CHAPTER 5

Accounting for Merchandising Activities

Many companies earn profits by buying merchandise and selling it to customers. Accounting helps managers to determine the amount of income earned by these companies and the cost of the inventory they have on hand.

Karen White and Mark Smith's continued interest in Imperial Oil Limited brought them back to both the company's financial statements and the section in Chapter 3 discussing the current ratio. They focused on the part that stated: "The current ratio is widely used to describe the company's ability to pay its short-term obligations." White and Smith then examined the composition of Imperial's current assets and the level of current liabilities, presented in the table below:

White and Smith left the school library wondering how items such as "Inventories of crude oil and products" and "materials, supplies and prepaid expenses" could be used to pay the current liabilities. They intended to raise this issue in their next accounting class.

IMPERIAL OIL LIMITED (in millions) December 31	1994	1993
Current assets:		
Cash	$ 409	$ 605
Marketable securities at cost	859	874
Accounts receivable	1,045	889
Inventories of crude oil and products	384	402
Materials, supplies and prepaid expenses	100	129
Total current assets	$2,797	$2,899
Total current liabilities	$1,581	$1,593

LEARNING OBJECTIVES

After studying Chapter 5, you should be able to:

1. **Describe merchandising activities, analyze their effects on financial statements, and record sales of merchandise.**
2. **Describe how the ending inventory and the cost of goods sold are determined with perpetual and periodic inventory accounting systems.**
3. **Describe various formats for income statements and prepare closing entries for a merchandising business.**
4. **Complete a work sheet that includes the inventory-related accounts.**
5. **Calculate the acid-test ratio and describe what it reveals about a company's liquidity.**
6. **Define or explain the words and phrases in the chapter glossary.**

After studying Appendix E at the end of Chapter 5, you should be able to:

7. **Explain an adjusting entry approach to recording the change in the Merchandise Inventory account.**

The first four chapters in this book used only service companies as examples of businesses that prepare financial statements. This chapter introduces some of the business and accounting practices used by companies that engage in merchandising activities. These companies buy goods and then resell them to customers. This chapter shows how the financial statements describe the special transactions and assets related to these activities. In particular, you will learn about the additional financial statement elements created by merchandising activities. To help you understand where the information comes from, we describe how accountants close the accounts of merchandising companies and design income statements.

THE NATURE OF MERCHANDISING ACTIVITIES

LO 1

Describe merchandising activities, analyze their effects on financial statements, and record sales of merchandise.

The first four chapters have described the financial statements and accounting records of Clear Copy. Because it provides services to its customers, Clear Copy is a service company. Other examples of service companies include **Greyhound Lines Inc.; Air Canada; Price Waterhouse;** and **Richardson Greenshields of Canada Limited**. In return for services provided to its customers, a service company receives commissions, fares, or fees as revenue. Its net income for a reporting period is the difference between its revenues and the operating expenses incurred in providing the services.

In contrast, a merchandising company earns net income by buying and selling **merchandise,** which consists of goods that the company acquires for the purpose of reselling them to customers.[1] To achieve a net income, the revenue from selling the merchandise needs to exceed not only the cost of the merchandise sold to customers but also the company's other operating expenses for the reporting period.

[1]A merchandising company can be either a wholesaler or a retailer. Wholesalers buy goods from manufacturers and sell them to retailers or other wholesalers. Retailers buy goods from wholesalers and sell them to individual customers.

The accounting term for the revenues from selling merchandise is *sales* and the term used to describe the expense of buying and preparing the merchandise is *cost of goods sold.*[2] The company's other expenses are often called *operating expenses.* This condensed income statement for Meg's Mart shows you how these three elements of net income are related to each other:

MEG'S MART
Condensed Income Statement
For Year Ended December 31, 1997

Net sales	$314,700
Cost of goods sold	(230,400)
Gross profit from sales	$ 84,300
Total operating expenses	(62,800)
Net income	$ 21,500

This income statement tells us that Meg's Mart sold goods to its customers for $314,700. The company acquired those goods at a total cost of $230,400. As a result, it earned $84,300 of **gross profit,** which is the difference between the net sales and the cost of goods sold. In addition, the company incurred $62,800 of operating expenses and achieved $21,500 of net income for the year.

A merchandising company's balance sheet includes an additional element that is not on the balance sheet of a service company. In Illustration 5–1, we present the classified balance sheet for Meg's Mart. Notice that the current asset section includes an item called **merchandise inventory.** Even though they also have inventories of supplies, most companies simply refer to merchandise on hand as *inventory.* This asset consists of goods the company owns on the balance sheet date and holds for the purpose of selling to its customers. The $21,000 amount listed for the inventory is the costs incurred to buy the goods, ship them to the store, and otherwise make them ready for sale.

The next sections of the chapter provide more information about these unique elements of the financial statements for merchandising companies.

TOTAL REVENUE FROM SALES

This schedule shows how Meg's Mart calculates its *net sales* for 1997:

MEG'S MART
Calculation of Net Sales
For Year Ended December 31, 1997

Sales		$321,000
Less: Sales returns and allowances	$2,000	
Sales discounts	4,300	6,300
Net sales		$314,700

[2]Many service companies also use the word *sales* to describe their revenues.

Illustration 5-1
Classified Balance Sheet for a Merchandising Company

MEG'S MART
Balance Sheet
December 31, 1997

Assets

Current assets:			
Cash		$ 8,200	
Accounts receivable		11,200	
Merchandise inventory		21,000	
Prepaid expenses		1,100	
Total current assets			$41,500
Capital assets:			
Office equipment	$ 4,200		
Less accumulated amortization	1,400	$ 2,800	
Store equipment	$30,000		
Less accumulated amortization	6,000	24,000	
Total capital assets			26,800
Total assets			$68,300

Liabilities

Current liabilities:		
Accounts payable	$16,000	
Salaries payable	800	
Total liabilities		$16,800

Owner's Equity

Meg Harlowe, capital	51,500
Total liabilities and owner's equity	$68,300

The components of this calculation are described in the following paragraphs.

Sales

The sales item in this calculation is the total cash and credit sales made by the company during the year. Each cash sale was rung up on one of the company's cash registers. At the end of each day, the total cash sales for the day were recorded with a journal entry like this one for November 3:

Nov.	3	Cash	1,205.00	
		Sales		1,205.00
		Sold merchandise for cash.		

This entry records the fact that the cash received from customers represents sales revenue earned by the company.

In addition, a journal entry would be prepared each day to record the credit sales made on that day. For example, this entry records $450 of credit sales on November 3:

Nov.	3	Accounts Receivable	450.00	
		Sales		450.00
		Sold merchandise on credit.		

This entry records the increase in the company's assets in the form of the accounts receivable and records the revenue from the credit sales.[3]

Sales Returns and Allowances

To meet their customers' needs, most companies allow customers to return any unsuitable merchandise for a full refund. If a customer keeps the unsatisfactory goods and is given a partial refund of the selling price, the company is said to have provided a sales *allowance.* Either way, returns and allowances involve dissatisfied customers and the possibility of lost future sales. To monitor the extent of these problems, managers need information about actual returns and allowances. Thus, many accounting systems record returns and allowances in a separate *contra-revenue* account like the one used in this entry to record a $200 cash refund:

Nov.	3	Sales Returns and Allowances	200.00	
		Cash		200.00
		Customer returned defective merchandise.		

The company could record the refund with a debit to the Sales account. Although this would provide the same measure of net sales, it would not provide information that the manager can use to monitor the refunds and allowances. By using the Sales Returns and Allowances contra account, the information is readily available. To simplify the reports provided to external decision makers, published income statements usually omit this detail and present only the amount of net sales.

Sales Discounts

When goods are sold on credit, the expected amounts and dates of future payments need to be clearly stated to avoid misunderstandings. The **credit terms** for a sale describe the amounts and timing of payments that the buyer agrees to make in the future. The specific terms usually reflect the ordinary practices of most companies in the industry. For example, companies in one industry might expect to be paid 10 days after the end of the month in which a sale occurred. These credit terms would be stated on sales invoices or tickets as "n/10 EOM," with the abbreviation **EOM** standing for "end of the month." In another industry, invoices may normally be due and payable 30 calendar days after the invoice date. These terms are abbreviated as "n/30," and the 30-day period is called the **credit period.**

When the credit period is long, the seller often grants a **cash discount** if the customer pays promptly. These early payments are desirable because the seller re-

[3]Chapter 8 describes how stores account for sales to customers who use third-party credit cards, such as those issued by banks.

ceives the cash more quickly and can use it to carry on its activities. In addition, prompt payments reduce future efforts and costs of billing customers. These advantages are usually worth the cost of offering the discounts.

If cash discounts for early payment are granted, they are described in the credit terms on the invoice. For example, the terms of 2/10, n/60 mean that a 60-day credit period passes before full payment is due. However, to encourage early payment, the seller allows the buyer to deduct 2% of the invoice amount from the payment if it is made within 10 days of the invoice date. The **discount period** is the period in which the reduced payment can be made.

At the time of a credit sale, the seller does not know that the customer will pay within the discount period and take advantage of a cash discount. As a result, the discount is usually not recorded until the customer pays within the discount period. For example, suppose that Meg's Mart completed a credit sale on November 12 at a gross selling price of $100, subject to terms of 2/10, n/60. This entry records the sale:

Nov.	12	Accounts Receivable	100.00	
		Sales		100.00
		Sold merchandise under terms of 2/10, n/60.		

Even though the customer may pay less than the gross price, the entry records the receivable and the revenue as if the full amount will be collected.

In fact, the customer has two alternatives. One option is to wait 60 days until January 11 and pay the full $100. If this is done, Meg's Mart records the collection as follows:

Jan.	11	Cash	100.00	
		Accounts Receivable		100.00
		Collected account receivable.		

The customer's other option is to pay $98 within a 10-day period that runs through November 22. If the customer pays on November 22, Meg's Mart records the collection with this entry:

Nov.	22	Cash	98.00	
		Sales Discounts	2.00	
		Accounts Receivable		100.00
		Received payment for the November 12 sale less the discount.		

Cash discounts granted to customers are called **sales discounts.** Because management needs to monitor the amount of cash discounts to assess their effectiveness and their cost, they are recorded in a contra-revenue account called Sales Discounts.

The balance of this account is deducted from the balance of the Sales account when calculating the company's net sales. Although information about the amount of discounts is useful internally, it is seldom reported on income statements distributed to external decision makers.

Progress Check
(Answers to Progress Checks are provided at the end of the chapter.)

5–1 **Which of the following items is not unique to the financial statements of merchandising companies? *(a)* Cost of goods sold; *(b)* Accounts receivable; *(c)* Merchandise inventory.**

5–2 **What is a merchandising company's gross profit?**

5–3 **Why are sales returns and allowances and sales discounts recorded in contra-revenue accounts instead of in the Sales account? Is this information likely to be reported outside the company?**

5–4 **How long are the credit and discount periods under credit terms of 2/10, n/60?**

MEASURING INVENTORY AND COST OF GOODS SOLD

LO 2

Describe how the ending inventory and the cost of goods sold are determined with perpetual and periodic inventory accounting systems.

A merchandising company's balance sheet includes a current asset called *inventory* and its income statement includes the item called *cost of goods sold*. Both of these items are affected by the company's merchandise transactions. The amount of the asset on the balance sheet equals the cost of the inventory on hand at the end of the fiscal year. The amount of the cost of goods sold is the cost of the merchandise that was sold to customers during the year.

Two different inventory accounting systems may be used to collect information about the cost of the inventory on hand and the cost of goods sold. They are described in the following paragraphs.

Periodic and Perpetual Inventory Systems

The two basic types of inventory accounting systems are called *perpetual* and *periodic*. As suggested by their name, **perpetual inventory systems** maintain a continuous record of the amount of inventory on hand. This perpetual record is maintained by adding the cost of each newly purchased item to the inventory account and subtracting the cost of each sold item from the account. When an item is sold, its cost is recorded in the Cost of Goods Sold account. Whenever posting is up to date during the period, users of perpetual systems can determine the cost of merchandise on hand by looking at the balance of the inventory account. They can also determine the cost of goods sold thus far during the period by referring to the Cost of Goods Sold account.

Before computers were used widely, perpetual systems were generally applied only by businesses that made a limited number of sales each day, such as automobile dealers or major appliance stores. Because there were relatively few transactions, the perpetual accounting system could be operated efficiently. However, the availability of improved technology has greatly increased the number of companies that use perpetual systems.

Under **periodic inventory systems,** a company does not continuously update its records of the quantity and cost of goods that are on hand or sold. Instead, the company simply records the cost of new merchandise in a temporary *Purchases* account. When merchandise is sold, only the revenue is recorded. Then, when financial statements are prepared, the company takes a *physical inventory* by counting the quantities of merchandise on hand. The total cost is determined by relating the quantities to records that show each item's original cost. This total cost is then used to determine the cost of goods sold.

Traditionally, periodic systems were used by companies such as drug and department stores that sold large quantities of low-valued items. Without computers and scanners, it was not feasible for accounting systems to track such small items as toothpaste, pain killers, clothing, and housewares through the inventory and into the customers' hands.

Although perpetual systems are now more affordable, they are still not used by all merchandising companies. As a result, it will be helpful for you to understand how periodic systems work. In addition, studying periodic systems will help you visualize the flow of goods through inventory without having to learn the more complicated sequence of journal entries used in perpetual systems. (More information on perpetual systems is provided in Chapter 9. However, at this stage you may wish to consider journal-entry comparison of the two systems: comparison is provided in the footnote at the bottom of this page.[4])

CALCULATING THE COST OF GOODS SOLD WITH A PERIODIC INVENTORY SYSTEM

As mentioned earlier, a store that uses a periodic inventory system does not record the cost of merchandise items when they are sold. Rather, the accountant waits until the end of the reporting period and determines the cost of all the goods sold during the period. To make this calculation, the accountant must have information about:

1. The cost of merchandise on hand at the beginning of the period.
2. The cost of merchandise purchased during the period.
3. The cost of unsold goods on hand at the end of the period.

Look at Illustration 5–2 to see how this information can be used to measure the cost of goods sold for Meg's Mart.

In Illustration 5–2, note that Meg's Mart had $251,400 of goods available for sale during the period. They were available because the company had $19,000 of goods on hand when the period started and purchased an additional $232,400 of goods during the year.

The available goods either were sold during the period or on hand at the end of the period. Because the count showed that $21,000 were on hand at the end of the year, we can conclude that $230,400 must have been sold. This schedule presents the calculation:

[4]**Periodic**

Purchase of goods:		
Purchases	xxx	
Accounts payable		xxx
Sales of goods:		
Accounts receivable	xxx	
Sales		xxx

No entry; the impact of the cost of the goods is via an end-of-period update of inventory and the closing of purchases and related accounts.

Perpetual

Inventory	xxx	
Accounts payable		xxx
Accounts receivable	xxx	
Sales		xxx
Cost of goods sold	xxx	
Inventory		xxx

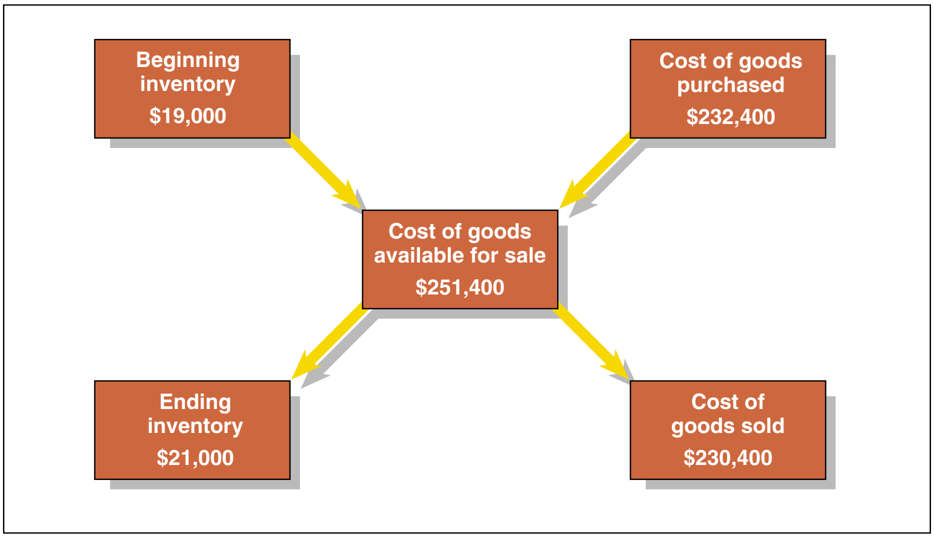


Illustration 5-2
The Flow of Goods and Costs through Inventory

MEG'S MART
Calculation of Cost of Goods Sold
For Year Ended December 31, 1997

Beginning inventory	$ 19,000
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

Note that if any three of the items in this calculation are known, they can be used to calculate the fourth. For example, **Example** Corporation's 1996 annual report disclosed the following information:

Beginning merchandise inventories	$2,269 million
Ending merchandise inventories	1,579 million
Cost of sales	$6,717 million

The cost of Example's purchases during 1996 can be calculated as follows:

Ending merchandise inventories	$1,579 million
Cost of sales	6,717 million
Cost of goods that must have been available for sale	$8,296 million
Less beginning merchandise inventories	2,269 million
Cost of goods purchased	$6,027 million

The following paragraphs explain how the accounting system accumulates the information that the accountant needs to make these calculations.

Measuring and Recording Merchandise Inventory

Because a new reporting period starts as soon as the old period ends, the ending inventory of one period is always the beginning inventory of the next. When a periodic inventory system is used, the dollar amount of the ending inventory is determined by (1) counting the unsold items in the store and the stockroom, (2) multiplying the counted quantity of each type of good by its cost, and (3) adding all the costs of the different types of goods. The cost of goods sold is found by subtracting the cost of the ending inventory from the cost of the goods available for sale.

Through the closing process described later in the chapter, the periodic system records the cost of the ending inventory in the *Merchandise Inventory* account. The balance in this account is not changed during the next accounting period. In fact, entries are made to the Merchandise Inventory account only at the end of the period. Thus, neither the purchases of new merchandise nor the cost of goods sold is entered in the Merchandise Inventory account. As a result, as soon as any goods are purchased or sold in the current period, the account no longer shows the cost of the merchandise on hand. Because the account's balance describes the beginning inventory of the period, it cannot be used on a new balance sheet without being updated by the closing entries described later in this chapter.

Recording the Cost of Purchased Merchandise

To determine the cost of purchased merchandise, the gross purchase price must be adjusted for the effects of (1) any cash discounts provided by the suppliers, (2) any returns and allowances for unsatisfactory items received from the suppliers, and (3) any freight costs paid by the buyer to get the goods into the buyer's inventory. For example, the cost of the goods purchased by Meg's Mart for 1997 is calculated as follows:

MEG'S MART
Calculation of Cost of Goods Purchased
For Year Ended December 31, 1997

Purchases		$235,800
Less: Purchases returns and allowances	$1,500	
Purchases discounts	4,200	5,700
Net purchases		$230,100
Add transportation-in		2,300
Cost of goods purchased		$232,400

The following paragraphs explain how these amounts are accumulated in the accounts.

The Purchases Account. Under a periodic inventory system, the cost of merchandise bought for resale is debited to a temporary account called *Purchases*. For example, Meg's Mart records a $1,200 credit purchase of merchandise on November 2 with this entry:

Nov.	2	Purchases	1,200.00	
		Accounts Payable		1,200.00
		Purchased merchandise on credit, invoice dated November 2, terms 2/10, n/30.		

The Purchases account accumulates the cost of all merchandise bought during a period. The account is a holding place for information used at the end of the period to calculate the cost of goods sold.

Trade Discounts. When a manufacturer or wholesaler prepares a catalogue of the items it offers for sale, each item is given a **list price,** which is also called a *catalogue price*. The list price generally is not the intended selling price of the item. Instead, the intended selling price equals the list price reduced by a given percentage called a **trade discount.**

The amount of the trade discount usually depends on whether the buyer is a wholesaler, a retailer, or the final consumer. For example, a wholesaler that buys large quantities is granted a larger discount than a retailer that buys smaller quantities. Regardless of its amount, a trade discount is a reduction in a list price that is applied to determine the actual sales price of the goods to a customer.

Trade discounts are commonly used by manufacturers and wholesalers to change selling prices without republishing their catalogues. When the seller wants to change the selling prices, it can notify its customers merely by sending them a new set of trade discounts to apply to the catalogue prices.

Because list prices are not intended to reflect the negotiated sales value of the merchandise, neither the buyer nor the seller enters the list prices and the trade discounts in their accounts. Instead, they record the actual sales price (the list price less the trade discount). For example, if a manufacturer deducts a 40% trade discount on an item listed in its catalogue at $2,000, the selling price is $1,200, which is [$2,000 − (40% × $2,000)]. The seller records the credit sale as follows:

Nov.	2	Accounts Receivable	1,200.00	
		Sales		1,200.00
		Sold merchandise on credit.		

The buyer also records the purchase at $1,200. For example, see the previous entry to record the purchase by Meg's Mart.

Purchases Discounts. When stores buy merchandise on credit, they may be offered cash discounts for paying within the discount period. The buyer refers to these cash discounts as **purchases discounts.** When the buyer pays within the discount period, the accounting system records a credit to a contra-purchases account called *Purchases Discounts*. The following entry uses this account to record the payment for the merchandise purchased on November 2:

As a Matter of Ethics

Renee Fleck was recently hired by Mid-Mart, a medium-size retailing company that purchases most of its merchandise on credit. She overlapped on the new job for several days with the outgoing employee in her position, Martin Hull, so that he could help her learn the ropes.

One of Fleck's responsibilities is to see that the payables are paid promptly to maintain the company's credit standing with its suppliers and to take advantage of all cash discounts. Hull told Fleck that the current system has accomplished both goals easily and has also made another contribution to the company's profits. He explained that the computer system has been programmed to prepare cheques for amounts net of the cash discounts. Even though the cheques are dated as of the last day of the discount period, they are not mailed until five days later. Because the accounts are always paid, the company has had virtually no trouble with its suppliers. "It's simple," Hull explained to Fleck. "We get the free use of the cash for an extra five days, and who's going to complain? Even when somebody does, we just blame the computer system and the people in the mail room."

A few days later, Hull had departed and Fleck assumed her new duties. The first invoice that she examined had a 10-day discount period on a $10,000 purchase. The transaction occurred on April 9 subject to terms of 2/10, n/30. Fleck had to decide whether she should mail the $9,800 cheque on April 19 or wait until the 24th.

Nov.	12	Accounts Payable	1,200.00	
		Purchases Discounts (2% × $1,200)		24.00
		Cash		1,176.00
		Paid for the purchase of November 2 less the discount.		

By recording the amount of discounts taken in a separate contra account, the accountant can help managers keep track of the company's performance in taking advantage of discounts. For example, if all purchases are made on credit and all suppliers offer a 2% discount, the balance of the Purchases Discounts contra account should equal 2% of the balance of the Purchases account. If the accountant did not use the contra account, the $24 credit entry would be recorded as a reduction of the Purchases account balance. As a result, it would be more difficult to determine whether discounts were taken.

The accountant uses the balance of the Purchases Discounts account to compute the net cost of the purchases for the period. However, published financial statements usually do not include this calculation because it is useful only for managers.

A Cash Management Technique. To ensure that discounts are not missed, most companies set up a system to pay all invoices within the discount period. Furthermore, careful cash management ensures that no invoice is paid until the last day of the discount period. A helpful technique for reaching both of these goals is to file each invoice in such a way that it automatically comes up for payment on the last day of its discount period. For example, a simple manual system uses 31 folders, one for each day in the month. After an invoice is recorded in the journal, it is placed in the file folder for the last day of its discount period. Thus, if the last day of an invoice's discount period is November 12, it is filed in folder number 12. Then, the invoice and any other invoices in the same folder are removed and paid on November 12. Computerized systems can accomplish the same result by using a code that identifies the last date in the discount period. When that date is reached, the computer automatically provides a reminder that the account should be paid. Another way a company can gain more control over purchase discounts is by using the *net method of recording purchases*. This method is discussed in Chapter 7.

Read the As a Matter of Ethics case and consider what you would do if you were faced with the situation it describes.

Purchases Returns and Allowances. Sometimes, merchandise received from a supplier is not acceptable and must be returned. In other cases, the purchaser may keep imperfect but marketable merchandise because the supplier grants an allowance, which is a reduction in the purchase price.

Even though the seller does not charge the buyer for the returned goods or gives an allowance for imperfect goods, the buyer incurs costs in receiving, inspecting, identifying, and possibly returning defective merchandise. The occurrence of these costs can be signaled to the manager by recording the cost of the returned merchandise or the seller's allowance in a separate contra-purchases account called *Purchases Returns and Allowances.* For example, this journal entry is recorded on November 14 when Meg's Mart returns defective merchandise for a $265 refund of the original purchase price:

Nov.	14	Accounts Payable	265.00	
		Purchases Returns and Allowances		265.00
		Returned defective merchandise.		

As we described for Purchases Discounts, the accountant uses the balance of the Purchases Returns and Allowances account to compute the net cost of goods purchased during the period. However, published financial statements generally do not include this detailed information.

Discounts and Returned Merchandise. If part of a shipment of goods is returned within the discount period, the buyer can take the discount only on the remaining balance of the invoice. For example, suppose that Meg's Mart is offered a 2% cash discount on $5,000 of merchandise. Two days later, the company returns $800 of the goods before the invoice is paid. When the liability is paid within the discount period, Meg's Mart can take the 2% discount only on the $4,200 balance. Thus, the discount is $84 (2% × $4,200) and the cash payment must be $4,116 ($4,200 − $84).

Transportation Costs. Depending on the terms negotiated with its suppliers, a company may be responsible for paying the shipping costs for transporting the acquired goods to its own place of business. Because these costs are necessary to make the goods ready for sale, the cost principle requires them to be added to the cost of the purchased goods.

The freight charges could be recorded with a debit to the Purchases account. However, more complete information about these costs is provided to management if they are debited to a special supplemental account called *Transportation-In*. The accountant adds this account's balance to the net purchase price of the acquired goods to find the total cost of goods purchased. (See the schedule on page 246.)

The use of this account is demonstrated by the following entry, which records a $75 freight charge for incoming merchandise:

Nov.	24	Transportation-In	75.00	
		Cash		75.00
		Paid freight charges on purchased merchandise.		

Because detailed information about freight charges is relevant only for managers, it is seldom found in external financial statements.

Freight paid to bring purchased goods into the inventory is accounted for separately from freight paid on goods sent to customers. The shipping cost of incoming goods is included in the cost of goods sold, while the shipping cost for outgoing goods is a selling expense.

Identifying Ownership Responsibilities and Risks. When a merchandise transaction is planned, the buyer and seller need to establish which party will be responsible for paying any freight costs and which will bear the risk of loss during transit.

The basic issue to be negotiated is the point at which ownership is transferred from the buyer to the seller. The place of the transfer is called the **FOB** point, which is the abbreviation for the phrase, *free on board*. The meaning of different FOB points is explained by the diagram in Illustration 5–3.

Under an *FOB shipping point* agreement (also called *FOB factory*), the buyer accepts ownership at the seller's place of business. As a result, the buyer is responsible for paying the shipping costs and bears the risk of damage or loss while the goods are in shipment. In addition, the goods are part of the buyer's inventory while they are in transit because the buyer already owns them.

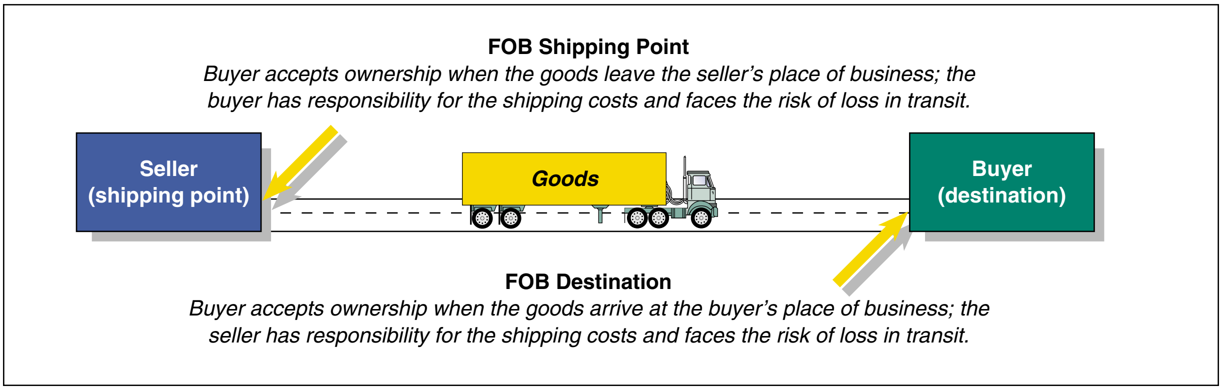
Alternatively, an *FOB destination* agreement causes ownership of the goods to pass at the buyer's place of business. If so, the seller is responsible for paying the shipping charges and bears the risk of damage or loss in transit. Furthermore, the seller should not record the sales revenue until the goods arrive at the destination because the transaction is not complete before that point in time.

Compaq Computer Corporation originally shipped all of its products under FOB factory agreements. However, customers' shipping companies proved to be undependable in picking up shipments at scheduled times and caused backups at the plant, missed deliveries, and disappointed end users. The company changed its agreements to FOB destination and cleared up these problems.

Debit and Credit Memoranda

Buyers and sellers often find they need to adjust the amount that is owed between them. For example, purchased merchandise may not meet specifications, unordered goods may be received, different quantities may be received than were ordered and billed, and billing errors may occur.

Illustration 5–3 Identifying Ownership Responsibilities and Risks



In some cases, the original balance can be adjusted by the buyer without a negotiation. For example, a seller may make an error on an invoice. If the buying company discovers the error, it can make its own adjustment and notify the seller by sending a **debit memorandum** or a **credit memorandum.** A debit memorandum is a business document that informs the recipient that the sender has *debited* the account receivable or payable. It provides the notification with words like these: "We debit your account," followed by the amount and an explanation. On the other hand, a credit memorandum informs the recipient that the sender has credited the receivable or payable. See Illustration 5–4 for two situations that involve these documents.

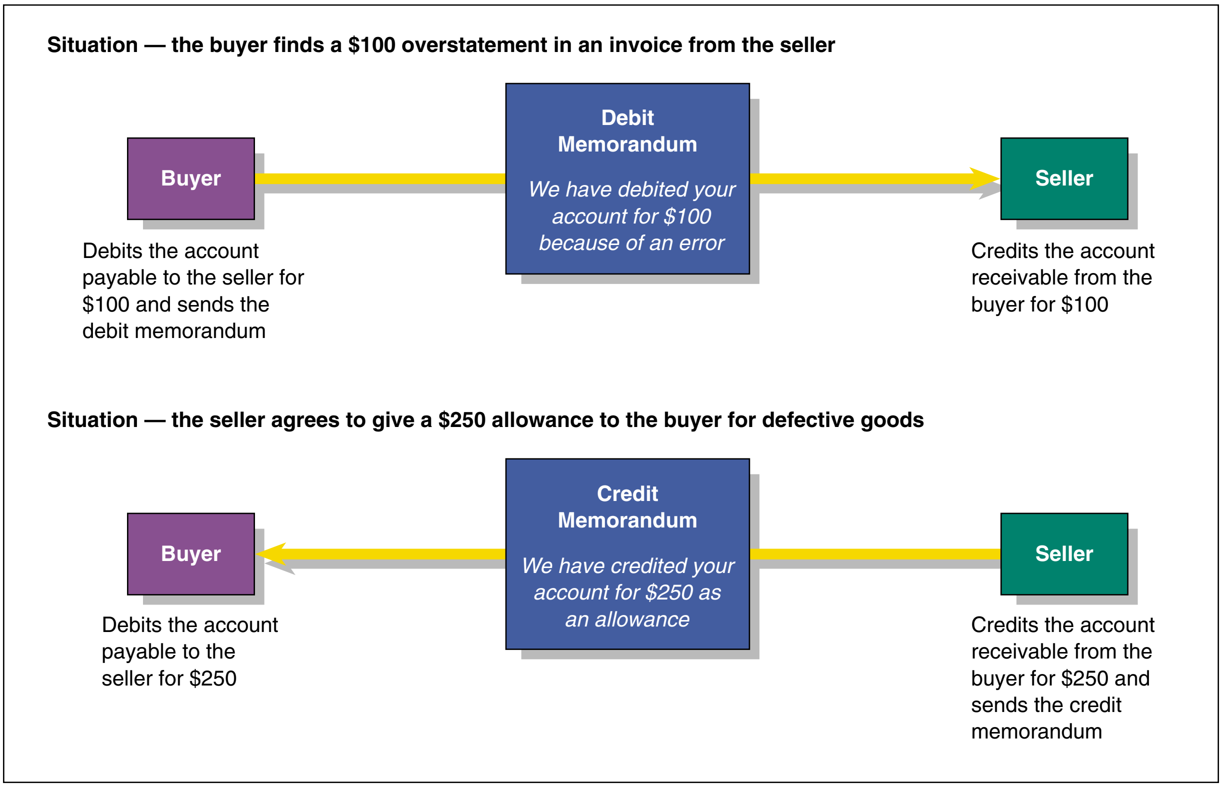
The debit memorandum in Illustration 5–4 is based on a case in which a buyer initially records an invoice as an account payable and later discovers an error by the seller that overstated the total bill by $100. The buyer corrects the balance of its liability and formally notifies the seller of the mistake with a debit memorandum reading: "We have debited your account for $100 because of an error." Additional information is provided about the invoice, its date, and the nature of the error. The buyer sends a *debit* memorandum because the correction debits the account payable to reduce its balance. The buyer's debit to the payable is offset by a credit to the Purchases account.

When the seller receives its copy of the debit memorandum, it records a *credit* to the buyer's account receivable to reduce its balance. An equal debit is recorded in the Sales account. Neither company uses a contra account because the adjustment was created by an error.

In other situations, an adjustment can be made only after negotiations between the buyer and the seller. For example, suppose that a buyer claims that some merchandise does not meet specifications. The amount of the allowance to be given by the seller can be determined only after discussion. Assume that a buyer accepts delivery of merchandise and records the transaction with a $750 debit to the Purchases account and an equal credit to Accounts Payable. Later, the buyer discovers that some of the merchandise is flawed. After a phone call, the seller agrees to grant a $250 allowance against the original purchase price.

The seller records the allowance with a debit to the Sales Returns and Allowances contra account and a credit to Accounts Receivable. Then, the seller formally

Illustration 5–4 The Use of Debit and Credit Memoranda



notifies the buyer of the allowance with a credit memorandum. A *credit* memorandum is used because the adjustment credited the receivable to reduce its balance. When the buyer receives the credit memorandum, it debits Accounts Payable and credits Purchases Returns and Allowances.

Inventory Shrinkage

Merchandising companies lose merchandise in a variety of ways, including shoplifting and deterioration while an item is on the shelf or in the warehouse. These losses are called **shrinkage.**

Even though perpetual inventory systems track all goods as they move into and out of the company, they are not able to directly measure shrinkage. However, these systems allow the accountant to calculate shrinkage by comparing a physical count with recorded quantities.

Because periodic inventory systems do not identify quantities on hand, they cannot provide direct measures of shrinkage. In fact, all that they can determine is the cost of the goods on hand and the goods that passed out of the inventory. The amount that passed out includes the cost of goods sold, stolen, or destroyed. For example, suppose that shoplifters took merchandise that cost $500. Because the goods were not on hand for a physical count, the ending inventory's cost is $500 smaller than it would have been. As a result, the $500 is included in the cost of the goods sold.

Chapter 9 describes perpetual systems and how they provide more complete information about shrinkage. Chapter 9 also describes how an accountant can estimate shrinkage when a periodic system is used.

Progress Check

5–5 **Which of the following items is subtracted from the list price of merchandise to determine the actual sales price?** ***(a)*** **Freight-in;** ***(b)*** **Trade discount;** ***(c)*** **Purchases discount;** ***(d)*** **Purchases return and/or allowance.**

5–6 **How is the cost of goods sold determined with a periodic inventory accounting system?**

5–7 **What is the meaning of the abbreviation** ***FOB?*** **What is the meaning of the term** ***FOB destination?***

ALTERNATIVE INCOME STATEMENT FORMATS

LO 3

Describe various formats for income statements and prepare closing entries for a merchandising business.

Generally accepted accounting principles do not require companies to use exactly the same financial statement formats. In fact, practice shows that many different formats are used. This section of the chapter describes several possible formats that Meg's Mart could use for its income statement.

In Illustration 5–5, we present a **classified income statement** that would probably be distributed only to the company's managers because of the details that it includes. The sales and cost of goods sold sections are the same as the calculations presented earlier in the chapter. The difference between the net sales and cost of goods sold is the gross profit for the year.

Also notice that the operating expenses section classifies the expenses into two categories. **Selling expenses** include the expenses of promoting sales through displaying and advertising the merchandise, making sales, and delivering goods to customers. **General and administrative expenses** support the overall operations of a business and include the expenses of activities such as accounting, human resource management, and financial management.

Some expenses may be divided between categories because they contribute to both activities. For example, Illustration 5–5 reflects the fact that Meg's Mart divided the total rent expense of $9,000 for its store building between the two categories. Ninety percent ($8,100) was selling expense and the remaining 10% ($900) was general and administrative expense.[5] The cost allocation should reflect an economic relationship between the prorated amounts and the activities. For example, the allocation in this case could be based on relative rental values.

In Illustration 5–6, we use the **multiple-step income statement** format that is sometimes used in external reports. The only difference between this format and the one in Illustration 5–5 is that it leaves out the detailed calculations of net sales and cost of goods sold. The format is called multiple-step because it shows several intermediate totals between sales and net income.

In contrast, we present a **single-step income statement** for Meg's Mart in Illustration 5–7. This simpler format includes cost of goods sold as an operating

[5]These expenses can be recorded in a single account or in two separate accounts. If they are recorded in one account, the accountant allocates its balance between the two expenses when preparing the statements.

Illustration 5-5 Classified Income Statement for Internal Use

MEG'S MART
Income Statement
For Year Ended December 31, 1997

Sales				$321,000
Less: Sales returns and allowances			$2,000	
Sales discounts			4,300	6,300
Net sales				$314,700
Cost of goods sold:				
Merchandise inventory, December 31, 1996			$19,000	
Purchases		$235,800		
Less: Purchases returns and allowances	$1,500			
Purchases discounts	4,200	5,700		
Net purchases		$230,100		
Add transportation-in		2,300		
Cost of goods purchased			232,400	
Goods available for sale			$251,400	
Merchandise inventory, December 31, 1997			21,000	
Cost of goods sold				230,400
Gross profit from sales				$ 84,300
Operating expenses:				
Selling expenses:				
Amortization expense, store equipment		$ 3,000		
Sales salaries expense		18,500		
Rent expense, selling space		8,100		
Store supplies expense		1,200		
Advertising expense		2,700		
Total selling expenses			$33,500	
General and administrative expenses:				
Amortization 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				62,800
Net income				$ 21,500

expense and presents only one intermediate total for total operating expenses. Many companies use this format in their published financial statements.

In practice, many companies use formats that combine some of the features of both the single- and multiple-step statements. As long as the income statement elements are presented logically, management can choose the format that it wants to use.[6]

[6]Later chapters describe other possible elements, such as extraordinary gains and losses, that must be presented in specified locations on the income statement.

Illustration 5-6
Multiple-Step Income Statement

MEG'S MART
Income Statement
For Year Ended December 31, 1997

Net sales			$314,700
Cost of goods sold			230,400
Gross profit from sales			$ 84,300
Operating expenses:			
Selling expenses:			
Amortization expense, store equipment	$ 3,000		
Sales salaries expense	18,500		
Rent expense, selling space	8,100		
Store supplies expense	1,200		
Advertising expense	2,700		
Total selling expenses		$33,500	
General and administrative expenses:			
Amortization 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			62,800
Net income			$ 21,500

Illustration 5-7
Single-Step Income Statement

MEG'S MART
Income Statement
For Year Ended December 31, 1997

Net sales		$314,700
Cost of goods sold	$230,400	
Selling expenses	33,500	
General and administrative expenses	29,300	
Total operating expenses		293,200
Net income		$ 21,500

CLOSING ENTRIES FOR MERCHANDISING COMPANIES

To help you understand how information flows through the accounting system into the financial statements, we now discuss the process for closing the temporary accounts of merchandising companies. The process is demonstrated with data from the adjusted trial balance for Meg's Mart in Illustration 5–8. In addition, the accountant knows from a physical count that the cost of the ending inventory is $21,000.

The trial balance includes these unique accounts for merchandising activities: Merchandise Inventory, Sales, Sales Returns and Allowances, Sales Discounts, Purchases, Purchases Returns and Allowances, Purchases Discounts, and Transportation-In. Their presence in the ledger causes the four closing entries to be slightly different from the ones described in Chapter 4.

Illustration 5-8
Adjusted Trial Balance

MEG'S MART
Adjusted Trial Balance
December 31, 1997

Cash	$ 8,200	
Accounts receivable	11,200	
Merchandise inventory	19,000	
Office supplies	550	
Store supplies	250	
Prepaid insurance	300	
Office equipment	4,200	
Accumulated amortization, office equipment		$ 1,400
Store equipment	30,000	
Accumulated amortization, store equipment		6,000
Accounts payable		16,000
Salaries payable		800
Meg Harlowe, capital		34,000
Meg Harlowe, withdrawals	4,000	
Sales		321,000
Sales returns and allowances	2,000	
Sales discounts	4,300	
Purchases	235,800	
Purchases returns and allowances		1,500
Purchases discounts		4,200
Transportation-in	2,300	
Amortization expense, store equipment	3,000	
Amortization 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	2,700	
Totals	$384,900	$384,900

Entry 1—Record the Ending Inventory and Close the Temporary Accounts that Have Credit Balances

The first entry adds the $21,000 cost of the ending inventory to the balance of the Merchandise Inventory account. It also closes the temporary accounts that have credit balances, including the Sales account and the two contra-purchases accounts. The first closing entry for Meg's Mart is:

Dec.	31	Merchandise Inventory	21,000.00	
		Sales	321,000.00	
		Purchases Returns and Allowances	1,500.00	
		Purchases Discounts	4,200.00	
		Income Summary		347,700.00
		To close temporary accounts with credit balances and record the ending inventory.		

Posting this entry gives zero balances to the three temporary accounts that had credit balances in the adjusted trial balance. It also momentarily increases the balance of the Merchandise Inventory account to $40,000. However, the next entry reduces the balance of this account.

Entry 2—Remove the Beginning Inventory and Close the Temporary Accounts that Have Debit Balances

The second entry subtracts the cost of the beginning inventory from the Merchandise Inventory account. It also closes the temporary accounts that have debit balances, including the expense accounts, the two contra-sales accounts, the Purchases account, and the Transportation-In account. The second closing entry for Meg's Mart is:

Dec.	31	Income Summary	326,200.00	
		Merchandise Inventory		19,000.00
		Sales Returns and Allowances		2,000.00
		Sales Discounts		4,300.00
		Purchases		235,800.00
		Transportation-In		2,300.00
		Amortization Expense, Store Equipment		3,000.00
		Amortization Expense, Office Equipment		700.00
		Office Salaries Expense		25,300.00
		Sales Salaries Expense		18,500.00
		Insurance Expense		600.00
		Rent Expense, Office Space		900.00
		Rent Expense, Selling Space		8,100.00
		Office Supplies Expense		1,800.00
		Store Supplies Expense		1,200.00
		Advertising Expense		2,700.00
		To close temporary accounts with debit balances and to remove the beginning inventory balance.		

Posting this entry reduces the balance of the Merchandise Inventory account to $21,000, which is the amount determined by the physical count on December 31, 1997. It also gives zero balances to the 14 temporary accounts that had debit balances.

After posting the first two closing entries, the Merchandise Inventory account appears as follows:

Merchandise Inventory **Acct. No.** 119

Date		Explanation	Debit	Credit	Balance
1996					
Dec.	31	Ending balance for 1996			19,000.00
1997					
Dec.	31	First closing entry	21,000.00		40,000.00
	31	Second closing entry		19,000.00	21,000.00

As mentioned earlier in the chapter, the $21,000 balance will remain unchanged throughout 1998 until the accounts are closed at the end of that year.

Entry 3—Close the Income Summary Account to the Owner's Capital Account

The third closing entry for a merchandising company is the same as the third closing entry for a service company. It closes the Income Summary account and updates the balance of the owner's capital account. The third closing entry for Meg's Mart is:

Dec.	31	Income Summary	21,500.00	
		Meg Harlowe, Capital		21,500.00
		To close the Income Summary account.		

The $21,500 amount in the entry is the net income reported on the income statement.

Entry 4—Close the Owner's Withdrawals Account to the Owner's Capital Account

The fourth closing entry for a merchandising company is the same as the fourth closing entry for a service company. It closes the owner's withdrawals account and reduces the balance of the owner's capital account to the amount shown on the balance sheet. The fourth closing entry for Meg's Mart is:

Dec.	31	Meg Harlowe, Capital	4,000.00	
		Meg Harlowe, Withdrawals		4,000.00
		To close the withdrawals account.		

When this entry is posted, all the temporary accounts are cleared and ready to record events in 1998. In addition, the owner's capital account has been fully updated to reflect the events of 1997.

Progress Check

5–8 **Which of the following accounts is not unique to a merchandising company? *(a)* Merchandise Inventory; *(b)* Purchases Returns and Allowances; *(c)* Advertising Expense; *(d)* Transportation-In; *(e)* Purchases.**

5–9 **Which income statement format shows the detailed calculations of net sales and cost of goods sold? Which format does not present any intermediate totals (other than total expenses)?**

5–10 **Which of the four closing entries includes a credit to Merchandise Inventory?**

A WORK SHEET FOR A MERCHANDISING COMPANY

LO 4

Complete a work sheet for a merchandising company and explain the difference between the closing entry and adjusting entry approaches to updating the Merchandise Inventory account.

Illustration 5–9 presents a version of the work sheet that the accountant for Meg's Mart could prepare in the process of developing its 1997 financial statements. It differs in two ways from the 10-column work sheet described in Chapter 4.

The first difference is the deletion of the adjusted trial balance columns. Many accountants delete these columns simply to reduce the size of the work sheet. This has nothing to do with the fact that Meg's Mart is a retail business. The omission of the columns causes the accountant to first compute the adjusted balances and then extend them directly into the financial statement columns.

The second difference appears on the line for the Merchandise Inventory account. The unadjusted trial balance includes the beginning inventory balance of \$19,000. This amount is extended into the Debit column for the income statement. Then, the ending balance is entered in the Credit column for the income statement and the Debit column for the balance sheet. This step allows the cost of goods sold to be included in net income while the correct ending balance is included for the balance sheet.

The adjustments in the work sheet reflect the following economic events:

(a) Expiration of \$600 of prepaid insurance.
(b) Consumption of \$1,200 of store supplies.
(c) Consumption of \$1,800 of office supplies.
(d) Amortization of the store equipment for \$3,000.
(e) Amortization of the office equipment for \$700.
(f) Accrual of \$300 of unpaid office salaries and \$500 of unpaid store salaries.

Once the adjusted amounts are extended into the financial statement columns, the accountant uses the information to develop the company's financial statements.

USING THE INFORMATION—THE ACID-TEST RATIO

LO 5

Calculate the acid-test ratio and describe what it reveals about a company's liquidity.

You have learned in this chapter that a company's current assets may include a merchandise inventory. Thus, you can understand that a major part of a company's current assets may not be available immediately for paying its existing liabilities. The inventory must be sold and the resulting accounts receivable must be collected before cash is available. As a result, the current ratio (which we described in Chapter 3) may not be an adequate indicator of a company's ability to pay its current liabilities.

Another measure that financial statement users often use to evaluate a company's ability to settle its current debts with its existing assets is the **acid-test ratio.** The acid-test ratio is similar to the current ratio, but differs because it excludes the less liquid current assets. The acid-test ratio is calculated just like the current ratio except that its numerator omits inventory and prepaid expenses. The remaining current assets (cash, temporary investments, and receivables) are called the company's *quick assets*. The formula for the ratio is

$$\text{Acid-test ratio} = \frac{\text{Quick assets}}{\text{Current liabilities}}$$

Recall the discussion of **Imperial Oil Limited** at the beginning of the chapter. The acid-test ratios for Imperial Oil are computed as follows:

Illustration 5-9 Work Sheet for Meg's Mart for the Year Ended December 31, 1997

		Unadjusted Trial Balance		Adjustments		Income Statement		Statement of Changes in Owner's Equity and Balance Sheet	
No.	**Account**	**Dr.**	**Cr.**	**Dr.**	**Cr.**	**Dr.**	**Cr.**	**Dr.**	**Cr.**
101	Cash	8,200						8,200	
106	Accounts receivable	11,200						11,200	
119	**Merchandise inventory**	**19,000**				**19,000**	**21,000**	**21,000**	
124	Office supplies	2,350			(*c*) 1,800			550	
125	Store supplies	1,450			(*b*) 1,200			250	
128	Prepaid insurance	900			(*a*) 600			300	
163	Office equipment	4,200						4,200	
164	Accum. amort., office equipment		700		(*e*) 700				1,400
165	Store equipment	30,000						30,000	
166	Accum. amort., store equipment		3,000		(*d*) 3,000				6,000
201	Accounts payable		16,000						16,000
209	Salaries payable				(*f*) 800				800
301	Meg Harlowe, capital		34,000						34,000
302	Meg Harlowe, withdrawals	4,000						4,000	
413	Sales		321,000				321,000		
414	Sales returns and allowances	2,000				2,000			
415	Sales discounts	4,300				4,300			
505	Purchases	235,800				235,800			
506	Purchases returns and allowances		1,500				1,500		
507	Purchases discounts		4,200				4,200		
508	Transportation-in	2,300				2,300			
612	Amort. expense, store equipment			(*d*) 3,000		3,000			
613	Amort. expense, office equipment			(*e*) 700		700			
620	Office salaries expense	25,000		(*f*) 300		25,300			
621	Sales salaries expense	18,000		(*f*) 500		18,500			
637	Insurance expense			(*a*) 600		600			
641	Rent expense, office space	900				900			
642	Rent expense, selling space	8,100				8,100			
650	Office supplies expense			(*c*) 1,800		1,800			
651	Store supplies expense			(*b*) 1,200		1,200			
655	Advertising expense	2,700				2,700			
	Totals	380,400	380,400	8,100	8,100	326,200	347,700	79,700	58,200
	Net income					21,500			21,500
	Totals					347,700	347,700	79,700	79,700

	End of Year	
Acid-Test Ratios	**1994**	**1993**
($409 + $859 + $1,045)/$1,581	1.5	
($605 + $874 + $899)/$1,593		1.5

In contrast, the current ratios (current assets/current liabilities) for Imperial Oil have these values:

Current Ratios	End of Year 1994	1993
$2,797/$1,581	1.8	
$2,899/$1,593		1.8

A traditional rule of thumb is that an acid-test ratio value of at least 1.0 suggests the company is not likely to face a liquidity crisis in the near future. However, a value less than 1.0 may not be threatening if the company can generate enough cash from sales or the accounts payable are not due until later in the year. On the other hand, a value more than 1.0 may hide a liquidity crisis if the payables are due at once but the receivables will not be collected until late in the year. These possibilities reinforce the point that a single ratio is seldom enough to indicate strength or weakness. However, it can identify areas that the analyst should look into more deeply.

Progress Check

5–11 **Which assets are defined as quick assets for the purpose of calculating the acid-test ratio? *(a)* Cash, temporary investments, and prepaid expenses; *(b)* Merchandise inventory and prepaid expenses; *(c)* Merchandise inventory and temporary investments; *(d)* Cash, temporary investments, and receivables.**

5–12 **Which ratio is a more strict test of a company's ability to meet its obligations in the very near future, the acid-test ratio or the current ratio?**

SUMMARY OF THE CHAPTER IN TERMS OF LEARNING OBJECTIVES

LO 1. **Describe merchandising activities, analyze their effects on financial statements, and record sales of merchandise.** Merchandising companies purchase and sell products. Their financial statements include the cost of the merchandise inventory in the current assets on the balance sheet and sales and cost of goods sold on the income statement. The difference between sales and cost of goods sold is called gross profit.

The seller of merchandise records the sale at the list price less any trade discount. Any returns or allowances are recorded in a contra account to provide information to the manager. When cash discounts from the sales price are offered and the customers pay within the discount period, the seller records the discounts in a contra-sales account.

LO 2. **Describe how the ending inventory and the cost of goods sold are determined with perpetual and periodic inventory accounting systems.** A perpetual inventory system continuously tracks the cost of goods on hand and the cost of goods sold. A periodic system merely accumulates the cost of goods purchased during the year and does not provide continuous information about the cost of the inventory or the sold goods. At year-end, the cost of the inventory is determined and used to calculate the cost of goods sold. The cost of goods available for sale equals the beginning inventory plus the cost of goods purchased. The cost of goods sold equals the cost of goods available for sale minus the cost of the ending inventory. The cost of goods purchased is affected by purchases discounts, purchases returns and allowances, and transportation-in. These amounts are recorded in contra and supplemental accounts to provide information to management. The contra and supplemental accounts are seldom reported in external statements.

LO 3. Describe various formats for income statements and prepare closing entries for a merchandising business. Companies have flexibility in choosing formats for their income statements. Internal statements show more details, including the calculations of net sales and the cost of goods sold. Classified income statements describe expenses incurred in different activities. Multiple-step statements include several intermediate totals and single-step statements do not.

In the closing entry approach, the Merchandise Inventory account is updated in the process of making closing entries. The ending inventory amount is added to the account as part of the entry that closes the income statement accounts with credit balances. The beginning inventory amount is removed from the account as part of the entry that closes the income statement accounts with debit balances.

LO 4. Complete a work sheet that includes the inventory-related accounts. The work sheet for a merchandising company uses special entries to update the inventory. The beginning inventory balance is extended into the Income Statement Debit column and the cost of the ending inventory is entered in the Income Statement Credit column and Balance Sheet Debit column. Many accountants omit the adjusted trial balance columns to reduce the size of the work sheet.

LO 5. Calculate the acid-test ratio and describe what it reveals about a company's liquidity. The acid-test ratio is used to assess a company's ability to pay its current liabilities with its existing quick assets (cash, temporary investments, and receivables). The costs of the merchandise inventory and prepaid expenses are not included in the numerator. A ratio value equal to or greater than one is usually considered to be adequate.

DEMONSTRATION PROBLEM

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

YE OLDE JUNQUE AND STUFF
Adjusted Trial Balance
December 31, 1997

Cash	$ 19,000	
Merchandise inventory	52,000	
Store supplies	1,000	
Equipment	40,000	
Accumulated amortization, equipment		$ 16,500
Accounts payable		8,000
Salaries payable		1,000
Ann Teak, capital		69,000
Ann Teak, withdrawals	8,000	
Sales		320,000
Sales discounts	20,000	
Purchases	147,000	
Purchases discounts		12,000
Transportation-in	11,000	
Amortization expense	5,500	
Salaries expense	60,000	
Insurance expense	12,000	
Rent expense	24,000	
Store supplies expense	6,000	
Advertising expense	21,000	
Totals	$426,500	$426,500

A physical count shows that the cost of the year's ending inventory is $50,000.

Required

1. Prepare schedules that calculate the company's net sales and cost of goods sold for the year.
2. Present a single-step income statement for 1997.
3. Prepare closing entries.

Planning the Solution

- The calculation of net sales deducts discounts from sales. The calculation of cost of goods sold adds the cost of goods purchased for the year to the beginning inventory and then subtracts the cost of the ending inventory.
- To prepare the single-step income statement, find the net sales and then list the operating expenses. Use the cost of goods sold number calculated in the first requirement.
- The first closing entry debits the inventory account for the cost of the ending inventory and debits all temporary accounts with credit balances. The second closing entry credits the inventory account with the cost of the beginning inventory and 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 owner's withdrawals account to the owner's capital account.

Solution to Demonstration Problem

1.

Sales		$320,000
Less sales discounts		(20,000)
Net sales		$300,000
Beginning inventory		$ 52,000
Purchases	$147,000	
Less purchases discounts	(12,000)	
Plus transportation-in	11,000	
Cost of goods purchased		146,000
Cost of goods available for sale		$198,000
Less ending inventory		(50,000)
Cost of goods sold		$148,000

2.

YE OLDE JUNQUE AND STUFF
Income Statement
For Year Ended December 31, 1997

Net sales		$300,000
Operating expenses:		
Cost of goods sold	$148,000	
Amortization expense	5,500	
Salaries expense	60,000	
Insurance expense	12,000	
Rent expense	24,000	
Store supplies expense	6,000	
Advertising expense	21,000	
Total expenses		276,500
Net income		$ 23,500

3.

Dec.	31	Merchandise Inventory	50,000.00	
		Sales	320,000.00	
		Purchases Discounts	12,000.00	
		Income Summary		382,000.00
		To close temporary accounts with credit balances and record the ending inventory.		
Dec.	31	Income Summary	358,500.00	
		Merchandise Inventory		52,000.00
		Sales Discounts		20,000.00
		Purchases		147,000.00
		Transportation-In		11,000.00
		Amortization Expense		5,500.00
		Salaries Expense		60,000.00
		Insurance Expense		12,000.00
		Rent Expense		24,000.00
		Store Supplies Expense		6,000.00
		Advertising Expense		21,000.00
		To close temporary accounts with debit balances and to remove the beginning inventory balance.		
Dec.	31	Income Summary	23,500.00	
		Ann Teak, Capital		23,500.00
		To close the Income Summary account.		
Dec.	31	Ann Teak, Capital	8,000.00	
		Ann Teak, Withdrawals		8,000.00
		To close the withdrawals account.		

The Adjusting Entry Approach to Recording the Change in the Merchandise Inventory Account

LO 7

Explain an adjusting entry approach to recording the change in the Merchandise Inventory account.

In the previous sections, the change in the Merchandise Inventory account was recorded in the process of making closing entries. This closing entry approach is widely used in practice. However, it is not the only bookkeeping method that can be applied at the end of the year. Another approach is to record the change in the Merchandise Inventory account with adjusting entries. When this approach is followed, the first two closing entries do not include changes in the Merchandise Inventory account. This adjusting entry approach is preferred by some accountants. It is also used by many computerized accounting systems that do not allow the Merchandise Inventory account (a permanent account) to be changed in the closing process.

The Adjusting Entries

Under the adjusting entry approach, Meg's Mart removes the beginning balance from the Merchandise Inventory account by recording this adjusting entry at the end of 1997:

Dec.	31	Income Summary	19,000.00	
		Merchandise Inventory		19,000.00
		To remove the beginning balance from the Merchandise Inventory account.		

The second adjusting entry produces the correct ending balance in the Merchandise Inventory account:

Dec.	31	Merchandise Inventory	21,000.00	
		Income Summary		21,000.00
		To insert the correct ending balance into the Merchandise Inventory account.		

After this entry is posted, the Merchandise Inventory account has a $21,000 debit balance. In addition, the Income Summary account has a $2,000 credit balance.

The Closing Entries

If the two adjusting entries for inventory are used, the closing entries differ only by not including the Merchandise Inventory account. Thus, Meg's Mart records the following two closing entries for 1997 under the adjusting entry approach:

Dec.	31	Sales	321,000.00	
		Purchases Returns and Allowances	1,500.00	
		Purchases Discounts	4,200.00	
		Income Summary		326,700.00
		To close temporary accounts with credit balances.		

Dec.	31	Income Summary	307,200.00	
		Sales Returns and Allowances		2,000.00
		Sales Discounts		4,300.00
		Purchases		235,800.00
		Transportation-In		2,300.00
		Amortization Expense, Store Equipment		3,000.00
		Amortization Expense, Office Equipment		700.00
		Office Salaries Expense		25,300.00
		Sales Salaries Expense		18,500.00
		Insurance Expense		600.00
		Rent Expense, Office Space		900.00
		Rent Expense, Selling Space		8,100.00
		Office Supplies Expense		1,800.00
		Store Supplies Expense		1,200.00
		Advertising Expense		2,700.00
		To close temporary accounts with debit balances.		

The third and fourth entries are the same as before, although now the amount debited to the Income Summary account is based on four previous entries instead of two:

Dec.	31	Income Summary	21,500.00	
		Meg Harlowe, Capital		21,500.00
		To close the Income Summary account.		
Dec.	31	Meg Harlowe, Capital	4,000.00	
		Meg Harlowe, Withdrawals		4,000.00
		To close the withdrawals account.		

The Adjusting Entry Approach and the Work Sheet. If the accountant uses the adjusting entry approach to update the inventory account, the two adjustments are included in the adjustments columns in the work sheet, and a line for the Income Summary account is inserted at the bottom of the work sheet.

Progress Check

5–13 **In which of the following columns is the ending inventory entered on the work sheet when the closing entry approach is used to record the change in inventory? *(a)* Unadjusted Trial Balance Debit Column; *(b)* Adjustments Debit column; *(c)* Income Statement Debit column; *(d)* Income Statement Credit column; *(e)* Balance Sheet Credit column.**

5–14 **Will the reported amounts of ending inventory and net income differ if the adjusting entry approach to recording the change in inventory is used instead of the closing entry approach?**

SUMMARY OF APPENDIX E IN TERMS OF LEARNING OBJECTIVE

LO 7. Explain an adjusting entry approach to recording the change in the Merchandise Inventory account. The adjusting entry approach to recording the ending inventory in the accounts uses two adjusting entries that remove the beginning cost from and add the ending cost to the Merchandise Inventory account. This approach is often used in computer systems.

GLOSSARY

Acid-test ratio a ratio used to assess the company's ability to settle its current debts with its existing assets; it is the ratio between a company's quick assets (cash, temporary investments, and receivables) and its current liabilities. p. 259

Cash discount a reduction in a debt that is granted by a seller to a purchaser in exchange for the purchaser's making payment within a specified period of time called the discount period. p. 241

Classified income statement an income statement format that classifies items in significant groups and shows detailed calculations of sales and cost of goods sold. p. 253

Credit memorandum a notification that the sender has entered a credit in the recipient's account maintained by the sender. p. 251

Credit period the time period that can pass before a customer's payment is due. p. 241

Credit terms the description of the amounts and timing of payments that a buyer agrees to make in the future. p. 241

Debit memorandum a notification that the sender has entered a debit in the recipient's account maintained by the sender. p. 251

Discount period the time period in which a cash discount is available. p. 242

EOM the abbreviation for *end-of-month*; used to describe credit terms for some transactions. p. 241

FOB the abbreviation for *free on board;* the designated point at which ownership of goods passes to the buyer; FOB shipping point (or factory) means that the buyer pays the shipping costs and FOB destination means that the seller pays the shipping costs. p. 250

General and administrative expenses expenses that support the overall operations of a business and include the expenses of such activities as providing accounting services, human resource management, and financial management. p. 253

Gross profit the difference between net sales and the cost of goods sold. p. 239

List price the nominal price of an item before any trade discount is deducted. p. 247

Merchandise goods acquired for the purpose of reselling them to customers. p. 238

Merchandise inventory goods a company owns on any given date and holds for the purpose of selling them to its customers. p. 239

Multiple-step income statement an income statement format that shows several intermediate totals between sales and net income. p. 253

Periodic inventory system a method of accounting that records the cost of inventory purchased but does not track the quantity on hand or sold to customers; the records are updated periodically to reflect the results of physical counts of the items on hand. p. 243

Perpetual inventory system a method of accounting that maintains continuous records of the amount of inventory on hand and sold. p. 243

Purchases discount a cash discount taken against an amount owed to a supplier of goods. p. 247

Sales discount a cash discount taken by customers against an amount owed to the seller. p. 242

Selling expenses the expenses of promoting sales by displaying and advertising the merchandise, making sales, and delivering goods to customers. p. 253

Shrinkage inventory losses that occur as a result of shoplifting or deterioration. p. 252

Single-step income statement an income statement format that does not present intermediate totals other than total expenses. p. 253

Trade discount a reduction below a list or catalogue price that is negotiated in setting the selling price of goods. p. 247

SYNONYMOUS TERMS

Actual sales price invoice price

FOB factory FOB shipping point

Gross profit gross margin

List price catalogue price

Merchandise goods

The letter E identifies the questions, quick studies, exercises, and problems based on Appendix E at the end of the chapter.

QUESTIONS

1. What item on the balance sheet is unique to merchandising companies? What items on the income statement are unique to merchandising companies?
2. Explain how a business can earn a gross profit on its sales and still have a net loss.
3. Why would a company offer a cash discount?
4. What is the difference between a sales discount and a purchases discount?
5. In counting the ending inventory, an employee omitted the contents of one shelf that contained merchandise with a cost of $2,300. How would this omission affect the company's balance sheet and income statement?
6. Distinguish between cash discounts and trade discounts. Is the amount of a trade discount on purchased merchandise recorded in the Purchases Discounts account?
7. Why would a company's manager be concerned about the quantity of its purchases returns if its suppliers allow unlimited returns?
8. What do the sender and the recipient of a debit memorandum record in their accounts?
9. What is the difference between single-step and multiple-step income statement formats?
10. Does the beginning or ending inventory appear on the unadjusted trial balance of a company that uses a periodic inventory system?
11. How and when is cost of goods sold determined in a store that uses a periodic inventory system?
12. When is the cost of goods sold recorded when a company uses a perpetual inventory system?
13. Why should the manager of a business be interested in the amount of its sales returns and allowances?
14. Since sales returns and allowances are subtracted from sales on the income statement, why not save the effort of this subtraction by debiting all such returns and allowances directly to the Sales account?

QUICK STUDY (Five-Minute Exercises)

QS 5–1
(LO 1)

Calculate net sales and gross profit in each of the following situations:

	a	b	c	d
Sales	$125,000	$505,000	$33,700	$256,700
Sales discounts	3,200	13,500	300	4,000
Sales returns and allowances	19,000	3,000	6,000	600
Cost of goods sold	67,600	352,700	22,300	123,900

QS 5–2
(LO 2)

A company purchased merchandise that cost $165,000 during the year that just ended. Determine the company's cost of goods sold in each of the following four situations:

a. There were no beginning or ending inventories.

b. There was a beginning inventory of $35,000 and no ending inventory.

c. There was a $30,000 beginning inventory and a $42,000 ending inventory.

d. There was no beginning inventory but there was a $21,000 ending inventory.

QS 5–3
(LO 3)

Given the following accounts with normal year-end balances, prepare the entry to close the income statement accounts that have debit balances (entry 2):

Merchandise inventory	$ 34,800
Jan Dean, capital	115,300
Jan Dean, withdrawals	4,000
Sales	157,200
Sales returns and allowances	3,500
Sales discounts	1,700
Purchases	102,000
Purchases returns and allowances	8,100
Purchases discounts	2,000
Transportation-in	5,400
Amortization expense	7,300
Salaries expense	29,500
Miscellaneous expenses	1,900

EQS 5–4
(LO 4)

Refer to the information in QS 5–3. Prepare the entry to close the income statement accounts that have debit balances (entry 2) assuming the business uses the adjusting entry approach to record the change in merchandise inventory.

QS 5–5
(LO 5)

Use the following information to calculate the acid-test ratio:

Cash	$1,000
Accounts receivable	2,500
Inventory	6,000
Prepaid expenses	500
Accounts payable	3,750
Other current liabilities	1,250

EXERCISES

Exercise 5–1
Merchandising terms
(LO 1, 2)

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. Inventory
H. Purchases discount
I. Sales discount
J. Trade discount

___ 1. An agreement that ownership of goods is transferred at the buyer's place of business.
___ 2. The time period in which a cash discount is available.
___ 3. The difference between net sales and the cost of goods sold.
___ 4. A reduction in a receivable or payable that is granted if it is paid within the discount period.
___ 5. A cash discount taken against an amount owed to a supplier of goods.
___ 6. An agreement that ownership of goods is transferred at the seller's place of business.
___ 7. A reduction below a list or catalogue price that is negotiated in setting the selling price of goods.
___ 8. A cash discount taken by customers against an amount owed to the seller.
___ 9. The time period that can pass before a customer's payment is due.
___ 10. The goods that a company owns and expects to sell to its customers.

Exercise 5–2
Calculating cost of goods sold
(LO 2)

Determine each of the missing numbers in the following situations:

	a	b	c
Purchases	$45,000	$80,000	$61,000
Purchases discounts	2,000	?	1,300
Purchases returns and allowances	1,500	3,000	2,200
Transportation-in	?	7,000	8,000
Beginning inventory	3,500	?	18,000
Cost of goods purchased	44,700	79,000	?
Ending inventory	2,200	15,000	?
Cost of goods sold	?	83,200	68,260

Exercise 5–3
Recording journal entries for merchandise transactions
(LO 2)

Prepare journal entries to record the following transactions for a retail store:

March 2 Purchased merchandise from Alfa Company under the following terms: $1,800 invoice price, 2/15, n/60, FOB factory.

3 Paid $125 for shipping charges on the purchase of March 2.

4 Returned to Alfa Company unacceptable merchandise that had an invoice price of $300.

17 Sent a cheque to Alfa Company for the March 2 purchase, net of the discount and the returned merchandise.

March 18 Purchased merchandise from Bravo Company under the following terms: $2,500 invoice price, 2/10, n/30, FOB destination.

21 After brief negotiations, received a credit memorandum from Bravo Company granting a $700 allowance on the purchase of March 18.

28 Sent a cheque to Bravo Company paying for the March 18 purchase, net of the discount and the allowance.

Exercise 5–4
Analyzing and recording merchandise transactions and returns
(LO 1, 2)

On May 12, Wilcox Company accepted delivery of $20,000 of merchandise and received an invoice dated May 11, with terms of 3/10, n/30, FOB Garner Company's factory. When the goods were delivered, Wilcox Company paid $185 to Express Shipping Service for the delivery charges on the merchandise. The next day, Wilcox Company returned $800 of defective goods to the seller, which received them one day later. On May 21, Wilcox Company mailed a cheque to Garner Company for the amount owed on that date. It was received the following day.

Required

a. Present the journal entries that Wilcox Company should record for these transactions.

b. Present the journal entries that Garner Company should record for these transactions.

Exercise 5–5
Analyzing and recording merchandise transactions and discounts
(LO 1, 2)

Sandra's Store purchased merchandise from a manufacturer with an invoice price of $11,000 and credit terms of 3/10, n/60, and paid within the discount period.

Required

a. Prepare the journal entries that the purchaser should record for the purchase and payment.

b. Prepare the journal entries that the seller should record for the sale and collection.

c. 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. Calculate how much the buyer saved by following this strategy. (Use a 365-day year.)

Exercise 5–6
Calculating expenses and cost of goods sold
(LO 1, 2)

The following information appeared in a company's income statement:

Sales	$300,000
Sales returns	15,000
Sales discounts	4,500
Beginning inventory	25,000
Purchases	180,000
Purchases returns and allowances	6,000
Purchases discounts	3,600
Transportation-in	11,000
Gross profit from sales	105,000
Net income	55,000

Required

Calculate the *(a)* total operating expenses, *(b)* cost of goods sold, and *(c)* ending inventory.

Exercise 5–7
Calculating expenses and income
(LO 1, 2)

Fill in the blanks in the following income statements. Identify any losses by putting the amount in parentheses.

	a	b	c	d	e
Sales	$40,000	$85,000	$24,000	$?	$59,000
Cost of goods sold:					
Beginning inventory	$ 4,000	$ 6,200	$ 5,000	$ 3,500	$ 6,400
Purchases	24,000	?	?	16,000	14,000
Ending inventory	?	(5,400)	(6,000)	(3,300)	?
Cost of goods sold	$22,700	$31,800	$?	$?	$14,000
Gross profit	$?	$?	$ 2,500	$22,800	$?
Expenses	6,000	21,300	8,100	1,300	15,000
Net income (loss)	$?	$31,900	$ (5,600)	$21,500	$?

Exercise 5–8
Multiple-step income statement and other calculations
(LO 3)

The following accounts and balances are taken from the year-end adjusted trial balance of the Vintage Shop, a single proprietorship. Use the information in these columns to complete the requirements.

	Debit	Credit
Merchandise inventory	$ 28,000	
Sales		$425,000
Sales returns and allowances	16,500	
Sales discounts	4,000	
Purchases	240,000	
Purchases returns and allowances		18,000
Purchases discounts		2,000
Transportation-in	6,000	
Selling expenses	35,000	
General and administrative expenses	95,000	

The count of the ending inventory shows that its cost is $37,000.

Required

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

b. Calculate the company's cost of goods purchased for the year.

c. Calculate the company's cost of goods sold for the year.

d. Prepare a multiple-step income statement for the year that lists net sales, cost of goods sold, gross profit, the operating expenses, and net income.

Exercise 5–9
Classified income statement
(LO 3)

Use the information provided in Exercise 5–8 to prepare a classified income statement that shows the calculations of net sales and cost of goods sold.

Exercise 5–10
Closing entries
(LO 3)

The Vintage Shop described in Exercise 5–8 is owned and operated by Otto Vintage. The ending balance of Vintage's withdrawals account is $25,000. Prepare four closing entries for this company. Post the entries to a balance column account for Merchandise Inventory that includes the beginning balance.

[E]Exercise 5–11
Adjusting entry approach
(LO 7)

The Vintage Shop described in Exercise 5–8 is owned and operated by Otto Vintage. The ending balance of Vintage's withdrawals account is $25,000. Assume that the company uses the adjusting entry approach to update its inventory account. Prepare adjusting and closing journal entries for this company, and post them to a balance column account for Merchandise Inventory that includes the beginning balance.

Exercise 5–12
Preparing reports from closing entries
(LO 3)

The following closing entries for Fox Fixtures Co. were made on March 31, the end of its annual accounting period:

1.	Merchandise Inventory	11,000.00	
	Sales	445,000.00	
	Purchases Returns and Allowances	22,000.00	
	Purchases Discounts	11,400.00	
	Income Summary		489,400.00
	To close temporary accounts with credit balances and record the ending inventory.		
2.	Income Summary	453,300.00	
	Merchandise Inventory		15,000.00
	Sales Returns and Allowances		25,000.00
	Sales Discounts		16,000.00
	Purchases		286,000.00
	Transportation-In		8,800.00
	Selling Expenses		69,000.00
	General and Administrative Expenses		33,500.00
	To close temporary accounts with debit balances and to remove the beginning inventory balance.		

Required

Use the information in the closing entries to prepare:

a. A calculation of net sales.

b. A calculation of cost of goods purchased.

c. A calculation of cost of goods sold.

d. A multiple-step income statement for the year that lists net sales, cost of goods sold, gross profit, the operating expenses, and net income.

Exercise 5–13
Preparing a work sheet for a merchandising proprietorship
(LO 4)

The following unadjusted trial balance was taken from the ledger of Johnson's Newsstand at the end of its fiscal year. (To reduce your effort, the account balances are relatively small.)

JOHNSON'S NEWSSTAND
Unadjusted Trial Balance
December 31

No.	Title	Debit	Credit
101	Cash	$ 3,700	
106	Accounts receivable	1,800	
119	Merchandise inventory	1,200	
125	Store supplies	600	
201	Accounts payable		$ 140
209	Salaries payable		
301	Tod Johnson, capital		5,785
302	Tod Johnson, withdrawals	375	
413	Sales		6,000
414	Sales returns and allowances	145	
505	Purchases	3,200	
506	Purchases discounts		125
507	Transportation-in	80	
622	Salaries expense	700	
640	Rent expense	250	
651	Store supplies expense		
	Totals	$12,050	$12,050

Required

Use the preceding information and the following additional facts to complete an eight-column work sheet for the company (do not include columns for the adjusted trial balance).

a. The ending inventory of store supplies was $450.

b. Accrued salaries at the end of the year were $60.

c. The ending merchandise inventory was $1,360.

Exercise 5–14
Acid-test ratio
(LO 5)

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

	Case X	Case Y	Case Z
Cash	$ 800	$ 910	$1,100
Temporary investments			500
Receivables		990	800
Inventory	2,000	1,000	4,000
Prepaid expenses	1,200	600	900
Total current assets	$4,000	$3,500	$7,300
Current liabilities	$2,200	$1,100	$3,650

PROBLEMS

Problem 5–1
Journal entries for merchandising activities
(LO 1, 2)

Prepare general journal entries to record the following transactions of the Belton Company and determine the cost of goods purchased and net sales for the month. (Use a separate account for each receivable and payable; for example, record the purchase on July 1 in Accounts Payable—Jones Co.)

July 1 Purchased merchandise from the Jones Company for $3,000 under credit terms of 1/15, n/30, FOB factory.

July 2 Sold merchandise to Terra Co. for $800 under credit terms of 2/10, n/60, FOB shipping point.

3 Paid $100 for freight charges on the purchase of July 1.

8 Sold $1,600 of merchandise for cash.

9 Purchased merchandise from the Keene Co. for $2,300 under credit terms of 2/15, n/30, FOB destination.

12 Received a $200 credit memorandum acknowledging the return of merchandise purchased on July 9.

13 Received the balance due from the Terra Co. for the credit sale dated July 2, net of the discount.

16 Paid the balance due to the Jones Company within the discount period.

19 Sold merchandise to Urban Co. for $1,250 under credit terms of 2/10, n/60, FOB shipping point.

21 Issued a $150 credit memorandum to Urban Co. for an allowance on goods sold on July 19.

22 Received a debit memorandum from Urban Co. for an error that overstated the total invoice by $50.

24 Paid the Keene Co. the balance due after deducting the discount.

30 Received the balance due from the Urban Co. for the credit sale dated July 19, net of the discount.

31 Sold merchandise to Terra Co. for $5,000 under credit terms of 2/10, n/60, FOB shipping point.

Problem 5–2
Journal entries for merchandising transactions
(LO 1, 2)

Prepare general journal entries to record the following transactions of Schafer Merchandising:

Oct. 1 Purchased merchandise on credit, terms 2/10, n/30, $7,200.

2 Sold merchandise for cash, $750.

7 Purchased merchandise on credit, terms 2/10, n/30, $5,250, FOB the seller's factory.

7 Paid $225 cash for freight charges on the merchandise shipment of the previous transaction.

8 Purchased delivery equipment on credit, $12,000.

12 Sold merchandise on credit, terms 2/15, 1/30, n/60, $3,000.

13 Received a $750 credit memorandum for merchandise purchased on October 7 and returned for credit.

13 Purchases office supplies on credit, $240, n/30.

15 Sold merchandise on credit, terms 2/10, 1/30, n/60, $2,100.

15 Paid for the merchandise purchased on October 7, less the return and the discount.

16 Received a credit memorandum for unsatisfactory office supplies purchased on October 13 and returned, $60.

19 Issued a $210 credit memorandum to the customer who purchased merchandise on October 15 and returned a portion for credit.

25 Received payment for the merchandise sold on October 15, less the return and applicable discount.

27 The customer of October 12 paid for the purchase of that date, less the applicable discount.

31 Paid for the merchandise purchased on October 1.

Problem 5–3
Income statements and closing entries
(LO 1, 2, 3)

On December 31, 1996, the end of Seaside Sales' annual accounting period, the financial statement columns of its work sheet appeared as follows:

	Income Statement		Balance Sheet	
	Debit	**Credit**	**Debit**	**Credit**
Merchandise inventory	69,330	66,545	66,545	
Other assets			487,785	
Debra Kelso, capital				200,000
Liabilities				312,370
Debra Kelso, withdrawals			50,000	
Sales		963,720		
Sales returns and allowances	5,715			
Sales discounts	14,580			
Purchases	651,735			
Purchases returns and allowances		2,730		
Purchases discounts		8,970		
Transportation-in	9,205			
Sales salaries expense	80,080			
Rent expense, selling space	33,000			
Store supplies expense	1,620			
Amortization expense, store equipment	8,910			
Office salaries expense	65,945			
Rent expense, office space	3,000			
Office supplies expense	735			
Insurance expense	3,390			
Amortization expense, office equipment	2,760			
	950,005	1,041,965	604,330	512,370
Net income	91,960			91,960
	1,041,965	1,041,965	604,330	604,330

Required

1. Prepare a 1996 classified, multiple-step income statement for Seaside, showing in detail the expenses and the items that make up cost of goods sold.
2. Prepare compound closing entries for Seaside.
3. Open a Merchandise Inventory account and enter a December 31, 1995, balance of $69,330. Then post those portions of the closing entries that affect the account.
4. Prepare a single-step income statement. Condense each revenue and expense category into a single item.

Problem 5–4
Proprietorship work sheet, income statement, and closing entries
(LO 2, 3, 4)

The December 31, 1996, year-end, unadjusted trial balance of the ledger of Eastman Store, a single proprietorship business, is as follows:

EASTMAN STORE
Unadjusted Trial Balance
December 31, 1996

Cash	$ 7,305	
Merchandise inventory	47,000	
Store supplies	1,715	
Office supplies	645	
Prepair insurance	3,840	
Store equipment	57,735	
Accumulated amortization, store equipment		$ 9,575
Office equipment	14,130	
Accumulated amortization, office equipment		3,670
Accounts payable		4,680
Bob Eastman, capital		93,585
Bob Eastman, withdrawals	31,500	
Sales		478,850
Sales returns and allowances	3,185	
Sales discounts	5,190	
Purchases	331,315	
Purchases returns and allowances		1,845
Purchases discounts		4,725
Transportation-in	2,810	
Sales salaries expense	34,710	
Rent expense, selling space	24,000	
Advertising expense	1,220	
Store supplies expense	–0–	
Amortization expense, store equipment	–0–	
Office salaries expense	27,630	
Rent expense, office space	3,000	
Office supplies expense	–0–	
Insurance expense	–0–	
Amortization expense, office equipment	–0–	
Totals	$596,930	$596,930

Required

1. Copy the unadjusted trial balance on a work sheet form and complete the work sheet using the following information:
   a. Store supplies inventory, $385.
   b. Office supplies inventory, $180.
   c. Expired insurance, $2,765.
   d. Amortization on the store equipment, $5,865.
   e. Amortization on the office equipment, $1,755.
   f. Ending merchandise inventory, $48,980.
2. Journalize closing entries for the store.
3. Open a balance column Merchandise Inventory account and enter a December 31, 1995, balance of $47,000. Then post those portions of the closing entries that affect the account.

Problem 5–5
Income statement calculations and formats
(LO 1, 2, 3)

The following amounts appeared on the Gershwin Company's adjusted trial balance as of October 31, the end of its fiscal year:

	Debit	Credit
Merchandise inventory	$ 25,000	
Other assets	140,000	
Liabilities		$ 37,000
G. Gershwin, capital		117,650
G. Gershwin, withdrawals	17,000	
Sales		210,000
Sales returns and allowances	15,000	
Sales discounts	2,250	
Purchases	90,000	
Purchases returns and allowances		4,300
Purchases discounts		1,800
Transportation-in	3,100	
Sales salaries expense	28,000	
Rent expense, selling space	10,000	
Store supplies expense	3,000	
Advertising expense	18,000	
Office salaries expense	16,000	
Rent expense, office space	2,500	
Office supplies expense	900	
Totals	$370,750	$370,750

A physical count shows that the cost of the ending inventory is $27,000.

Required

1. Calculate the company's net sales for the year.
2. Calculate the company's cost of goods purchased for the year.
3. Calculate the company's cost of goods sold for the year.
4. Present 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.
5. Present a condensed single-step income statement that lists these expenses: cost of goods sold, selling expenses, and general and administrative expenses.

Problem 5–6
Closing entries and interpreting information about discounts and returns
(LO 1, 3)

Use the data for the Gershwin Company in Problem 5–5 to meet the following requirements:

Required

Preparation component:

1. Prepare closing entries for the company as of October 31.

Analysis component:

2. All of the company's purchases were made on credit and the suppliers uniformly offer a 3% discount. Does it appear that the company's cash management system is accomplishing the goal of taking all available discounts?
3. In prior years, the company has experienced a 4% return rate on its sales, which means that approximately 4% of its gross sales were for items that were eventually returned outright or that caused the company to grant allowances to customers. How does this year's record compare to prior years' results?

E Problem 5–7
Adjusting entries, closing entries, and interpreting information about discounts and returns
(LO 1, 3, 4)

Refer to the Gershwin Company data in Problem 5-5 and notice that the adjusted trial balance reflects the closing entry approach to account for merchandise inventory. Now assume that the company has decided to switch to the adjusting entry approach.

Required

Preparation component:

1. Prepare adjusting entries to update the Merchandise Inventory account at October 31 and then prepare closing entries for the company as of October 31.

Analysis component:

2. All of the company's purchases were made on credit and the suppliers uniformly offer a 2.1% discount. Does it appear that the company's cash management system is accomplishing the goal of taking all available discounts?
3. In prior years, the company has experienced a 9% return rate on its sales, which means that approximately 9% of its gross sales were for items that were eventually returned outright or that caused the company to grant allowances to customers. How does this year's record compare to prior years' results?

Problem 5–8
Work sheet, income statements, and acid-test ratio
(LO 3, 4, 5)

The following unadjusted trial balance was prepared at the end of the fiscal year for Ruth's Place:

RUTH'S PLACE
Unadjusted Trial Balance
December 31

101	Cash	$ 4,000	
119	Merchandise inventory	9,900	
125	Store supplies	5,000	
128	Prepaid insurance	2,000	
165	Store equipment	45,000	
166	Accumulated amortization, store equipment		$ 6,000
201	Accounts payable		8,000
301	Ruth Helm, capital		35,200
302	Ruth Helm, withdrawals	3,500	
413	Sales		90,000
415	Sales discounts	1,000	
505	Purchases	38,000	
506	Purchases returns and allowances		800
508	Transportation-in	1,800	
612	Amortization expense, store equipment		
622	Salaries expense	16,000	
637	Insurance expense		
640	Rent expense	5,000	
651	Store supplies expense		
655	Advertising expense	8,800	
	Totals	$140,000	$140,000

Required

1. Use the unadjusted trial balance and the following information to prepare an eight-column work sheet for the company:
   a. The ending inventory of store supplies is $650.
   b. Expired insurance for the year is $1,200.

c. Amortization expense for the year is $9,000.

d. The ending merchandise inventory is $11,500.

2. Prepare a detailed multiple-step income statement that would be used by the store's owner.
3. Prepare a single-step income statement that would be provided to decision makers outside the company.
4. Compute the company's current and acid-test ratios as of December 31.

Problem 5–9
Proprietorship work sheet, financial statements, and closing entries
(LO 1, 2, 4)

The unadjusted trial balance of Classic Threads on December 31, 1996, the end of the annual accounting period, is as follows:

CLASSIC THREADS
Unadjusted Trial Balance
December 31, 1996

Cash	$ 10,275	
Accounts receivable	22,665	
Merchandise inventory	51,845	
Store supplies	2,415	
Office supplies	775	
Prepaid insurance	3,255	
Store equipment	61,980	
Accumulated amortization, store equipment		$ 10,830
Office equipment	12,510	
Accumulated amortization, office equipment		2,825
Accounts payable		8,310
Salaries payable		–0–
Sally Fowler, capital		106,015
Sally Fowler, withdrawals	15,000	
Sales		562,140
Sales returns and allowances	5,070	
Purchases	385,085	
Purchases returns and allowances		1,820
Purchases discounts		4,710
Transportation-in	5,125	
Sales salaries expense	43,220	
Rent expense, selling space	20,250	
Store supplies expense	–0–	
Amortization expense, store equipment	–0–	
Office salaries expense	48,330	
Rent expense, office space	8,850	
Office supplies expense	–0–	
Insurance expense	–0–	
Amortization expense, office equipment	–0–	
Totals	$696,650	$696,650

Required

1. Copy the unadjusted trial balance on a work sheet form and complete the work sheet using the information that follows:

   a. Ending store supplies inventory, $445.

   b. Ending office supplies inventory, $225.

   c. Expired insurance, $2,805.

   d. Amortization on the store equipment, $5,415.

   e. Amortization on the office equipment, $1,485.

f. Accrued sales salaries payable, $445; and accrued office salaries payable, $210.

g. Ending merchandise inventory, $54,365.

2. Prepare a multiple-step income statement showing in detail the expenses and the items that make up cost of goods sold.
3. Prepare a statement of changes in owner's equity. On December 31, 1995, the Sally Fowler, Capital account had a balance of $36,015. Early in 1996, Ms. Fowler invested an additional $70,000 in the business.
4. Prepare a year-end classified balance sheet with the prepaid expenses combined.
5. Prepare adjusting and closing entries.

Problem 5–10
Analytical Essay
(LO 1)

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

Problem 5–11
Analytical Essay
(LO 2)

A retail company's accountant recently compiled the cost of the ending merchandise inventory to use in preparing the financial statements. In developing the measure, the accountant did not know that $10,000 of incoming goods had been shipped by a supplier on December 31 under an FOB factory agreement. These goods had been recorded as a purchase, but they were not included in the physical count because they were not on hand. Explain how this overlooked fact would affect the company's financial statements and these ratios: debt ratio, current ratio, profit margin, and acid-test ratio.

SERIAL PROBLEM

Emerald Computer Services

(The first three segments of this comprehensive problem were presented in Chapters 2, 3, and 4. If those segments have not been completed, the assignment can begin at this point. However, the student will need to use the facts presented on pages 119–20 in Chapter 2, pages 175–76 in Chapter 3, and page 229 in Chapter 4. Because of its length, this problem is most easily solved if students use the Working Papers that accompany this text.)

Earlier segments of this problem have described how Tracy Green created Emerald Computer Services on October 1, 1996. The company has been successful, and its list of customers has started to grow. To accommodate the growth, the accounting system is ready to be 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 the end of 1996. Green 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 existing chart of accounts to continue being used. The list also shows the balances that two customers owed as of December 31, 1996:

Account	No.	Dec. 31 Balance
Alpha Printing Co.	106.1	
Bravo Productions	106.2	
Charles Company	106.3	$ 900
Delta Fixtures, Inc.	106.4	
Echo Canyon Ranch	106.5	
Fox Run Estates	106.6	$1,000
Golf Course Designs, Inc.	106.7	
Hotel Pollo del Mar	106.8	
Indiana Manuf. Co.	106.9	

In response to frequent requests from customers, Green has decided to begin selling computer software. The company will extend credit terms of 1/10, n/30 to customers who purchase merchandise. No cash discount will be available on consulting fees. The following additional accounts were 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
Purchases	505
Purchases Returns and Allowances	506
Purchases Discounts	507
Transportation-In	508

Because the accounting system does not use reversing entries, all revenue and expense accounts have zero balances as of January 1, 1997.

Required

1. Prepare journal entries to record each of the following transactions for Emerald Computer Services.
2. Post the journal entries to the accounts in the company's General Ledger. (Use asset, liability, and capital accounts that start with the balance as of December 31, 1996.)
3. Prepare a six-column table similar to Illustration 3–3 that presents the unadjusted trial balance, the March 31 adjustments, 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 interim income statement for the three months ended March 31, 1997. Use a detailed multiple-step format that shows calculations of net sales, total revenues, cost of goods sold, total expenses, and net income.
5. Prepare an interim statement of changes in owner's equity for the three months ended March 31, 1997.
6. Prepare an interim balance sheet as of March 31, 1997.

Transactions:

Jan.	4	Paid Fran Sims for five days, including one day in addition to the four unpaid days from the prior year.
	6	Tracy Green invested an additional $12,000 cash in the business.
	7	Purchased $2,800 of merchandise from SoftHead Co. on terms of 1/10, n/30, FOB shipping point.
	8	Received $1,000 from Fox Run Estates as final payment on its account.
	10	Completed 5-day project for Alpha Printing Co. and billed them $3,000, which is the total price of $4,000 less the advance payment of $1,000.
	13	Sold merchandise with a retail value of $2,100 to Delta Fixtures, Inc., with terms of 1/10, n/30, FOB shipping point.
	14	Paid $350 for freight charges on the merchandise purchased on January 7.
	16	Received $1,500 cash from Golf Course Designs, Inc., for computer services.
	17	Paid SoftHead Co. for the purchase on January 7, net of the discount.

Jan. 21 Delta Fixtures, Inc., returned $200 of defective merchandise from its purchase on January 13.

22 Received the balance due from Delta Fixtures, Inc., net of the discount and the credit for the returned merchandise.

23 Returned defective merchandise to SoftHead Co. and accepted credit against future purchases. Its cost, net of the discount, was $198.

26 Sold $2,900 of merchandise on credit to Hotel Pollo del Mar.

28 Purchased $4,000 of merchandise from SoftHead Co. on terms of 1/10, n/30, FOB destination.

29 Received a $198 credit memo from SoftHead Co. concerning the merchandise returned on January 23.

31 Paid Fran Sims for 10 days' work.

Feb. 1 Paid $2,250 to the Town Hall Mall for another three months' rent.

3 Paid SoftHead Co. for the balance due, net of the cash discount, less the $198 amount in the credit memo.

4 Paid $400 to the local newspaper for advertising.

11 Received the balance due from Alpha Printing Co. for fees billed on January 10.

16 Paid $2,000 to Tracy Green as a withdrawal.

23 Sold $1,600 of merchandise on credit to Golf Course Designs, Inc.

26 Paid Fran Sims for 8 days' work.

27 Reimbursed Tracy Green's business automobile usage for 600 km. at $0.25 per kilometre.

Mar. 8 Purchased $1,200 of computer supplies from AAA Supply Co. on credit.

9 Received the balance due from Golf Course Designs, Inc., for merchandise sold on February 23.

15 Repaired the company's computer at the cost of $430.

16 Received $2,130 cash from Indiana Manuf. Co. for computing services.

19 Paid the full amount due to AAA Supply Co. including amounts created on December 13 and March 8.

24 Billed Bravo Productions for $2,950 of computing services.

25 Sold $900 of merchandise on credit to Echo Canyon Ranch.

30 Sold $1,110 of merchandise on credit to Charles Company.

31 Reimbursed Tracy Green's business automobile usage for 400 km. at $0.25 per kilometre.

Information for the March 31 adjustments and financial statements:

a. The March 31 inventory of computing supplies is $670.

b. Three more months have passed since the company purchased the annual insurance policy at the cost of $1,440.

c. Fran Sims has not been paid for 7 days of work.

d. Three months have passed since any prepaid rent cost has been transferred to expense.

e. Amortization on the computer for January through March is $750.

f. Amortization on the office equipment for January through March is $500.

g. The March 31 inventory of merchandise is $2,182.

PROVOCATIVE PROBLEMS

Provocative Problem 5–1
Financial Reporting Problem
(LO 1, 2, 3)

Wanda Wonder, the owner of the WonderFull Store, has operated the company for several years but has never used an accrual accounting system. To have more useful information, Wonder has engaged you to help prepare an income statement for 1997. Based on data that you have gathered from the cash-basis accounting system and other documents, you have been able to prepare the following balance sheets as of the beginning and end of 1997:

	December 31	
	1996	**1997**
Cash	$ 5,400	$ 42,250
Accounts receivable	18,500	22,600
Merchandise inventory	39,700	34,000
Equipment (net of amortization)	87,000	56,000
Total assets	$150,600	$154,850
Accounts payable	$ 28,300	$ 36,250
Wages payable	2,200	1,700
Wanda Wonder, capital	120,100	116,900
Total liabilities and owner's equity	$150,600	$154,850

The store's cash records also provided the following facts for 1997:

Amount collected on accounts receivable	$339,900
Payments for:	
Accounts payable	198,050
Employees' wages	52,000
All other operating expenses	29,000
Withdrawals by the owner	24,000

You have determined that all merchandise purchases and sales were made on credit, and that no equipment was either purchased or sold during the year.

Use the preceding information to calculate the amounts of the company's sales, cost of goods purchased, cost of goods sold, amortization expense, and wages expense for 1997. Then, prepare a multiple-step income statement that shows the company's gross profit.

Provocative Problem 5–2
Nan's Nursery
(LO 1, 2, 3)

Nan Hall and Mike Linden were partners in a nursery. They disagreed, closed the business, and ended their partnership. In settlement for her partnership interest, Nan Hall received an inventory of trees, plants, and garden supplies having a $22,500 cost. Since there was nothing practical she could do with the inventory except open a new nursery, she did so by investing the inventory and $18,000 in cash. She used $15,000 of the cash to buy equipment, and she opened for business on May 1. During the succeeding eight months, she paid out $63,750 to creditors for additional trees, plants, and garden supplies and $21,000 in operating expenses. She also withdrew $15,000 for personal expenses, and at the year-end, she prepared the balance sheet that follows:

NAN'S NURSERY
Balance Sheet
December 31, 1996

Cash		$ 8,550	Accounts payable (all for merchandise)	$ 3,300
Merchandise inventory		26,650	Nan Hall, capital	45,700
Equipment	$ 15,000			
Less amortization	1,200	13,800		
Total assets		$49,000	Total liabilities and owner's equity	$49,000

Based on the information given, prepare calculations to determine the net income earned by the business, the cost of goods sold, and the amount of its sales. Then prepare an income statement showing the result of the nursery's operations during its first eight months.

Provocative Problem 5–3
Phil's Paints
(LO 1, 3)

Phil Potter worked in the National Bank for 20 years, until his aunt died, leaving him a sizable estate. After sitting around long enough to get bored and see his bank balance dwindle, Phil decided to open a retail paint store. When he started the business on July 1, 1996, Valley Hills had no such store, and it appeared to Phil that the business would succeed.

On July 1, Phil deposited $53,500 in a bank account under the name Phil's Paints. He then paid $12,000 cash for store equipment, which he expected to last 10 years before it became valueless. He also bought merchandise for $37,500 cash, and paid $3,600 in advance for six months' rent.

Phil estimated that most paint stores marked their goods for sale at prices averaging 35% above cost. In other words, an item that cost $10.00 was marked for sale at $13.50. But to entice customers, he decided to mark his merchandise for sale at 30% above cost. Since his overhead would be low, he thought this would still leave a new income equal to 10% of sales.

On December 31, 1996, six months after opening his store, Phil has come to you for advice. He thinks business has been good. However, he doesn't quite understand why his cash balance has fallen to $1,200.

In talking with Phil and examining his records, you determine that the inventory was replaced three times during the six months, each time at a cost of $37,500. All merchandise suppliers have been paid except for $10,850, which is not yet due. A full stock of merchandise (cost of $37,500) is on hand and customers owe Phil $29,100. In addition to the rend paid in advance, Phil paid $14,700 for other expenses.

Prepare an income statement for the business covering the six-month period ended December 31, a statement of changes in owner's equity, a December 31, 1996, balance sheet, and a statement that explains the $1,200 cash balance by showing the cash receipts and cash disbursements during the six months ended December 31.

Provocative Problem 5–4
Financial statement analysis case
(LO 1, 5)

Use the financial statements for Geac Computer Corporation Limited in Appendix I at the end of the book to find the answers to these questions:

a. Although Geac manufactures most of the goods that it sells, assume that the amounts reported for inventories and cost of sales* were all purchased ready for resale and then calculate the total cost of goods purchased during the fiscal year ended April 30, 1994.

b. Calculate the current and acid-test ratios as of the end of the 1994 and 1993 fiscal years. Comment on what you find.

*Use "costs, excluding amounts shown below" as cost of sales.

Provocative Problem 5–5
Ethical issue essay

Describe the problem faced by Renee Fleck in the As a Matter of Ethics case on page 248 and evaluate her alternative courses of action.

ANALYTICAL AND REVIEW PROBLEMS

A & R Problem 5–1 The partially completed work sheet of Incomplete Data Company appears below:

INCOMPLETE DATA COMPANY
Work Sheet for the Year Ended December 31, 1996

Account Titles	Trial Balance		Adjustments		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	34,780							
Accounts receivable							4,600	
Merchandise inventory					31,400	26,400		
Prepaid fire insurance	720						480	
Prepaid rent	4,800							
Office equipment							12,000	
Accum. amort.—office equipment		4,500						
Accounts payable		8,000						
Clay Camp, capital		22,000						
Clay Camp, drawing							20,000	
Sales		300,000						
Sales returns and allowances					1,000			
Purchases	199,200							
Purchases returns and allowances						1,400		
Advertising expense	1,000							
Supplies expense	1,800							
Salaries expense	23,200							
Utilities expense	1,400							
Fire insurance expense								
Rent expense					2,400			
Amort. expense—office equipment					1,500			
Salaries payable								660

Required

1. Complete the work sheet for the year ended December 31, 1996.

The following are the selected data for the Allen Sales Company for the year 1997.

A & R Problem 5–2

1. Selected closing entries:

Income Summary	273,000	
Purchases Returns and Allowances	2,500	
Purchases		180,000
Freight-In		4,000
Purchase Discounts Lost		200
Sales Salaries Expense		40,000
Advertising Expense		10,000
Rent Expense, Office Space		8,000
Delivery Expense		4,800
Office Salaries Expense		26,000
Amortization, Office Equipment		2,000
Miscellaneous Expense		500
To close expense and other nominal accounts		
G. Allen, Capital	28,000	
G. Allen, Withdrawals		28,000
To close the withdrawals account.		

2. G. Allen follows the practice of withdrawing half of the annual net income from the business.
3. There were no sales returns and allowances for the year. However, sales discounts amounted to $2,000.
4. Inventories:

   December 31, 1996—$25,000

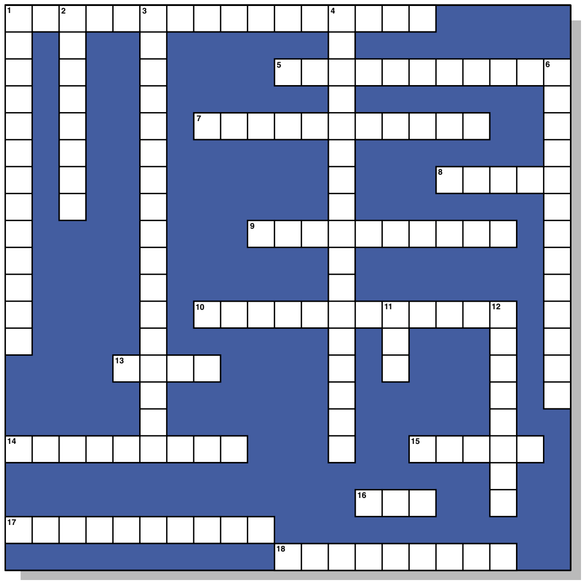
   December 31, 1997—$20,000

Required

1. Compute the amount of net income for 1997.
2. Compute the amount of sales for 1997.
3. Prepare a classified income statement for 1997.

CONCEPT TESTER

Test your understanding of the concepts introduced in this chapter by completing the following crossword puzzle.



Across Clues

1. Freight charges on goods purchased (2 words).
5. Amounts and timing of payments agreed to by buyers (2 words).
7. Goods bought and sold to others.
8. Term for revenues from selling of merchandise.
9. Income statement format (2 words).
10. Income statement format that discloses gross profit (2 words).
13. Expense of buying and preparing goods sold (abbreviation).
14. Inventory method that recognizes COGS at time of sale.
15. Synonymous term for merchandise.
16. Legal arrangement for identifying location at which title to goods is transferred (abbreviation).
17. Balance sheet that identifies current assets, capital assets, etc.
18. Collection of goods waiting to be sold to customers.

Down Clues

1. Reduction from catalogue price (2 words).
2. Ratio of quick assets to current liabilities (2 words).
3. Cash discount taken against amount owed to supplier (2 words).
4. Total of selling and general administration expenses (2 words).
6. Cash discount taken by customers (2 words).
11. Credit terms (abbreviation).
12. Inventory method which fails to identify amount of shrinkage.

ANSWERS TO PROGRESS CHECKS

5–1 *b*

5–2 Gross profit is the difference between net sales and cost of goods sold.

5–3 Keeping sales returns and allowances and sales discounts separate from sales makes useful information readily available to managers for internal monitoring and decision making. This information is not likely to be reported outside the company because it would not be useful for external decision makers.

5–4 Under credit terms of 2/10, n/60, the credit period is 60 days and the discount period is 10 days.

5–5 *b*

5–6 With a periodic inventory system, the cost of goods sold is determined at the end of an accounting period by adding the cost of goods purchased to the beginning inventory and subtracting the ending inventory.

5–7 FOB means free on board. The term *FOB destination* means that the seller does not transfer ownership of the goods to the buyer until they arrive at the buyer's place of business. Thus, the seller is responsible for paying the shipping charges and bears the risk of damage during shipment.

5–8 *c*

5–9 The classified income statement; the single-step income statement.

5–10 The second closing entry, which closes the income statement accounts with debit balances, includes a credit to Merchandise Inventory to remove the beginning inventory amount.

5–11 *d*

5–12 The acid-test ratio.

5–13 *d*

5–14 Both approaches will report the same ending inventory and net income.