Summary	308,100	
Sales Discounts		4,300	Sales Discounts		4,300
Sales Returns and Allowances		2,000	Sales Returns and Allowances		2,000
Merchandise Inventory		**19,000**			
Purchases		**235,800**	**Cost of Goods Sold**		**230,400**
Transportation-In		**2,300**			
Depreciation Expense—Store eq.		3,000	Depreciation Expense—Store eq.		3,000
Depreciation Expense—Office eq.		700	Depreciation Expense—Office eq.		700
Office Salaries Expense		25,300	Office Salaries Expense		25,300
Sales Salaries Expense		18,500	Sales Salaries Expense		18,500
Insurance Expense		600	Insurance Expense		600
Rent Expense—Office space		900	Rent Expense—Office space		900
Rent Expense—Selling space		8,100	Rent Expense—Selling space		8,100
Office Supplies Expense		1,800	Office Supplies Expense		1,800
Store Supplies Expense		1,200	Store Supplies Expense		1,200
Advertising Expense		11,300	Advertising Expense		11,300
(3) Income Summary	12,900		**(3)** Income Summary	12,900	
K. Marty, Capital		12,900	K. Marty, Capital		12,900
(4) K. Marty, Capital	4,000		**(4)** K. Marty, Capital	4,000	
K. Marty, Withdrawals		4,000	K. Marty, Withdrawals		4,000

By updating Merchandise Inventory and closing Purchases, Purchase Discounts, Purchase Returns and Allowances, and Transportation-In, the periodic system transfers the cost of goods sold amount to Income Summary. Review the periodic side of Exhibit 6A.2 and notice that the colored items affect Income Summary as follows:

Credited to Income Summary in the first closing entry	
Merchandise inventory (ending)	$ 21,000
Purchase discounts	4,200
Purchase returns and allowances	1,500
Debited to Income Summary in the second closing entry	
Merchandise inventory (beginning)	(19,000)
Purchases	(235,800)
Transportation-in	(2,300)
Net effect on Income Summary	**$(230,400)**

This $230,400 effect on Income Summary is the cost of goods sold amount. This figure is confirmed as follows:

Beginning inventory		$ 19,000
Purchases	$235,800	
Less purchase discounts	(4,200)	
Less purchase returns and allowances	(1,500)	
Plus transportation-in	2,300	
Net cost of goods purchased		232,400
Cost of goods available for sale		$251,400
Less ending inventory		(21,000)
Cost of goods sold		**$230,400**

This shows that the periodic system transfers cost of goods sold to the Income Summary account but without using a Cost of Goods Sold account. Also, the periodic system does not separately measure shrinkage. Instead, it computes cost of goods available for sale, subtracts the cost of ending inventory, and defines the difference as cost of goods sold. This difference includes shrinkage.

Work Sheet for a Merchandiser

Exhibit 6A.3 shows the work sheet that we could prepare in developing financial statements. It slightly differs from the work sheet in Chapter 5—the differences are bolded. The adjustments in the work sheet reflect the following economic events: (*a*) Expiration of $600 of prepaid insurance. (*b*) Use of $1,200 of store supplies. (*c*) Use of $1,800 of office supplies. (*d*) Depreciation of $3,000 for store

Exhibit 6A.3

Work Sheet for Merchandiser (using a perpetual system)

Exhibit 6a-3

No.	Account	Unadjusted Trial Balance Dr.	Unadjusted Trial Balance Cr.	Adjustments Dr.	Adjustments Cr.	Adjusted Trial Balance Dr.	Adjusted Trial Balance Cr.	Income Statement Dr.	Income Statement Cr.	Balance Sheet and Statement of Changes in Owner's Equity Dr.	Balance Sheet and Statement of Changes in Owner's Equity Cr.
101	Cash	8,200				8,200				8,200	
106	Accounts receivable	11,200				11,200				11,200	
119	**Merchandise inventory**	**21,250**			**(g) 250**	**21,000**				**21,000**	
124	Office supplies	2,350			(c) 1,800	550				550	
125	Store supplies	1,450			(b) 1,200	250				250	
128	Prepaid insurance	900			(a) 600	300				300	
163	Office equipment	4,200				4,200				4,200	
164	Accum. depr.—office equip.		700		(e) 700		1,400				1,400
165	Store equipment	30,000				30,000				30,000	
166	Accum. depr.—office equip.		3,000		(d) 3,000		6,000				6,000
201	Accounts payable		16,000				16,000				16,000
209	Salaries payable				(f) 800		800				800
301	K. Marty, Capital		42,600				42,600				42,600
302	K. Marty, Withdrawals	4,000				4,000				4,000	
413	**Sales**		**321,000**				**321,000**		**321,000**		
414	**Sales returns and allowances**	**2,000**				**2,000**		**2,000**			
415	**Sales discounts**	**4,300**				**4,300**		**4,300**			
502	**Cost of goods sold**	**230,150**		**(g) 250**		**230,400**		**230,400**			
612	Depr. expense—store equip.			(d) 3,000		3,000		3,000			
613	Depr. expense—office equip.			(e) 700		700		700			
620	Office salaries expense	25,000		(f) 300		25,300		25,300			
621	Sales salaries expense	18,000		(f) 500		18,500		18,500			
637	Insurance expense			(a) 600		600		600			
641	Rent expense, office space	900				900		900			
642	Rent expense, selling space	8,100				8,100		8,100			
650	Office supplies expense			(c) 1,800		1,800		1,800			
651	Store supplies expense			(b) 1,200		1,200		1,200			
655	Advertising expense	11,300				11,300		11,300			
	Totals	383,300	383,300	8,350	8,350	387,800	387,800	308,100	321,000	79,700	66,800
	Net income							12,900			12,900
	Totals							321,000	321,000	79,700	79,700

equipment. (*e*) Depreciation of $700 for office equipment. (*f*) Accrual of $300 of unpaid office salaries and $500 of unpaid store salaries. (*g*) Inventory shrinkage of $250. Once the adjusted amounts are extended into the financial statement columns, the information is used to develop financial statements.

Adjusting Entry Method—Periodic System

In our discussion of the periodic system, the change in the Merchandise Inventory account is recorded as part of the closing process. This *closing entry method* is common. An alternative method, called the *adjusting entry method*, also is used. The *adjusting entry method* records the change in the Merchandise Inventory account with adjusting entries. Under this method, the first two closing entries (see Exhibit 6A.2) do not include the Merchandise Inventory account.

Adjusting Entries

Under the adjusting entry method of the periodic system, Z-Mart removes the beginning balance from the Merchandise Inventory account by recording this adjusting entry at the end of the period:

Dec. 31	Income Summary	19,000	
	Merchandise Inventory		19,000
	To remove the beginning balance from the Merchandise Inventory account.		

A second adjusting entry inserts the ending balance in the inventory account:

Dec. 31	Merchandise Inventory	21,000	
	Income Summary		21,000
	To insert the ending balance in the Merchandise Inventory account.		

After these entries are posted, the Merchandise Inventory account appears as follows:

Merchandise Inventory			
Beg. balance	19,000		
		Adjustment	19,000
Adjustment	21,000		
End. balance	21,000		

Closing Entries

If the adjusting entry method for inventory is used, the closing entries do not include the Merchandise Inventory account. In particular, entries (1) and (2) in Exhibit 6A.2 are the same except for removing the Merchandise Inventory account and its balance from both entries (including its amount from Income Summary). Entry (3) to close Income Summary is unchanged. The adjusting entry method took four entries instead of two to get net income of $12,900 into Income Summary.

Quick Check

13. What account is used in a perpetual inventory system but not in a periodic system?

14. Which of the following accounts are temporary accounts under a periodic system? (a) Merchandise Inventory; (b) Purchases; (c) Transportation-In.

15. How is cost of goods sold computed under a periodic inventory system?

16. Do reported amounts of ending inventory and net income differ if the adjusting entry method of recording the change in inventory is used instead of the closing entry method?

Answer—p. 244

Summary

C1 Describe merchandising activities and identify business examples. Operations of merchandisers involve buying products and reselling them. Examples of merchandisers include **Wal-Mart**, **Home Depot**, **The Limited**, and **Barnes & Noble**.

C2 Identify and explain the components of income for a merchandising company. A merchandiser's costs on an income statement include an amount for cost of goods sold. Gross profit, or gross margin, equals sales minus cost of goods sold.

C3 Identify and explain the inventory asset of a merchandising company. The current asset section of a merchandising company's balance sheet includes *merchandise inventory*, which refers to the products a merchandiser sells and are available for sale at the balance sheet date.

C4 Describe both perpetual and periodic inventory systems. A perpetual inventory system continuously tracks the cost of goods available for sale and the cost of goods sold. A periodic system accumulates the cost of goods purchased during the period and does not compute the amount of inventory or the cost of goods sold until the end of a period.

C5 Analyze and interpret cost flows and operating activities of a merchandising company. Costs of merchandise purchases flow into Merchandise Inventory and from there to Cost of Goods Sold on the income statement. Any remaining Merchandise Inventory is reported as a current asset on the balance sheet.

A1 Analyze and interpret accruals and cash flows for merchandising activities. Merchandising sales and costs of sales reported in the income statement usually differ from their corresponding cash receipts and cash payments. Cash received from customers equals net sales less the increase (or plus the decrease) in Accounts Receivable during the period. Cash paid to suppliers equals cost of goods sold less the increase (or plus the decrease) in Accounts Payable and less the decrease (or plus the increase) in Inventory during the period.

A2 Compute the acid-test ratio and explain its use to assess liquidity. The acid-test ratio is computed as quick assets (cash, short-term investments, and current receivables) divided by current liabilities. It indicates a company's ability to pay its current liabilities with its existing quick assets. A ratio equal to or greater than 1.0 is often adequate.

A3 Compute the gross margin ratio and explain its use to assess profitability. The gross margin ratio is computed as gross margin (net sales minus cost of goods sold) divided by net sales. It indicates a company's profitability before considering operating expenses.

P1 Analyze and record transactions for merchandise purchases using a perpetual system. For a perpetual inventory system, purchases of inventory (net of trade discounts) are added (debited) to the Merchandise Inventory account. Purchase discounts and purchase returns and allowances are subtracted (credited) from Merchandise Inventory, and transportation-in costs are added (debited) to Merchandise Inventory.

P2 Analyze and record transactions for sales of merchandise using a perpetual system. A merchandiser records sales at list price less any trade discounts. The cost of items sold is transferred from Merchandise Inventory to Cost of Goods Sold. Refunds or credits given to customers for unsatisfactory merchandise are recorded (debited) in Sales Returns and Allowances, a contra account to Sales. If merchandise is returned and restored to inventory, the cost of this merchandise is removed from Cost of Goods Sold and transferred back to Merchandise Inventory. When cash discounts from the sales price are offered and customers pay within the discount period, the seller records (debits) Sales Discounts, a contra account to Sales.

P3 Prepare adjustments and close accounts for a merchandising company. With a perpetual system, it is often necessary to make an adjustment for inventory shrinkage. This is computed by comparing a physical count of inventory with the Merchandise Inventory balance. Shrinkage is normally charged to Cost of Goods Sold. Temporary accounts closed to Income Summary for a merchandiser include Sales, Sales Discounts, Sales Returns and Allowances, and Cost of Goods Sold.

P4 Define and prepare multiple-step and single-step income statements. Multiple-step income statements include greater detail for sales and expenses than do single-step income statements. They also show details of net sales and report expenses in categories reflecting different activities.

P5 Record and compare merchandising transactions using both periodic and perpetual inventory systems. Transactions involving the sale and purchase of merchandise are recorded and analyzed under both the periodic and perpetual inventory systems. Adjusting and closing entries for both inventory systems are illustrated and explained.

Guidance Answers to You Make the Call

Entrepreneur For terms of 3/10, n/90, missing the 3% discount for an additional 80 days equals an annual interest rate of 13.69% computed as (365 days ÷ 80 days) × 3%. Since you can borrow funds at 11% (assuming no other processing costs), it is better to borrow and pay within the discount period. You save 2.69% (13.69% − 11%) in interest costs by paying early.

Credit Manager—Ethics Your decision here is whether to comply with prior policy or to create a new policy and not abuse discounts offered by suppliers. Your first step should be to meet with your superior to find out if the late payment policy is the actual policy and, if so, its rationale. If it is the policy to pay late, you must apply your own sense of ethics. One point of view is that the late payment policy is unethical. A deliberate plan to make late payments means the company lies when it pretends to make purchases within the credit terms. The potential is that your company can lose its ability to get future credit. Another view is that the late payment policy is acceptable. In some markets, attempts to take discounts through late payments are accepted as a continued phase of "price negotiation." Also, your company's suppliers can respond by billing your company for the discounts not accepted because of late payments. However, this is a dubious viewpoint, especially since the prior manager proposes you explain late payments as computer or mail problems and given that some suppliers have complained.

Supplier A current ratio of 2.1 suggests sufficient current assets to cover current liabilities. An acid-test ratio of 0.5 suggests, however, that quick assets can cover only about one-half of current liabilities. This implies the store depends on profits from sales of inventory to pay current liabilities. If sales of inventory decline or profit margins decrease, the likelihood that this store will default on its payments increases. Your decision is probably not to extend credit to the store. If you do extend credit, you are likely to closely monitor the store's financial condition.

Financial Officer Your company's net profit margin is about equal to the industry average and suggests typical industry performance. However, gross margin reveals that your company is paying far more in cost of goods sold or receiving far less in sales price than competitors. Your attention must be directed to finding the problem with cost of goods sold, sales, or both. One positive note is that your company's expenses make up 19% of sales (36% − 17%). This favorably compares with competitors' expenses that make up 28% of sales (44% − 16%).

Guidance Answers to **Quick Checks**

1. Cost of goods sold is the cost of merchandise purchased from a supplier that is sold to customers during a specific period.
2. Gross profit (or gross margin) is the difference between net sales and cost of goods sold.
3. Widespread use of computing and related technology has dramatically increased the use of the perpetual inventory system.
4. Under credit terms of 2/10, n/60, the credit period is 60 days and the discount period is 10 days.
5. (b)
6. *FOB* means free on board. It is used in identifying the point when ownership transfers from seller to buyer. *FOB destination* means the seller transfers ownership of goods to the buyer when they arrive at the buyer's place of business. It also means the seller is responsible for paying shipping charges and bears the risk of damage or loss during shipment.
7. Recording sales discounts and sales returns and allowances separately from sales gives useful information to managers for internal monitoring and decision making.
8. When a customer returns merchandise *and* the seller restores the merchandise to inventory, two entries are necessary. One entry records the decrease in revenue and credits the customer's account. The second entry debits inventory and reduces cost of goods sold.
9. Credit memorandum—seller credits accounts receivable from buyer.
10. Merchandise Inventory may need adjusting to reflect shrinkage.
11. Sales (of goods), Sales Discounts, Sales Returns and Allowances, and Cost of Goods Sold.
12. Four closing entries: (1) close credit balances in temporary accounts to Income Summary, (2) close debit balances in temporary accounts to Income Summary, (3) close Income Summary to owner's capital, and (4) close withdrawals account to owner's capital.
13. Cost of Goods Sold.
14. (b) Purchases and (c) Transportation-In.
15. Under a periodic inventory system, the cost of goods sold is determined at the end of an accounting period by adding the net cost of goods purchased to the beginning inventory and subtracting the ending inventory.
16. Both methods report the same ending inventory and net income.

Glossary

Acid-test ratio ratio used to assess a company's ability to settle its current debts with its most liquid assets; defined as quick assets (cash, short-term investments, and current receivables) over current liabilities. (p. 233).

Cash discount reduction in the price of merchandise granted by a seller to a buyer when payment is made within the *discount period.* (p. 219).

Cost of goods sold cost of inventory sold to customers during a period. (p. 216)

Credit memorandum notification that the sender has credited the recipient's account kept by the sender. (p. 226).

Credit period time period that can pass before a customer's payment is due. (p. 218).

Credit terms description of the amounts and timing of payments that a buyer agrees to make in the future. (p. 218).

Debit memorandum notification that the sender has debited the recipient's account kept by the sender. (p. 220).

Discount period time period in which a cash discount is available and the buyer can make a reduced payment. (p. 219).

EOM abbreviation for *end of month;* used to describe credit terms for some transactions. (p. 218).

FOB abbreviation for *free on board;* the point when ownership of goods passes to the buyer; *FOB shipping point* (or *factory*) means the buyer pays shipping costs and accepts ownership of goods at the seller's place of business; *FOB destination* means the seller pays shipping costs and accepts ownership of goods at the buyer's place of business. (p. 221).

General and administrative expenses expenses that support the operating activities of a business. (p. 230).

Gross margin (see gross profit). (p. 214).

Gross margin ratio gross margin (sales minus cost of goods sold) divided by sales; also called *gross profit ratio.* (p. 233).

Gross profit net sales minus cost of goods sold; also called *gross margin.* (p. 214).

Inventory merchandise a company owns and expects to sell in its normal operations. (p. 216).

List price catalog price of an item before any trade discount is deducted. (p. 218).

Merchandise (see *merchandise inventory*). (p. 214).

Merchandise inventory products that a company owns and expects to sell to customers; also called *merchandise.* (p. 215).

Merchandiser entity that earns net income by buying and selling merchandise. (p. 214).

Multiple-step income statement income statement format that shows subtotals between sales and net income and details of net sales and expenses. (p. 230).

Periodic inventory system method that records the cost of inventory purchased but does not track the quantity available or sold to customers; records are updated at the end of each period to reflect the physical count of goods available. (p. 216).

Perpetual inventory system method that maintains continuous records of the cost of inventory available and the cost of goods sold. (p. 217).

Purchase discount term used by a purchaser to describe a cash discount granted to the purchaser for paying within the discount period. (p. 219).

Retailer intermediary that buys products from manufacturers or wholesalers and sells them to consumers. (p. 214).

Sales discount term used by a seller to describe a cash discount granted to buyers who pay within the discount period. (p. 219).

Selling expenses expenses of promoting sales, such as displaying and advertising merchandise, making sales, and delivering goods to customers. (p. 230).

Shrinkage inventory losses that occur as a result of theft or deterioration. (p. 227).

Single-step income statement income statement format that includes cost of goods sold as an expense and shows only one subtotal for total expenses. (p. 230).

Supplementary records information outside the usual accounting records; also called *supplemental records.* (p. 223).

Trade discount reduction below a list or catalog price that can vary for wholesalers, retailers, and consumers. (p. 218).

Wholesaler intermediary that buys products from manufacturers or other wholesalers and sells them to retailers or other wholesalers. (p. 214).

[The superscript letter ^{A} denotes assignments based on Appendix 6A.]

Questions

1. In comparing the accounts of a merchandising company with those of a service company, what additional accounts would the merchandising company likely use, assuming it employs a perpetual inventory system?
2. What items appear in financial statements of merchandising companies but not in the statements of service companies?
3. Explain how a business can earn a positive gross profit on its sales and still have a net loss.
4. Why do companies offer a cash discount?
5. How does a company that uses a perpetual inventory system determine the amount of inventory shrinkage?
6. Distinguish between cash discounts and trade discounts. Is the amount of a trade discount on purchased merchandise recorded in the accounts?
7. What is the difference between a sales discount and a purchase discount?
8. Why would a company's manager be concerned about the quantity of its purchase returns if its suppliers allow unlimited returns?
9. Does the sender of a debit memorandum record a debit or a credit in the recipient's account? Which (debit or credit) does the recipient record?
10. What is the difference between single-step and multiple-step income statement formats?
11. Refer to the income statement for **Nike** in Appendix A. What term is used instead of cost of goods sold? Does the company present a detailed calculation of its cost of goods sold?
12. Refer to the balance sheet for **Reebok** in Appendix A. What does Reebok call its inventory account? What alternate name could it use?
13. Refer to the income statement of **Gap** in Appendix A. Does its income statement report a gross profit figure?
14. Companies need to be skillful in negotiating purchase contracts with suppliers. What type of shipping terms should a purchaser attempt to negotiate to minimize freight-in costs?

QUICK STUDY

QS 6-1

Recording purchases —perpetual system **P1**

Prepare journal entries to record each of the following transactions of a merchandising company. Show any supporting calculations. Assume a perpetual inventory system.

Mar. 5	Purchased 600 units of product with a list price of $10 per unit. The purchaser is granted a trade discount of 20%; terms of the sale are 2/10, n/60.
Mar. 7	Returned 25 defective units from the March 5 purchase and received full credit.
Mar. 15	Paid the amount due from the March 5 purchase, less the return on March 7.

QS 6-2
Recording sales—perpetual system
P2

Prepare journal entries to record each of the following transactions of a merchandising company. Show any supporting calculations. Assume a perpetual inventory system.

Apr. 1	Sold merchandise for \$3,000, granting the customer terms of 2/10, EOM. The cost of the merchandise is \$1,800.
Apr. 4	The customer in the April 1 sale returned merchandise and received credit for \$600. The merchandise, which had cost \$360, is returned to inventory.
Apr. 11	Received payment for the amount due from the April 1 sale less the return on April 4.

QS 6-3[A]
Contrasting periodic and perpetual systems
C4

Identify whether each description best applies to a periodic or a perpetual inventory system.

a. Provides more timely information to managers.
b. Requires an adjusting entry to record inventory shrinkage.
c. Markedly increased in frequency and popularity in business within the past decade.
d. Records cost of goods sold each time a sales transaction occurs.

QS 6-4
Computing and analyzing gross margin
C2 A3

Compute net sales, gross profit, and the gross margin ratio for each situation (a) through (d):

	a	b	c	d
Sales	\$150,000	\$550,000	\$38,700	\$255,700
Sales discounts	5,200	17,500	600	4,200
Sales returns and allowances	20,000	6,000	5,300	900
Cost of goods sold	79,600	329,700	24,300	128,900

Interpret the gross margin ratio for situation (a).

QS 6-5
Acid-test ratio
A2

Use the following information on current assets and current liabilities to compute and interpret the acid-test ratio. Also explain what the acid-test ratio of a company measures.

Cash	\$1,500
Accounts receivable	2,800
Inventory	6,000
Prepaid expenses	700
Accounts payable	5,750
Other current liabilities	850

QS 6-6
Contrasting liquidity ratios
A2

Identify similarities and differences between the acid-test ratio and the current ratio. Compare and describe how the two ratios reflect a company's ability to meet its current obligations.

QS 6-7
Accounting for shrinkage—perpetual system
P3

Bemis Company's ledger on July 31, its fiscal year-end, includes the following accounts that have normal balances:

Merchandise inventory	\$ 37,800	Sales returns and allowances	\$ 6,500
T. Bemis, Capital	118,300	Cost of goods sold	105,000
T. Bemis, Withdrawals	7,000	Depreciation expense	10,300
Sales	160,200	Salaries expense	32,500
Sales discounts	4,700	Miscellaneous expenses	5,000

A physical count of its July 31 year-end inventory discloses that the cost of the merchandise available for sale is \$35,900. Prepare the entry to record any inventory shrinkage.

QS 6-8
Closing entries
P3

Refer to QS 6-7 and prepare journal entries to close the balances in temporary accounts. Remember to consider the entry that is made to solve QS 6-7.

EXERCISES

Exercise 6-1
Recording entries for merchandise purchases

P1

Prepare journal entries to record the following transactions for a retail store. Assume a perpetual inventory system.

Apr. 2 Purchased merchandise from Blass Company under the following terms: $4,600 invoice price, 2/15, n/60 credit terms, FOB shipping point.
3 Paid $300 for shipping charges on the April 2 purchase.
4 Returned to Blass Company unacceptable merchandise that had an invoice price of $600.
17 Sent a check to Blass Company for the April 2 purchase, net of the discount and the returned merchandise.
18 Purchased merchandise from Flow Corp. under the following terms: $8,500 invoice price, 2/10, n/30 credit terms, FOB destination.
21 After negotiations, received from Flow an $1,100 allowance on the April 18 purchase.
28 Sent a check to Flow paying for the April 18 purchase, net of the discount and allowance.

Exercise 6-2
Applying merchandising terms

C1 C2

Insert the letter for each term in the blank space beside the definition that it most closely matches:

A. Cash discount
B. Credit period
C. Discount period
D. FOB destination
E. FOB shipping point
F. Gross profit
G. Merchandise inventory
H. Purchase discount
I. Sales discount
J. Trade discount

_______ **1.** Ownership of goods is transferred at the seller's place of business.
_______ **2.** Reduction below list or catalog price that is negotiated in setting the price of goods.
_______ **3.** Seller's description of a cash discount granted to customers in return for early payment.
_______ **4.** Time period that can pass before a customer's payment is due.
_______ **5.** Goods a company owns and expects to sell to its customers.
_______ **6.** Ownership of goods is transferred at the buyer's place of business.
_______ **7.** Time period in which a cash discount is available.
_______ **8.** Difference between net sales and the cost of goods sold.
_______ **9.** Reduction in a receivable or payable that is granted if it is paid within the discount period.
_______ **10.** Purchaser's description of a cash discount received from a supplier of goods.

Exercise 6-3
Analyzing and recording merchandise transactions—both buyer and seller

P1 P2

Sundance Company purchased merchandise for resale from Phoenix with an invoice price of $24,000 and credit terms of 3/10, n/60. The merchandise had cost Phoenix $16,000. Sundance paid within the discount period. Assume that both buyer and seller use a perpetual inventory system.

Required

1. Prepare entries that the buyer should record for the purchase and cash payment.
2. Prepare entries that the seller should record for the sale and cash collection.
3. Assume that the buyer borrowed enough cash to pay the balance on the last day of the discount period at an annual interest rate of 8% and paid it back on the last day of the credit period. Compute how much the buyer saved by following this strategy. (Use a 365-day year.)

Exercise 6-4
Analyzing and recording merchandise transactions—both buyer and seller

P1 P2

On May 11, Recovery Co. accepts delivery of $40,000 of merchandise it purchases for resale from Hoak Corporation. With the merchandise is an invoice dated May 11, with terms of 3/10, n/90, FOB factory. The cost of the goods for Hoak is $30,000. When the goods are delivered, Recovery pays $345 to Express Shipping Service for delivery charges on the merchandise. On May 12, Recovery returns $1,400 of goods to Hoak, who receives them one day later and restores them to inventory. The returned goods had cost Hoak $800. On May 20, Recovery mails a check to Hoak Corporation for the amount owed. Hoak receives it the following day.

Required

1. Prepare journal entries that Recovery Co. records for these transactions. Recovery uses a perpetual inventory system.
2. Prepare journal entries that Hoak Corporation records for these transactions. Hoak uses a perpetual inventory system.

Exercise 6-5
Calculating expenses and cost of goods sold
C5

Monk Company's ledger and supplementary records at the end of the period reveal the following:

Sales	$380,000
Sales discounts	6,500
Sales returns	15,000
Merchandise inventory (beginning of period)	31,000
Invoice cost of merchandise purchases	176,000
Purchase discounts received	4,600
Purchase returns and allowances	5,000
Costs of transportation-in	12,000
Gross profit	155,000
Net income	65,000

Required

Compute (1) total operating expenses, (2) cost of goods sold, and (3) merchandise inventory (end of period). (*Hint:* Review Exhibits 6.10 and 6.11.)

Exercise 6-6A
Determining components of cost of goods sold
C5

Using the data provided from the general ledger and supplementary records, determine each of the missing numbers in the separate situations (a), (b), and (c):

	a	b	c
Invoice cost of merchandise purchases	$94,000	$40,000	$32,500
Purchase discounts received	5,000	?	800
Purchase returns and allowances	2,000	2,500	1,200
Costs of transportation-in	?	4,500	5,000
Merchandise inventory (beginning of period)	9,000	?	10,000
Total cost of merchandise purchases	91,400	40,500	?
Merchandise inventory (end of period)	5,400	8,500	?
Cost of goods sold	?	42,600	35,130

Exercise 6-7
Recording sales returns and allowances
P2

A1 Parts is organized on May 1, 2002, and made its first purchase of merchandise on May 3. The purchase is for 2,000 units at a price of $10 per unit. On May 5, A1 Parts sold 600 of the units for $14 per unit to Dean Co. Terms of the sale are 2/10, n/60. Prepare entries for A1 Parts to record the May 5 sale and each of the following separate transactions using a perpetual inventory system.

a. On May 7, Dean returns 200 units because they did not fit the customer's needs. A1 Parts restores the units to its inventory.

b. On May 8, Dean discovers that 200 units are damaged but of some use and, therefore, keeps the units. A1 Parts sends Dean a credit memorandum for $600 to compensate for the damage.

c. On May 15, Dean returns 20 defective units and A1 Parts concludes that these units cannot be resold. As a result, A1 Parts discards them.

Exercise 6-8
Recording purchase returns and allowances
P1

Refer to Exercise 6-7 and prepare the appropriate journal entries for Dean Co. to record the purchase and each of the three separate transactions. Dean is a retailer that uses a perpetual inventory system and purchases these units for resale.

Exercise 6-9A
Calculating revenues, expenses, and income
C2 C5

Fill in the blanks in the following separate income statements *a* through *e*. Identify any negative amount by putting it in parentheses.

	a	b	c	d	e
Sales	$62,000	$43,500	$46,000	$?	$25,600
Cost of goods sold					
Merchandise inventory (beginning)	8,000	17,050	7,500	8,000	4,560
Total cost of merchandise purchases	38,000	?	?	32,000	6,600
Merchandise inventory (ending)	?	(2,700)	(9,000)	(6,600)	?
Cost of goods sold	$34,050	$15,900	$?	$?	$ 6,600
Gross profit	$?	$?	$ 3,750	$45,600	$?
Expenses	10,000	10,650	12,150	3,600	6,000
Net income (loss)	$?	$16,950	$(8,400)	$42,000	$?

Exercise 6-10
Sales returns and allowances
C2 P2

Briefly explain why a company's manager wants the accounting system to record customers' returns of unsatisfactory goods in the Sales Returns and Allowances account instead of the Sales account. In addition, explain whether this information would be useful for external decision makers.

Exercise 6-11
Interpreting physical count error as shrinkage
P3

A retail company recently completed a physical count of ending merchandise inventory to use in preparing adjusting entries. In determining the cost of the counted inventory, company employees failed to consider that $3,000 of incoming goods had been shipped by a supplier on December 31 under an FOB shipping point agreement. These goods had been recorded in Merchandise Inventory as a purchase, but they were not included in the physical count because they were in transit. Explain how this overlooked fact affects the company's financial statements and the following ratios: return on equity, debt ratio, current ratio, profit margin ratio, and acid-test ratio.

Exercise 6-12
Recording effects of merchandising activities
C5

The following supplementary records summarize Duncan Company's merchandising activities for year 2002. Set up T-accounts for Merchandise Inventory and Cost of Goods Sold. Then record the summarized activities in the T-accounts and compute account balances. (*Hint:* See Exhibit 6.16.)

Cost of merchandise sold to customers in sales transactions	$196,000
Merchandise inventory, December 31, 2001	25,000
Invoice cost of merchandise purchases	192,500
Shrinkage determined on December 31, 2002	800
Cost of transportation-in	2,900
Cost of merchandise returned by customers and restored to inventory	2,100
Purchase discounts received	1,700
Purchase returns and allowances	4,000

Exercise 6-13
Computing and analyzing acid-test and current ratios
A2

Calculate the current and acid-test ratios for each of the following separate cases:

	Case X	Case Y	Case Z
Cash	$ 900	$ 810	$1,000
Short-term investments	0	0	600
Receivables	0	1,090	700
Inventory	3,000	1,100	4,100
Prepaid expenses	1,300	500	900
Total current assets	$5,200	$3,500	$7,300
Current liabilities	$2,200	$1,200	$3,750

Which company case is in the best position to meet short-term obligations? Explain your choice.

Exercise 6-14
Determining profitability and merchandising cash flows
A1

A company reports the following balances and activities at year-end:

Net sales	$1,010,000
Cost of goods sold	565,000
Increase in accounts receivable for the period	45,000
Cash payments to suppliers of goods	515,000

Required

1. Calculate gross profit.
2. Calculate cash received from customers.
3. Calculate cash flows from customers less cash flows paid to suppliers.

Exercise 6-15[A]
Preparing adjusting and closing entries for a merchandiser
P3

The following list includes some permanent accounts and all of the temporary accounts from the December 31, 2002, unadjusted trial balance of Davis Sales, a business owned by Julie Davis. Use these account balances along with the additional information to journalize adjusting and closing entries. Davis Sales uses a perpetual inventory system.

	Debit	Credit
Merchandise inventory	$ 30,000	
Prepaid selling expenses	5,500	
Julie Davis, Withdrawals	2,200	
Sales		$529,000
Sales returns and allowances	17,500	
Sales discounts	5,000	
Cost of goods sold	212,000	
Sales salaries expense	48,000	
Utilities expense	15,000	
Selling expenses	36,000	
Administrative expenses	105,000	

Additional Information

Accrued sales salaries amount to $1,700. Prepaid selling expenses of $3,000 have expired. A physical count of merchandise inventory discloses $28,450 of goods available.

Exercise 6-16[A]
Preparing journal entries to contrast the periodic and perpetual systems
P1 P2 P5

Journalize the following merchandising transactions for Texas Systems assuming it uses a (a) periodic system and (b) perpetual system.

1. On November 1, Texas Systems purchases merchandise for $1,500 on credit with terms of 2/5, n/30, FOB shipping point.
2. On November 5, Texas Systems pays cash for the November 1 purchase.
3. On November 7, Texas Systems discovers and returns $200 of defective merchandise purchased on November 1 for a cash refund.
4. On November 10, Texas Systems pays $90 cash for transportation costs with the November 1 purchase.
5. On November 13, Texas Systems sells merchandise for $1,600 on credit. The cost of the merchandise is $800.
6. On November 16, the customer returns merchandise from the November 13 transaction. The returned items sell for $300 and cost $150.

PROBLEM SET A

Problem 6-1A
Preparing journal entries for merchandising activities (perpetual system)
P1 P2

Prepare journal entries to record the following perpetual system merchandising transactions of Heflin Company. (Use a separate account for each receivable and payable; for example, record the purchase on August 1 in Accounts Payable—Chapman Co.)

Aug.	1	Purchased merchandise from Chapman Company for $7,500 under credit terms of 1/10, n/30, FOB destination.
	4	At Chapman's request, Heflin paid $200 cash for freight charges on the August 1 purchase, reducing the amount owed to Chapman.
	5	Sold merchandise to Griffin Corp. for $5,200 under credit terms of 2/10, n/60, FOB destination. The merchandise had cost $4,000.

8 Purchased merchandise from Follmer Corporation for $5,400 under credit terms of 1/10, n/45, FOB shipping point. The invoice showed that at Heflin's request, Follmer paid the $140 shipping charges and added that amount to the bill.
9 Paid $125 cash for shipping charges related to the August 5 sale to Griffin Corp.
10 Griffin returned merchandise from the August 5 sale that had cost $400 and been sold for $600. The merchandise was restored to inventory.
12 After negotiations with Follmer Corporation concerning problems with the merchandise purchased on August 8, Heflin received a credit memorandum from Follmer granting a price reduction of $700.
15 Received balance due from Griffin Corp. for the August 5 sale less the return on August 10.
18 Paid the amount due Follmer Corporation for the August 8 purchase less the price reduction granted.
19 Sold merchandise to Trigger for $4,800 under credit terms of 1/10, n/30, FOB shipping point. The merchandise had cost $2,400.
22 Trigger requested a price reduction on the August 19 sale because the merchandise did not meet specifications. Sent Trigger a credit memorandum for $500 to resolve the issue.
29 Received Trigger's cash payment for the amount due from the August 19 purchase.
30 Paid Chapman Company the amount due from the August 1 purchase.

Check Aug. 18, Cr. Cash, $4,793

Problem 6-2A
Preparing journal entries for merchandising activities (perpetual system)
P1 P2

Prepare journal entries to record the following perpetual system merchandising transactions of Beltran Company. (Use a separate account for each receivable and payable; for example, record the purchase on July 1 in Accounts Payable—White Co.)

July 1 Purchased merchandise from White Company for $6,000 under credit terms of 1/15, n/30, FOB shipping point.
2 Sold merchandise to Terry Co. for $900 under credit terms of 2/10, n/60, FOB shipping point. The merchandise had cost $500.
3 Paid $125 cash for freight charges on the purchase of July 1.
8 Sold merchandise that cost $1,300 for $1,700 cash.
9 Purchased merchandise from Kane Co. for $2,200 under credit terms of 2/15, n/60, FOB destination.
11 Received a $200 credit memorandum from the return of merchandise purchased on July 9.
12 Received the balance due from Terry Co. for the credit sale dated July 2, net of the discount.
16 Paid the balance due to White Company within the discount period.
19 Sold merchandise that cost $800 to Jolie Co. for $1,200 under credit terms of 2/15, n/60, FOB shipping point.
21 Issued a $150 credit memorandum to Jolie Co. for an allowance on goods sold on July 19.
22 Received a debit memorandum from Jolie Co. for an error that overstated the total sales invoice by $50.
24 Paid Kane Co. the balance due after deducting the discount.
30 Received the balance due from Jolie Co. for the credit sale dated July 19, net of discount.
31 Sold merchandise that cost $4,800 to Terry Co. for $7,000 under credit terms of 2/10, n/60, FOB shipping point.

Check July 30, Dr. Cash, $980

Problem 6-3A
Preparing adjusting entries and income statements, and computing gross margin, acid-test, and current ratios
P3 P4 A2 A3

The following unadjusted trial balance is prepared at fiscal year-end for Tioga Company:

TIOGA COMPANY
Unadjusted Trial Balance
January 31, 2002

	Debit	Credit
Cash	$ 5,300	
Merchandise inventory	12,500	
Store supplies	5,800	
Prepaid insurance	2,400	
Store equipment	42,800	
Accumulated depreciation—Store equipment		$ 15,250
Accounts payable		10,000
Laura Izon, Capital		36,200
Laura Izon, Withdrawals	4,200	
Sales		111,950
Sales discounts	2,000	
Sales returns and allowances	2,200	
Cost of goods sold	38,400	
Depreciation expense—Store equipment	0	
Salaries expense	35,000	
Insurance expense	0	
Rent expense	15,000	
Store supplies expense	0	
Advertising expense	8,800	
Totals	$ 173,400	$ 173,400

Rent and salaries expenses are equally divided between selling activities and the general and administrative activities. Tioga Company uses a perpetual inventory system.

Required

1. Prepare adjusting journal entries for the following:
   a. Store supplies available at fiscal year-end amount to $1,750.
   b. Expired insurance, an administrative expense, for the fiscal year is $1,400.
   c. Depreciation expense on store equipment, a selling expense, is $1,525 for the fiscal year.
   d. To estimate shrinkage, a physical count of ending merchandise inventory is taken. It shows $10,900 of goods are available for sale.

2. Prepare a multiple-step income statement for fiscal year 2002.

Check (3) Total expenses, $104,775

3. Prepare a single-step income statement for fiscal year 2002.

4. Compute the company's current ratio, acid-test ratio, and gross margin ratio as of January 31, 2002.

Problem 6-4A
Computing and formatting an income statement
P4 A1

Big Star Company's adjusted trial balance on August 31, 2002, its fiscal year-end, follows:

	Debit	Credit
Merchandise inventory	$ 41,000	
Other assets	130,400	
Liabilities		$ 25,000
S. Stone, Capital		110,550
S. Stone, Withdrawals	14,000	
Sales		225,600
Sales discounts	2,250	
Sales returns and allowances	12,000	
Cost of goods sold	74,500	
Sales salaries expense	32,000	
Rent expense, selling space	8,000	
Store supplies expense	1,500	
Advertising expense	13,000	
Office salaries expense	28,500	
Rent expense, office space	3,600	
Office supplies expense	400	
Totals	$361,150	$361,150

On August 31, 2001, merchandise inventory amounted to $26,000. Supplementary records of merchandising activities for the year ended August 31, 2002, reveal the following itemized costs:

Invoice cost of merchandise purchases	$92,000
Purchase discounts received	2,000
Purchase returns and allowances	4,500
Costs of transportation-in	4,000

Required

1. Compute the company's net sales for the year.

2. Compute the company's total cost of merchandise purchased for the year.

3. Prepare a multiple-step income statement that lists the company's net sales, cost of goods sold, and gross profit, as well as the components and amounts of selling expenses and general and administrative expenses.

Check (4) Total expenses, $161,500

4. Prepare a single-step income statement that lists these costs: cost of goods sold, selling expenses, and general and administrative expenses.

5. Accounts receivable decreased during the period by $30,000. Compute cash received from customers.

Problem 6-5A
Preparing closing entries and interpreting information about discounts and returns

P3

Use the data for Big Star Company in Problem 6-4A to complete the following requirements:

Required

Preparation Component

1. Prepare closing entries under the perpetual system as of August 31, 2002.

Check (1) $49,850 Dr. to close Income Summary

Analysis Component

2. The company makes all purchases on credit, and its suppliers uniformly offer a 3% sales discount. Does it appear that the company's cash management system is accomplishing the goal of taking all available discounts? Explain.

3. In prior years, the company experienced a 4% return and allowance rate on its sales, which means approximately 4% of its gross sales were eventually returned outright or caused the company to grant allowances to customers. How do this year's results compare to prior years' results?

PROBLEM SET B

Problem 6-1B
Preparing journal entries for merchandising activities (perpetual system)

P1 P2

Prepare journal entries to record the following perpetual system merchandising transactions of Whitecap Company. (Use a separate account for each receivable and payable; for example, record the purchase on July 3 in Accounts Payable—MAP Corp.)

July 3 Purchased merchandise from MAP Corp. for $15,000 under credit terms of 1/10, n/30, FOB destination.
4 At MAP's request, Whitecap paid $150 cash for freight charges on the July 3 purchase, reducing the amount owed to MAP.
7 Sold merchandise to Bergez Co. for $11,500 under credit terms of 2/10, n/60, FOB destination. The merchandise had cost $7,750.
10 Purchased merchandise from McFarland Corporation for $14,250 under credit terms of 1/10, n/45, FOB shipping point. The invoice showed that at Whitecap's request, McFarland paid the $500 shipping charges and added that amount to the bill.
11 Paid $300 cash for shipping charges related to the July 7 sale to Bergez Co.
12 Bergez returned merchandise from the July 7 sale that had cost $1,450 and been sold for $1,850. The merchandise was restored to inventory.
14 After negotiations with McFarland Corporation concerning problems with the merchandise purchased on July 10, Whitecap received a credit memorandum from McFarland granting a price reduction of $2,000.
17 Received balance due from Bergez Co. for the July 7 sale less the return on July 12.
20 Paid the amount due McFarland Corporation for the July 10 purchase less the price reduction granted.
21 Sold merchandise to Harden for $11,000 under credit terms of 1/10, n/30, FOB shipping point. The merchandise had cost $7,000.
24 Harden requested a price reduction on the July 21 sale because the merchandise did not meet specifications. Sent Harden a credit memorandum for $1,300 to resolve the issue.
31 Received Harden's cash payment for the amount due from the July 21 purchase.
31 Paid MAP Corp. the amount due from the July 3 purchase.

Check July 20, Cr. Cash, $12,627.5

Problem 6-2B
Preparing journal entries for merchandising activities (perpetual system)

P1 P2

Prepare journal entries to record the following perpetual system merchandising transactions of Chang Company. (Use a separate account for each receivable and payable; for example, record the purchase on May 2 in Accounts Payable—McManus Co.)

May 2 Purchased merchandise from McManus Co. for $10,000 under credit terms of 1/15, n/30, FOB shipping point.
4 Sold merchandise to Four Winds Co. for $11,000 under credit terms of 2/10, n/60, FOB shipping point. The merchandise had cost $5,600.
5 Paid $250 cash for freight charges on the purchase of May 2.
9 Sold merchandise that cost $2,000 for $2,500 cash.
10 Purchased merchandise from Alvarez Co. for $3,650 under credit terms of 2/15, n/60, FOB destination.
12 Received a $400 credit memorandum from the return of merchandise purchased on May 10.
14 Received the balance due from Four Winds Co. for the credit sale dated May 4, net of the discount.
17 Paid the balance due to McManus Co. within the discount period.

20 Sold merchandise that cost $1,450 to Wickham Co. for $2,800 under credit terms of 2/15, n/60, FOB shipping point.

22 Issued a $325 credit memorandum to Wickham Co. for an allowance on goods sold from May 20.

23 Received a debit memorandum from Wickham Co. for an error that overstated the total invoice by $75.

25 Paid Alvarez Co. the balance due after deducting the discount.

Check May 30, Dr. Cash, $2,352

30 Received the balance due from Wickham Co. for the credit sale dated May 20, net of discount.

31 Sold merchandise that cost $3,600 to Four Winds Co. for $7,200 under credit terms of 2/10, n/60, FOB shipping point.

Problem 6-3B

Preparing adjusting entries and income statements, and computing gross margin, acid-test, and current ratios

P3 P4 A2 A3

The following unadjusted trial balance is prepared at fiscal year-end for Durable Products Co.:

DURABLE PRODUCTS COMPANY
Unadjusted Trial Balance
October 31, 2002

	Debit	Credit
Cash	$ 7,400	
Merchandise inventory	24,000	
Store supplies	9,700	
Prepaid insurance	5,600	
Store equipment	84,900	
Accumulated depreciation—Store equipment		$ 32,000
Accounts payable		18,000
Jan Bergen, Capital		52,400
Jan Bergen, Withdrawals	7,400	
Sales		227,100
Sales discounts	1,000	
Sales returns and allowances	5,000	
Cost of goods sold	75,900	
Depreciation expense—Store equipment	0	
Salaries expense	63,000	
Insurance expense	0	
Rent expense	26,000	
Store supplies expense	0	
Advertising expense	17,800	
Totals	$ 327,500	$ 327,500

Rent and salaries expenses are equally divided between selling activities and the general and administrative activities. Durable Products Company uses a perpetual inventory system.

Required

1. Prepare adjusting journal entries for the following:

a. Store supplies available at fiscal year-end amount to $3,700.

b. Expired insurance, an administrative expense, for the fiscal year is $2,800.

c. Depreciation expense on store equipment, a selling expense, is $3,000 for the fiscal year.

d. To estimate shrinkage, a physical count of ending merchandise inventory is taken. It shows $21,300 of goods are available for sale.

2. Prepare a multiple-step income statement for fiscal year 2002.

Check (3) Total expenses, $197,100

3. Prepare a single-step income statement for fiscal year 2002.

4. Compute the company's current ratio, acid-test ratio, and gross margin ratio as of October 31, 2002.

Problem 6-4B

Computing and formatting an income statement

P4 A1

Ryan Company's adjusted trial balance on March 31, 2002, its fiscal year-end, follows:

	Debit	Credit
Merchandise inventory	$ 56,500	
Other assets	202,600	
Liabilities		$ 42,500
Cook Ryan, Capital		175,425
Cook Ryan, Withdrawals	14,000	

[continued on next page]

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	Debit	Credit
Sales		332,650
Sales discounts	5,875	
Sales returns and allowances	20,000	
Cost of goods sold	115,600	
Sales salaries expense	44,500	
Rent expense—Selling space	16,000	
Store supplies expense	3,850	
Advertising expense	26,000	
Office salaries expense	40,750	
Rent expense—Office space	3,800	
Office supplies expense	1,100	
Totals	$550,575	$550,575

On March 31, 2001, merchandise inventory amounted to $37,500. Supplementary records of merchandising activities for the year ended March 31, 2002, reveal the following itemized costs:

Invoice cost of merchandise purchases	$138,500
Purchase discounts received	2,950
Purchase returns and allowances	6,700
Costs of transportation-in	5,750

Required

1. Calculate the company's net sales for the year.

2. Calculate the company's total cost of merchandise purchased for the year.

3. Prepare a multiple-step income statement that lists the company's net sales, cost of goods sold, and gross profit, as well as the components and amounts of selling expenses and general and administrative expenses.

4. Prepare a single-step income statement that lists these costs: cost of goods sold, selling expenses, and general and administrative expenses.

Check (4) Total expenses, $251,600

5. Accounts receivable increased by $50,000 during the period. Calculate cash received from customers.

Problem 6-5B

Preparing closing entries and interpreting information about discounts and returns

P3

Use the data for Ryan Company in Problem 6-4B to complete the following requirements:

Required

Preparation Component

1. Prepare closing entries under the perpetual system as of March 31, 2002.

Check (1) $55,175 Dr. to close Income Summary

Analysis Component

2. The company makes all purchases on credit, and its suppliers uniformly offer a 3% sales discount. Does it appear that the company's cash management system is accomplishing the goal of taking all available discounts? Explain.

3. In prior years, the company experienced a 4% return and allowance rate on its sales, which means approximately 4% of its gross sales were eventually returned outright or caused the company to grant allowances to customers. How do this year's results compare to prior years' results?

SERIAL PROBLEM

Sierra Systems

(The first three segments of this comprehensive problem were presented in Chapters 3, 4, and 5. If those segments have not been completed, the assignment can begin at this point. You should use the Working Papers that accompany this text because they reflect the account balances that resulted from posting the entries required in Chapters 3, 4, and 5.)

Earlier segments of this problem have described how Sela Solstise created Sierra Systems on October 1, 2002. The company has been successful, and its list of customers has grown. To accommodate the growth, the accounting system is modified to set up separate accounts for each customer. The following list of customers includes the account number used for each account and any balance as of December 31, 2002. Solstise decided to add a fourth digit with a decimal point to the 106 account number that had been used for the single Accounts Receivable account. This modification allows the company to continue using the existing chart of accounts.

Customer Account	No.	Balance
Antonio's Engineering Co.	106.1	$ 0
Alexander Services	106.2	0
Prime Leasing	106.3	0
Dade Co.	106.4	3,000
Elan Corporation	106.5	0
Foster Co..	106.6	2,668
Olathe Co.	106.7	0
Taos, Inc.	106.8	0
Imagine, Inc.	106.9	0

In response to requests from customers, Solstise has decided to begin selling computer software. The company also will extend credit terms of 1/10, n/30 to all customers who purchase this merchandise. No cash discount will be available on consulting fees. The following additional accounts are added to the general ledger to allow the system to account for the company's new merchandising activities:

Account	No.
Merchandise Inventory	119
Sales.	413
Sales Returns and Allowances	414
Sales Discounts	415
Cost of Goods Sold	502

Sierra Systems does not use reversing entries and, therefore, all revenue and expense accounts have zero balances as of January 1, 2003. Its transactions for January through March follow:

Jan. 4 Paid cash to Suzie Smith for five days' work at the rate of $125 per day. Four of the five days are unpaid days of work from the prior year.

5 Sela Solstise invested an additional $25,000 cash in the business.

7 Purchased $5,800 of merchandise from Jersey Corp. with terms of 1/10, n/30, FOB shipping point.

9 Received $2,668 cash from Foster Co. as final payment on its account.

11 Completed a five-day project for Antonio's Engineering Co. and billed it $5,500, which is the total price of $7,000 less the advance payment of $1,500.

13 Sold merchandise with a retail value of $5,200 and a cost of $3,560 to Elan Corporation with terms of 1/10, n/30, FOB shipping point.

15 Paid $600 cash for freight charges on the merchandise purchased on January 7.

16 Received $4,000 cash from Olathe Co. for computer services provided.

17 Paid Jersey Corp. for the purchase on January 7, net of the discount.

20 Elan Corporation returned $500 of defective merchandise from its purchase on January 13. The returned merchandise, which had a $320 cost, is discarded.

22 Received the balance due from Elan Corporation, net of both the discount and the credit for the returned merchandise.

24 Returned defective merchandise to Jersey Corp. and accepted credit against future purchases. Its cost, net of the discount, was $496.

26 Purchased $9,000 of merchandise from Jersey Corp. with terms of 1/10, n/30, FOB destination.

26 Sold merchandise with a $4,640 cost for $5,800 on credit to Taos, Inc.

29 Received a $496 credit memorandum from Jersey Corp. concerning the merchandise returned on January 24.

31 Paid cash to Suzie Smith for 10 days' work at $125 per day.

Feb.	1	Paid $2,475 cash to Hilldale Mall for another three months' rent in advance.
	3	Paid Jersey Corp. for the balance due, net of the cash discount, less the $496 amount in the credit memorandum.
	5	Paid $600 cash to the local newspaper for an advertising insert in today's paper.
	11	Received the balance due from Antonio's Engineering Co. for fees billed on January 11.
	15	Sela Solstise withdrew $4,800 cash.
	23	Sold merchandise with a $2,660 cost for $3,220 on credit to Olathe Co.
	26	Paid cash to Suzie Smith for eight days' work at $125 per day.
	27	Reimbursed Sela Solstise for business automobile mileage (600 miles at $0.32 per mile).
Mar.	8	Purchased $2,730 of computer supplies from Appier Office Products on credit.
	9	Received the balance due from Olathe Co. for merchandise sold on February 23.
	11	Paid $960 cash to repair the company's computer.
	16	Received $5,260 cash from Imagine, Inc., for computing services provided.
	19	Paid the full amount due to Appier Office Products, including amounts created on December 15 and March 8.
	24	Billed Prime Leasing for $8,900 of computing services provided.
	25	Sold merchandise with a $2,002 cost for $2,800 on credit to Alexander Services.
	30	Sold merchandise with a $1,100 cost for $2,220 on credit to Dade Company.
	31	Reimbursed Sela Solstise for business automobile mileage (400 miles at $0.32 per mile).

The following additional facts are available for preparing adjustments on March 31 prior to financial statement preparation:

a. The March 31 inventory of computer supplies totals $2,005.

b. Three more months have passed since the company purchased its annual insurance policy at a $2,220 cost.

c. Suzie Smith has not been paid for seven days of work.

d. Three months have passed since any prepaid rent has been transferred to expense. The monthly rent is $825.

e. Depreciation on the computer equipment for January 1 through March 31 is $1,250.

f. Depreciation on the office equipment for January 1 through March 31 is $400.

g. The March 31 amount of merchandise inventory totals $704.

Required

1. Prepare journal entries to record each of the January through March transactions.
2. Post the journal entries to the accounts in the company's general ledger. (Begin with the post-closing adjusted balances as of December 31, 2002.)
3. Prepare a partial work sheet consisting of the first six columns (similar to the one shown in Exhibit 6A.3) that includes the unadjusted trial balance, the March 31 adjustments (a) through (g), and the adjusted trial balance. Do not prepare closing entries and do not journalize the adjusting entries or post them to the ledger.
4. Prepare an income statement for the three months ended March 31, 2003. Use a single-step format. List all expenses without differentiating between selling expenses and general and administrative expenses.
5. Prepare a statement of changes in owner's equity for the three months ended March 31, 2003.
6. Prepare a balance sheet as of March 31, 2003.

Beyond the Numbers

Reporting in Action

A2 C5

NIKE

BTN 6-1 Refer to **Nike**'s financial statements in Appendix A.

Required

1. Assume that the amounts reported for inventories and cost of sales reflect items purchased in a form ready for resale. Compute the net cost of goods purchased for the fiscal year ended May 31, 2000.
2. Compute the current and acid-test ratios as of May 31, 2000, and May 31, 1999. Comment on the ratio results.

Swoosh Ahead

3. Access Nike's annual report for fiscal years ending after May 31, 2000, from its Web site **[www.nike.com]** or the SEC's EDGAR database **[www.sec.gov].** Recompute the current and acid-test ratios for fiscal years ending after May 31, 2000.

Comparative Analysis

A3

BTN 6-2 Key comparative figures ($ millions) for both **Nike** and **Reebok** follow:

	Nike		Reebok	
Key Figures	**Current Year**	**Prior Year**	**Current Year**	**Prior Year**
Revenues (net sales)	$8,995.1	$8,776.9	$2,899.9	$3,224.6
Cost of sales	5,403.8	5,493.5	1,783.9	2,037.5

Required

1. Compute the dollar amount of gross margin and the gross margin ratio for the two years shown for both companies.
2. Which company earns more in gross margin for each dollar of net sales?
3. Did the gross margin ratios improve or decline for these companies?

Ethics Challenge

P2

BTN 6-3 Helen Gaines is a student who plans to attend approximately four professional events a year at her college. Each event requires a new dress and accessories that necessitate a financial outlay of $100–$200 per event. After incurring a major hit to her savings for the first event in her freshman year, Helen developed a different approach. She buys the dress on credit the week before the event, wears it to the event, and returns it the next week to the store for a full refund on her charge card.

Required

1. Comment on the ethics exhibited by Helen and possible consequences of her actions.
2. How does the merchandising company account for the dresses that Helen returns?

Communicating in Practice

C4 C5 P3

BTN 6-4 You are the accountant for **Music and More**, a retailer that sells goods for home entertainment needs. The business owner, Mr. U. Paah, recently reviewed the annual financial statements you prepared and sent you an e-mail stating that he thinks you overstated net income. He explains that although he has invested a great deal in security, he is sure shoplifting and other forms of inventory shrinkage have occurred, but he does not see any deduction for shrinkage on the income statement. The store uses a perpetual inventory system.

Required

Prepare a brief memorandum that responds to the owner's concerns in paper or e-mail format. If the response is made via e-mail, assume that your instructor is the owner instead of Mr. U. Paah.

Taking It to the Net

C1

BTN 6-5 Access **www.edgar-online.com** and obtain the June 2, 2000, 10-K report filed by **eToys.com Inc.** (ticker ETYS). Construct a three-year trend of gross margin ratios for eToys using the net sales and cost of goods sold data on eToys' income statement. Analyze and comment on the trend.

Teamwork in Action

C2 C5 A3

BTN 6-6 **World Brands**' ledger and supplementary records at the end of its current period reveal the following:

Sales	$430,000	Merchandise inventory (beginning of period) . .	$ 49,000
Sales returns	18,000	Invoice cost of merchandise purchases	180,000
Sales discounts	6,600	Purchase discounts received	4,500
Cost of transportation-in . . .	11,000	Purchase returns and allowances	5,500
Operating expenses	20,000	Merchandise inventory (end of period)	42,000

Required

1. *Each* member of the team is to assume responsibility for computing *one* of the following items. You are not to duplicate your teammates' work. Get any necessary amounts to compute your item from the appropriate teammate. Each member is to explain his/her computation to the team in preparation for reporting to the class.
   a. Net sales
   b. Total cost of merchandise purchases
   c. Cost of goods sold
   d. Gross profit
   e. Net income
2. Check your net income with the instructor. If correct, proceed to step (3).
3. Assume that a physical inventory finds that actual ending inventory is $38,000. Discuss how this affects previously computed amounts in step (1).

Point: In teams of four, assign the same student (a) and (e). Rotate teams for reporting on a different computation and the analysis in (3).

Business Week Activity

P4

BTN 6-7 Read the article, "You Can Survive Online Shopping" in the December 6, 1999, issue of ***Business Week***.

Required

1. How does the 1999 projected dollar volume of online November and December shopping compare to the 1998 figure?
2. Return policies for e-merchants vary widely. Discuss the variety of return policies implemented by online retailers.
3. What account title would you recommend an online retailer use to record goods returned that were purchased online? Would you record these returns in a separate account from goods that were purchased in a store and returned (assuming the retailer operates a "bricks-and-mortar" storefront as well as online retailing)? Explain your answer.

Entrepreneurial Decision

C1 C5 P4

e

BTN 6-8 Steve Miller is an entrepreneur who buys and sells new and used musical instruments to small retail outlets that offer musical instruments and training to customers. He recently completed his first year of operations. His income statement follows:

MUSICAL INSTRUMENTS
Income Statement
For Year Ended January 31, 2002

Net Sales	$ 250,000
Cost of sales	(175,000)
Expenses	(20,000)
Net income	$ 55,000

To increase income, Miller is proposing to offer sales discounts of 3/10, n/30, and to ship all merchandise FOB shipping point. He presently offers no discounts and ships merchandise FOB destination. The discounts are predicted to increase net sales by 14%; the ratio of cost of sales to net sales is expected to remain unchanged. Since delivery expenses are zero under this proposal, the expenses are predicted to increase by only 10%.

Required

1. Prepare a forecasted income statement for the year ended January 31, 2003, based on Miller's proposal.
2. Do you recommend that Miller implement his proposal given your analysis in part *1*?
3. Identify any concerns you might express to Miller regarding his proposal.