CHAPTER 3

Accounting for Merchandising Businesses

LEARNING OBJECTIVES

After you have mastered the material in this chapter, you will be able to:

1. Identify and explain the primary features of the perpetual inventory system.
2. Show the effects of inventory transactions on financial statements.
3. Explain the meaning of terms used to describe transportation costs, cash discounts, returns or allowances, and financing costs.
4. Explain how gains and losses differ from revenues and expenses.
5. Compare and contrast single and multistep income statements.
6. Show the effect of lost, damaged, or stolen inventory on financial statements.
7. Use common size financial statements to evaluate managerial performance.
8. Identify the primary features of the periodic inventory system. (Appendix)

CHAPTER OPENING

Previous chapters have discussed accounting for service businesses. These businesses obtain revenue by providing some kind of service such as medical or legal advice to their customers. Other examples of service companies include dry cleaning companies, maid service companies, and car washes. This chapter introduces accounting practices for merchandising businesses. **Merchandising businesses** generate revenue by selling goods. They buy the merchandise they sell from companies called suppliers. The goods purchased for resale are called **merchandise inventory.** Merchandising businesses include **retail companies** (companies that sell goods to the final consumer) and **wholesale companies** (companies that sell to other businesses). **Sears**, **JCPenney**, **Target**, and **Sam's Club** are real-world merchandising businesses.

The Curious Accountant

Janice recently purchased a gold necklace for $250 from her local **Zales** jewelry store. The next day she learned that Zoe bought the same necklace on-line from **Blue Nile** for only $200. Janice questioned how Blue Nile could sell the necklace for so much less than Zales. Zoe suggested that even though both jewelry sellers purchase their products from the same producers at about the same price, Blue Nile can charge lower prices because it does not have to operate expensive bricks-and-mortar stores, and thus has lower operating costs. Janice disagrees. She thinks the cost of operating large distribution centers and Internet server centers will offset any cost savings Blue Nile enjoys from not owning retail jewelry stores.

Exhibit 3.1 presents the income statements for Zales and Blue Nile. Based on these income statements, do you think Janice or Zoe is correct? (Answer on page 104.)

EXHIBIT 3.1 Comparative Income Statements

BLUE NILE, INC.
Consolidated Statements of Operations
(in thousands, except per share data)

	Year Ended	
	January 3, 2010	January 4, 2009
Net sales	$302,134	$295,329
Cost of sales	236,790	235,333
Gross profit	65,344	59,996
Selling, general and administrative expenses	45,997	44,005
Operating income	19,347	15,991
Other income, net:		
Interest income, net	122	1,420
Other income, net	209	445
Total other income, net	331	1,865
Income before income taxes	19,678	17,856
Income tax expense	6,878	6,226
Net income	$ 12,800	$ 11,630

ZALE CORPORATION AND SUBSIDIARIES
Consolidated Statements of Operations
(in thousands, except per share amounts)

	Year Ended July 31,	
	2009	2008 As Restated
Revenues	$1,779,744	$2,138,041
Cost and expenses:		
Cost of sales	948,572	1,089,553
Selling, general and administrative	927,249	985,028
Cost of insurance operations	7,000	6,744
Depreciation and amortization	58,947	60,244
Other charges and gains	70,095	(10,700)
Operating (loss) earnings	(232,119)	7,172
Interest expense	10,399	12,364
Other income	—	(3,500)
Loss before income taxes	(242,518)	(1,692)
Income tax (benefit) expense	(53,015)	4,761
Loss from continuing operations	(189,503)	(6,453)
Earnings from discontinued operations, net of taxes	—	7,084
Net (loss) earnings	$ (189,503)	$ 631

PRODUCT COSTS VERSUS SELLING AND ADMINISTRATIVE COSTS

LO 1

Identify and explain the primary features of the perpetual inventory system.

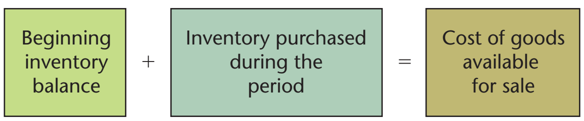
Companies report inventory costs on the balance sheet in the asset account Merchandise Inventory. All costs incurred to acquire merchandise and ready it for sale are included in the inventory account. Examples of inventory costs include the price of goods purchased, shipping and handling costs, transit insurance, and storage costs.

Since inventory items are referred to as products, inventory costs are frequently called **product costs.**

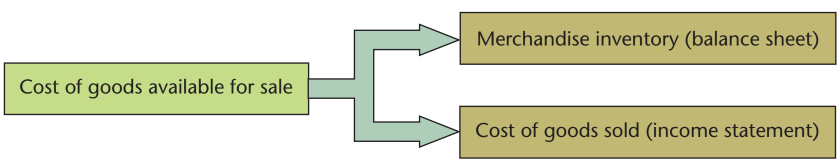
Costs that are not included in inventory are usually called **selling and administrative costs.** Examples of selling and administrative costs include advertising, administrative salaries, sales commissions, insurance, and interest. Since selling and administrative costs are usually recognized as expenses *in the period* in which they are incurred, they are sometimes called **period costs.** In contrast, product costs are expensed when inventory is sold regardless of when it was purchased. In other words, product costs are matched directly with sales revenue, while selling and administrative costs are matched with the period in which they are incurred.

ALLOCATING INVENTORY COST BETWEEN ASSET AND EXPENSE ACCOUNTS

The cost of inventory that is available for sale during a specific accounting period is determined as follows.



The **cost of goods available for sale** is allocated between the asset account Merchandise Inventory and an expense account called **Cost of Goods Sold.** The cost of inventory items that have not been sold (Merchandise Inventory) is reported as an asset on the balance sheet, and the cost of the items sold (Cost of Goods Sold) is expensed on the income statement. This allocation is depicted graphically as follows.



The difference between the sales revenue and the cost of goods sold is called **gross margin** or **gross profit.** The selling and administrative expenses (period costs) are subtracted from gross margin to obtain the net income.

Exhibit 3.1 displays income statements from the annual reports of **Blue Nile** and **Zales**. For each company, review the most current income statement and determine the amount of gross margin. You should find a gross profit of $65,344 for Blue Nile and a gross margin of $831,172 ($1,779,744 − $948,572) for Zales.

PERPETUAL INVENTORY SYSTEM

LO 2

Show the effects of inventory transactions on financial statements.

Most modern companies maintain their inventory records using the **perpetual inventory system,** so-called because the inventory account is adjusted perpetually (continually) throughout the accounting period. Each time merchandise is purchased, the inventory account is increased; each time it is sold, the inventory account is decreased. The following illustration demonstrates the basic features of the perpetual inventory system.

June Gardener loved plants and grew them with such remarkable success that she decided to open a small retail plant store. She started June's Plant Shop (JPS) on January 1, 2012. The following discussion explains and illustrates the effects of the five events the company experienced during its first year of operation.

Effects of 2012 Events on Financial Statements

EVENT 1 JPS acquired $15,000 cash by issuing common stock.

This event is an asset source transaction. It increases both assets (cash) and stockholders' equity (common stock). The income statement is not affected. The statement of cash flows reflects an inflow from financing activities. These effects are shown here.

		Assets			=	Liab.	+	Stockholders' Equity								
Cash	+	Inventory	+	Land	=	Accts. Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow
15,000	+	NA	+	NA	=	NA	+	15,000	+	NA	NA	−	NA	=	NA	15,000 FA

EVENT 2 JPS purchased merchandise inventory for $14,000 cash.

This event is an asset exchange transaction. One asset, cash, decreases and another asset, merchandise inventory, increases; total assets remain unchanged. Because product costs are expensed when inventory is sold, not when it is purchased, the event does not affect the income statement. The cash outflow, however, is reported in the operating activities section of the statement of cash flows. These effects are illustrated below.

		Assets			=	Liab.	+	Stockholders' Equity								
Cash	+	Inventory	+	Land	=	Accts. Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow
(14,000)	+	14,000	+	NA	=	NA	+	NA	+	NA	NA	−	NA	=	NA	(14,000) OA

EVENT 3A JPS recognized sales revenue from selling inventory for $12,000 cash.

The revenue recognition is the first part of a two-part transaction. The *sales part* represents a source of assets (cash increases from earning sales revenue). Both assets (cash) and stockholders' equity (retained earnings) increase. Sales revenue on the income statement increases. The $12,000 cash inflow is reported in the operating activities section of the statement of cash flows. These effects are shown in the following financial statements model.

		Assets			=	Liab.	+	Stockholders' Equity								
Cash	+	Inventory	+	Land	=	Accts. Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow
12,000	+	NA	+	NA	=	NA	+	NA	+	12,000	12,000	−	NA	=	12,000	12,000 OA

EVENT 3B JPS recognized $8,000 of cost of goods sold.

The expense recognition is the second part of the two-part transaction. The *expense part* represents a use of assets. Both assets (merchandise inventory) and stockholders' equity (retained earnings) decrease. An expense account, Cost of Goods Sold, is reported on the income statement. This part of the transaction does not affect the statement of cash flows. A cash outflow occurred when the goods were bought, not when they were sold. These effects are shown here.

Assets						=	Liab.	+	Stockholders' Equity									
Cash	+	Inventory	+	Land	=		Accts. Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow	
NA	+	(8,000)	+	NA	=		NA	+	NA	+	(8,000)	NA	−	8,000	=	(8,000)	NA	

EVENT 4 **JPS paid $1,000 cash for selling and administrative expenses.**

This event is an asset use transaction. The payment decreases both assets (cash) and stockholders' equity (retained earnings). The increase in selling and administrative expenses decreases net income. The $1,000 cash payment is reported in the operating activities section of the statement of cash flows. These effects are illustrated below.

Assets						=	Liab.	+	Stockholders' Equity									
Cash	+	Inventory	+	Land	=		Accts. Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow	
(1,000)	+	NA	+	NA	=		NA	+	NA	+	(1,000)	NA	−	1,000	=	(1,000)	(1,000)	OA

EVENT 5 **JPS paid $5,500 cash to purchase land for a place to locate a future store.**

Buying the land increases the Land account and decreases the Cash account on the balance sheet. The income statement is not affected. The statement of cash flow shows a cash outflow to purchase land in the investing activities section of the statement of cash flows. These effects are shown below.

Assets						=	Liab.	+	Stockholders' Equity									
Cash	+	Inventory	+	Land	=		Accts. Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow	
(5,500)	+	NA	+	5,500	=		NA	+	NA	+	NA	NA	−	NA	=	NA	(5,500)	IA

Financial Statements for 2012

JPS's financial statements for 2012 are shown in Exhibit 3.2. JPS had no beginning inventory in its first year, so the cost of merchandise inventory available for sale was $14,000 (the amount of inventory purchased during the period). Recall that JPS must allocate the ***Cost of Goods (Inventory) Available for Sale*** between the ***Cost of Goods Sold*** ($8,000) and the ending balance ($6,000) in the ***Merchandise Inventory*** account. The cost of goods sold is reported as an expense on the income statement and the ending balance of merchandise inventory is reported as an asset on the balance sheet. The difference between the sales revenue ($12,000) and the cost of goods sold ($8,000) is labeled ***gross margin*** ($4,000) on the income statement.

EXHIBIT 3.2

Financial Statements

2012 Income Statement

Sales revenue	$12,000
Cost of goods sold	(8,000)
Gross margin	4,000
Less: Operating exp.	
Selling and admin. exp.	(1,000)
Net income	$ 3,000

12/31/12 Balance Sheet

Assets		
Cash	$ 6,500	
Merchandise inventory	6,000	
Land	5,500	
Total assets		$18,000
Liabilities		$ 0
Stockholders' equity		
Common stock	$15,000	
Retained earnings	3,000	
Total stockholders' equity		18,000
Total liab. and stk. equity		$18,000

2012 Statement of Cash Flows

Operating activities		
Inflow from customers	$12,000	
Outflow for inventory	(14,000)	
Outflow for selling & admin. exp.	(1,000)	
Net cash outflow for operating activities		$ (3,000)
Investing activities		
Outflow to purchase land		(5,500)
Financing activities		
Inflow from stock issue		15,000
Net change in cash		6,500
Plus: Beginning cash balance		0
Ending cash balance		$ 6,500

CHECK YOURSELF 3.1

Phambroom Company began 2012 with $35,600 in its Inventory account. During the year, it purchased inventory costing $356,800 and sold inventory that had cost $360,000 for $520,000. Based on this information alone, determine (1) the inventory balance as of December 31, 2012, and (2) the amount of gross margin Phambroom would report on its 2012 income statement.

Answer

1. $35,600 Beginning inventory + $356,800 Purchases = $392,400 Goods available for sale
   $392,400 Goods available for sale − $360,000 Cost of goods sold = $32,400 Ending inventory
2. Sales revenue − Cost of goods sold = Gross margin
   $520,000 − $360,000 = $160,000

Transportation Cost, Purchase Returns and Allowances, and Cash Discounts Related to Inventory Purchases

LO 3

Explain the meaning of terms used to describe transportation costs, cash discounts, returns or allowances, and financing costs.

Purchasing inventory often involves: (1) incurring transportation costs, (2) returning inventory or receiving purchase allowances (cost reductions), and (3) taking cash discounts (also cost reductions). During its second accounting cycle, JPS encountered these kinds of events. The final account balances at the end of the 2012 fiscal year become the beginning balances for 2013: Cash, $6,500; Merchandise Inventory, $6,000; Land, 5,500; Common Stock, $15,000; and Retained Earnings, $3,000.

Effects of 2013 Events on Financial Statements

JPS experienced the following events during its 2013 accounting period. The effects of each of these events are explained and illustrated in the following discussion.

EVENT 1 JPS borrowed $4,000 cash by issuing a note payable.

JPS borrowed the money to enable it to purchase a plot of land for a site for a store it planned to build in the near future. Borrowing the money increases the Cash account and the Note Payable account on the balance sheet. The income statement is not affected. The statement of cash flow shows a cash flow from financing activities. These effects are shown below.

Assets								=	Liabilities			+	Stockholders' Equity								
Cash	+	Accts. Rec.	+	Inventory	+	Land		=	Accts. Pay.	+	Notes Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow
4,000	+	NA	+	NA	+	NA		=	NA	+	4,000	+	NA	+	NA	NA	−	NA	=	NA	4,000 FA

EVENT 2 JPS purchased on account merchandise inventory with a list price of $11,000.

The inventory purchase increases both assets (merchandise inventory) and liabilities (accounts payable) on the balance sheet. The income statement is not affected until later, when inventory is sold. Since the inventory was purchased on account, there was no cash outflow. These effects are shown here.

Assets								=	Liab.			+	Stockholders' Equity								
Cash	+	Accts. Rec.	+	Inventory	+	Land		=	Accts. Pay.	+	Notes Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow
NA	+	NA	+	11,000	+	NA		=	11,000	+	NA	+	NA	+	NA	NA	−	NA	=	NA	NA

Accounting for Purchase Returns and Allowances

EVENT 3 JPS returned some of the inventory purchased in Event 2. The list price of the returned merchandise was $1,000.

To promote customer satisfaction, many businesses allow customers to return goods for reasons such as wrong size, wrong color, wrong design, or even simply because the purchaser changed his mind. The effect of a purchase return is the *opposite* of the original purchase. For JPS the **purchase return** decreases both assets (merchandise inventory) and liabilities (accounts payable). There is no effect on either the income statement or the statement of cash flows. These effects are shown below.

Assets								=	Liab.			+	Stockholders' Equity								
Cash	+	Accts. Rec.	+	Inventory	+	Land		=	Accts. Pay.	+	Notes Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow
NA	+	NA	+	(1,000)	+	NA		=	(1,000)	+	NA	+	NA	+	NA	NA	−	NA	=	NA	NA

Sometimes dissatisfied buyers will agree to keep goods instead of returning them if the seller offers to reduce the price. Such reductions are called allowances. **Purchase allowances** affect the financial statements the same way purchase returns do.

Purchase Discounts

EVENT 4 JPS received a cash discount on goods purchased in Event 2. The credit terms were 2/10, n/30.

To encourage buyers to pay promptly, sellers sometimes offer **cash discounts.** To illustrate, assume JPS purchased the inventory in Event 2 under terms **2/10, n/30** (two-ten, net thirty). These terms mean the seller will allow a 2 percent cash discount if the purchaser pays cash within 10 days from the date of purchase. The amount not paid within the first 10 days is due at the end of 30 days from date of purchase. Recall that JPS returned $1,000 of the inventory purchased in Event 1 leaving a $10,000 balance ($11,000 list price − $1,000 purchase return). If JPS pays for the inventory within 10 days, the amount of the discount is $200 ($10,000 × .02).

When cash discounts are applied to purchases they are called **purchases discounts.** When they are applied to sales, they are called sales discounts. Sales discounts will be discussed later in the chapter. A *purchase discount* reduces the cost of the inventory and the associated account payable on the balance sheet. A purchase discount does not directly affect the income statement or the statement of cash flow. These effects are shown here.

Assets							=	Liab.			+	Stockholders' Equity							
Cash	+	Accts. Rec.	+	Inventory	+	Land	=	Accts. Pay.	+	Notes Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow
NA	+	NA	+	(200)	+	NA	=	(200)	+	NA	+	NA	+	NA	NA	−	NA	=	NA	NA

If JPS paid the account payable after 10 days, there would be no purchase discount. In this case the balances in the Inventory and Account Payable accounts would remain at $10,000.

EVENT 5 JPS paid the $9,800 balance due on the account payable.

The remaining balance in the accounts payable is $9,800 ($10,000 list price − $200 purchase discount). Paying cash to settle the liability reduces cash and accounts payable on the balance sheet. The income statement is not affected. The cash outflow is shown in the operating section of the statement of cash flows. These effects are shown below.

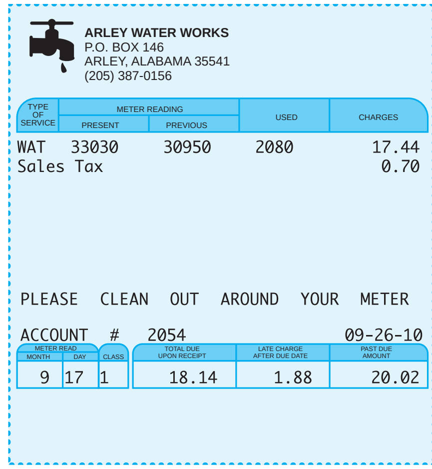
Assets							=	Liab.			+	Stockholders' Equity								
Cash	+	Accts. Rec.	+	Inventory	+	Land	=	Accts. Pay.	+	Notes Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow
(9,800)	+	NA	+	NA	+	NA	=	(9,800)	+	NA	+	NA	+	NA	NA	−	NA	=	NA	(9,800) OA

The Cost of Financing Inventory

Suppose you buy inventory this month and sell it next month. Where do you get the money to pay for the inventory at the time you buy it? One way to finance the purchase is to buy it on account and withhold payment until the last day of the term for the account payable. For example, suppose you buy inventory under terms 2/10, net/30. Under these circumstances you could delay payment for 30 days after the day of purchase. This way you may be able to collect enough money from the inventory you sell

REALITY BYTES

Many real-world companies have found it more effective to impose a penalty for late payment than to use a cash discount to encourage early payment. The invoice from Arley Water Works is an example of the penalty strategy. Notice that the amount due, if paid by the due date, is $18.14. A $1.88 late charge is imposed if the bill is paid after the due date. The $1.88 late charge is in fact interest. If Arley Water Works collects the payment after the due date, the utility will receive cash of $20.02. The collection will increase cash ($20.02), reduce accounts receivable ($18.14), and increase interest revenue ($1.88).


ARLEY WATER WORKS
P.O. BOX 146
ARLEY, ALABAMA 35541
(205) 387-0156

TYPE OF SERVICE	METER READING PRESENT	METER READING PREVIOUS	USED	CHARGES
WAT	33030	30950	2080	17.44
Sales Tax				0.70

PLEASE CLEAN OUT AROUND YOUR METER

ACCOUNT # 2054 09-26-10

METER READ MONTH	METER READ DAY	CLASS	TOTAL DUE UPON RECEIPT	LATE CHARGE AFTER DUE DATE	PAST DUE AMOUNT
9	17	1	18.14	1.88	20.02

to pay for the inventory you purchased. Refusing the discount allows you the time needed to generate the cash necessary to pay off the liability (account payable). Unfortunately, this is usually a very expensive way to finance the purchase of inventory.

While the amount of a cash discount may appear small, the discount period is short. Consider the terms 2/10, net/30. Since you can pay on the tenth day and still receive the discount, you obtain financing for only 20 days (30-day full credit term − 10-day discount term). In other words, you must forgo a 2 percent discount to obtain a loan with a 20-day term. What is the size of the discount in annual terms? The answer is determined by the following formula.

$$\text{Annual rate} = \text{Discount rate} \times (365 \text{ days} \div \text{term of the loan})$$

$$\text{Annual rate} = 2\% \times (365 \div 20)$$

$$\text{Annual rate} = 36.5\%$$

This means that a 2 percent discount rate for 20 days is equivalent to a 36.5 percent annual rate of interest. So, if you do not have the money to pay the account payable, but can borrow money from a bank at less than 36.5 percent annual interest, you should borrow the money and pay off the account payable within the discount period.

Accounting for Transportation Costs

EVENT 6 The shipping terms for the inventory purchased in Event 2 were FOB shipping point. JPS paid the freight company $300 cash for delivering the merchandise.

The terms **FOB shipping point** and **FOB destination** identify whether the buyer or the seller is responsible for transportation costs. If goods are delivered FOB shipping point, the buyer is responsible for the freight cost. If goods are delivered FOB destination, the seller is responsible. When the buyer is responsible, the freight cost is called **transportation-in.** When the seller is responsible, the cost is called **transportation-out.** The following table summarizes freight cost terms.

Responsible Party	Buyer	Seller
Freight terms	FOB shipping point	FOB destination
Account title	Merchandise inventory	Transportation-out

Event 6 indicates the inventory was delivered FOB shipping point, so JPS (the buyer) is responsible for the $300 freight cost. Since incurring transportation-in costs is necessary to obtain inventory, these costs are added to the inventory account. The freight cost increases one asset account (Merchandise Inventory) and decreases another asset account (Cash). The income statement is not affected by this transaction because transportation-in costs are not expensed when they are incurred. Instead they are expensed as part of *cost of goods sold* when the inventory is sold. However, the cash paid for transportation-in costs is reported as an outflow in the operating activities section of the statement of cash flows. The effects of *transportation-in costs* are shown here.

Assets								=	Liab.			+	Stockholders' Equity								
Cash	+	Accts. Rec.	+	Inventory	+	Land		=	Accts. Pay.	+	Notes Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow
(300)	+	NA	+	300	+	NA		=	NA	+	NA	+	NA	+	NA	NA	−	NA	=	NA	(300) OA

EVENT 7A JPS recognized $24,750 of revenue on the cash sale of merchandise that cost $11,500.

The sale increases assets (cash) and stockholders' equity (retained earnings). The revenue recognition increases net income. The $24,750 cash inflow from the sale is reported in the operating activities section of the statement of cash flows. These effects are shown below.

Assets								=	Liab.			+	Stockholders' Equity								
Cash	+	Accts. Rec.	+	Inventory	+	Land		=	Accts. Pay.	+	Notes Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow
24,750	+	NA	+	NA	+	NA		=	NA	+	NA	+	NA	+	24,750	24,750	−	NA	=	24,750	24,750 OA

EVENT 7B JPS recognized $11,500 of cost of goods sold.

When goods are sold, the product cost—*including a proportionate share of transportation-in and adjustments for purchase returns and allowances*—is transferred from the Merchandise Inventory account to the expense account, Cost of Goods Sold. Recognizing cost of goods sold decreases both assets (merchandise inventory) and stockholders' equity (retained earnings). The expense recognition for cost of goods sold decreases net income. Cash flow is not affected. These effects are shown here.

Assets								=	Liab.			+	Stockholders' Equity								
Cash	+	Accts. Rec.	+	Inventory	+	Land		=	Accts. Pay.	+	Notes Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow
NA	+	NA	+	(11,500)	+	NA		=	NA	+	NA	+	NA	+	(11,500)	NA	−	11,500	=	(11,500)	NA

EVENT 8 JPS paid $450 cash for freight costs on inventory delivered to customers.

Assume the merchandise sold in Event 7A was shipped FOB destination. Also assume JPS paid the freight cost in cash. FOB destination means the seller is responsible for the freight cost, which is called transportation-out. Transportation-out is reported on the income statement as an operating expense in the section below gross margin. The cost of freight on goods shipped to customers is incurred *after* the goods are sold. It is not part of the costs to obtain goods or ready them for sale. Recognizing the expense of transportation-out reduces assets (cash) and stockholders' equity (retained earnings). Operating expenses increase and net income decreases. The cash outflow is reported in the operating activities section of the statement of cash flows. These effects are shown below.

Assets								=	Liab.			+	Stockholders' Equity									
Cash	+	Accts. Rec.	+	Inventory	+	Land		=	Accts. Pay.	+	Notes Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow	
(450)	+	NA	+	NA	+	NA		=	NA	+	NA	+	NA	+	(450)	NA	−	450	=	(450)	(450)	OA

If the terms had been FOB shipping point, the customer would have been responsible for the transportation cost and JPS would not have recorded an expense.

EVENT 9 JPS paid $5,000 cash for selling and administrative expenses.

The effect on the balance sheet is to decrease both assets (cash) and stockholders' equity (retained earnings). Recognizing the selling and administrative expenses decreases net income. The $5,000 cash outflow is reported in the operating activities section of the statement of cash flows. These effects are shown below.

Assets								=	Liab.			+	Stockholders' Equity									
Cash	+	Accts. Rec.	+	Inventory	+	Land		=	Accts. Pay.	+	Notes Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow	
(5,000)	+	NA	+	NA	+	NA		=	NA	+	NA	+	NA	+	(5,000)	NA	−	5,000	=	(5,000)	(5,000)	OA

EVENT 10 JPS paid $360 cash for interest expense on the note described in Event 1.

The effect on the balance sheet is to decrease both assets (cash) and stockholders' equity (retained earnings). Recognizing the interest expense decreases net income. The $360 cash outflow is reported in the operating activities section of the statement of cash flows. These effects are shown below.

Assets								=	Liab.			+	Stockholders' Equity									
Cash	+	Accts. Rec.	+	Inventory	+	Land		=	Accts. Pay.	+	Notes Pay.	+	Com. Stk.	+	Ret. Earn.	Rev.	−	Exp.	=	Net Inc.	Cash Flow	
(360)	+	NA	+	NA	+	NA		=	NA	+	NA	+	NA	+	(360)	NA	−	360	=	(360)	(360)	OA

RECOGNIZING GAINS AND LOSSES

EVENT 11 JPS sold the land that had cost $5,500 for $6,200 cash.

LO 4

Explain how gains and losses differ from revenues and expenses.

When JPS sells merchandise inventory for more than it cost, the difference between the sales revenue and the cost of the goods sold is called the *gross margin.* In contrast, when JPS sells land for more than it cost, the difference between the sales price and the cost of the land is called a **gain.** Why is one called *gross margin* and the other a *gain*? The terms are used to alert financial statement users to the fact that the nature of the underlying transactions is different.

JPS' primary business is selling inventory, not land. The term *gain* indicates profit resulting from transactions that are not likely to regularly recur. Similarly, had the land sold for less than cost the difference would have been labeled **loss** rather than expense. This term also indicates the underlying transaction is not from normal, recurring operating activities. Gains and losses are shown separately on the income statement to communicate the expectation that they are nonrecurring.

The presentation of gains and losses in the income statement is discussed in more detail in a later section of the chapter. At this point note that the sale increases cash, decreases land, and increases retained earnings on the balance sheet. The income statement shows a gain on the sale of land and net income increases. The $6,200 cash inflow is shown as an investing activity on the statement of cash flows. These effects are shown below:

Assets							=	Liab.			+	Stockholders' Equity									
Cash	+	Accts. Rec.	+	Inventory	+	Land	=	Accts. Pay.	+	Notes Pay.	+	Com. Stk.	+	Ret. Earn.	Gain	−	Exp.	=	Net Inc.	Cash Flow	
6,200	+	NA	+	NA	+	(5,500)	=	NA	+	NA	+	NA	+	700	700	−	NA	=	700	6,200	IA

CHECK YOURSELF 3.2

Tsang Company purchased $32,000 of inventory on account with payment terms of 2/10, n/30 and freight terms FOB shipping point. Freight costs were $1,100. Tsang obtained a $2,000 purchase allowance because the inventory was damaged upon arrival. Tsang paid for the inventory within the discount period. Based on this information alone, determine the balance in the inventory account.

Answer

List price of inventory	$32,000
Plus: Transportation-in costs	1,100
Less: Purchase returns and allowances	(2,000)
Less: Purchase discount [($32,000 − $2,000) × .02]	(600)
Balance in inventory account	$30,500

MULTISTEP INCOME STATEMENT

LO 5

Compare and contrast single and multistep income statements.

JPS' 2013 income statement is shown in Exhibit 3.3. Observe the form of this statement carefully. It is more informative than one which simply subtracts expenses from revenues. First, it compares sales revenue with the cost of the goods that were sold to produce that revenue. The difference between the sales revenue and the cost of goods sold is called *gross margin.* Next, the operating expenses are subtracted from the gross margin to determine the *operating income*. **Operating income** is the amount of income that is generated from the normal recurring operations of a business. Items that are not expected to recur on a regular basis are subtracted from the operating income to determine the amount of *net income*.[1]

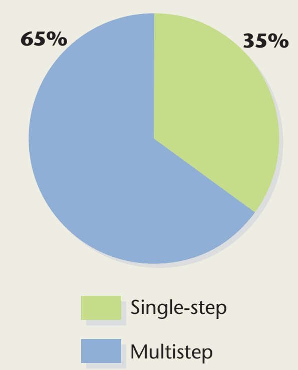
EXHIBIT 3.3

JUNE'S PLANT SHOP
Income Statement
For the Period Ended December 31, 2013

Sales revenue	$ 24,750
Cost of goods sold	(11,500)
Gross margin	13,250
Less: Operating expenses	
Selling and administrative expense	(5,000)
Transportation-out	(450)
Operating income	7,800
Nonoperating items	
Interest expense	(360)
Gain on the sale of land	700
Net income	$ 8,140

EXHIBIT 3.4

Income Statement Format Used by U.S. Companies



Data Source: AICPA, *Accounting Trends and Techniques.*

EXHIBIT 3.5

JUNE'S PLANT SHOP
Balance Sheet
As of December 31, 2013

Assets		
Cash	$25,540	
Merchandise inventory	4,600	
Total assets		$30,140
Liabilities		
Notes payable		$ 4,000
Stockholders' equity		
Common stock	$15,000	
Retained earnings	11,140	
Total stockholders' equity		26,140
Total liabilities and stockholders' equity		$30,140

Income statements that show these additional relationships are called **multistep income statements.** Income statements that display a single comparison of all revenues minus all expenses are called **single-step income statements.** To this point in the text we have shown only single-step income statements to promote simplicity. However, the multistep form is used more frequently in practice. Exhibit 3.4 shows the percentage of companies that use the multistep versus the single-step format. Go to Exhibit 3.1 and identify the company that presents its income statement in the multistep format. You should have identified Blue Nile as the company using the multistep format. Zale's statement is shown in the single-step format.

[1]Revenue and expense items with special characteristics may be classified as discontinued or extraordinary items. These items are shown separately just above net inc ome regardless of whether a company uses a single-step or multistep format. Further discussion of these items is beyond the scope of this text.

EXHIBIT 3.6

JUNE'S PLANT SHOP
Statement of Cash Flows
For the Period Ended December 31, 2013

Operating activities		
Inflow from customers	$ 24,750	
Outflow for inventory*	(10,100)	
Outflow for transportation-out	(450)	
Outflow for selling and administrative expense	(5,000)	
Outflow for interest expense	(360)	
Net cash outflow for operating activities		$ 8,840
Investing activities		
Inflow from sale of land		6,200
Financing activities		
Inflow from issue of note payable		4,000
Net change in cash		19,040
Plus beginning cash balance		6,500
Ending cash balance		$25,540

*Net cost on inventory $9,800 + transportation-in $300 = $10,100

Note that interest is reported as a *nonoperating* item on the income statement in Exhibit 3.3. In contrast, it is shown in the *operating* activities section of the statement of cash flows in Exhibit 3.6. When the FASB issued Statement of Financial Accounting Standard (SFAS) 95, it required interest to be reported in the operating activities section of the statement of cash flows. There was no corresponding requirement for the treatment of interest on the income statement. Prior to SFAS 95, interest was considered to be a nonoperating item. Most companies continued to report interest as a nonoperating item on their income statements even though they were required to change how it was reported on the statement of cash flows. As a result, there is frequent inconsistency in the way interest is reported on the two financial statements.

Also note that while the gain on the sale of land is shown on the income statement, it is not included in the operating activities section of the statement of cash flows. Since the gain is a nonoperating item, it is included in the cash inflow from the sale of land shown in the investing activities section. In this case the full cash inflow from the sale of land ($6,200) is shown in the investing activities section of the statement of cash flows in Exhibit 3.6.

LOST, DAMAGED, OR STOLEN INVENTORY

LO 6

Show the effect of lost, damaged, or stolen inventory on financial statements.

Most merchandising companies experience some level of inventory **shrinkage,** a term that reflects decreases in inventory for reasons other than sales to customers. Inventory may be stolen by shoplifters, damaged by customers or employees, or even simply lost or misplaced. Since the *perpetual* inventory system is designed to record purchases and sales of inventory as they occur, the balance in the merchandise inventory account represents the amount of inventory that *should* be on hand at any given time. By taking a physical count of the merchandise inventory at the end of the accounting period and comparing that amount with the book balance in the Merchandise Inventory account, managers can determine the amount of any inventory shrinkage. If goods have been lost, damaged, or stolen, the book balance will be higher than the actual amount of inventory on hand and an adjusting entry is required to reduce assets and equity. The Merchandise Inventory account is reduced, and an expense for the amount of the lost, damaged, or stolen inventory is recognized.

REALITY BYTES

"Closed for Inventory Count" is a sign you frequently see on retail stores sometime during the month of January. Even if companies use a perpetual inventory system, the amount of inventory on hand may be unknown because of lost, damaged, or stolen goods. The only way to determine the amount of inventory on hand is to count it. Why count it in January? Christmas shoppers and many after-Christmas sales shoppers are satiated by mid-January, leaving the stores low on both merchandise and customers. Accordingly, stores have less merchandise to count and "lost sales" are minimized during January. Companies that do not depend on seasonal sales (e.g., a plumbing supplies wholesale business) may choose to count inventory at some other time during the year. Counting inventory is not a revenue-generating activity; it is a necessary evil that should be conducted when it least disrupts operations.

Adjustment for Lost, Damaged, or Stolen Inventory

To illustrate, assume that Midwest Merchandising Company maintains perpetual inventory records. Midwest determined, through a physical count, that it had $23,500 of merchandise inventory on hand at the end of the accounting period. The balance in the Inventory account was $24,000. Midwest must make an adjusting entry to write down the Inventory account so the amount reported on the financial statements agrees with the amount actually on hand at the end of the period. The write-down decreases both assets (inventory) and stockholders' equity (retained earnings). The write-down increases expenses and decreases net income. Cash flow is not affected. The effects on the statements are as follows.

Assets	=	Liab.	+	Equity	Rev.	−	Exp.	=	Net Inc.	Cash Flow
(500)	=	NA	+	(500)	NA	−	500	=	(500)	NA

Theoretically, inventory losses are operating expenses. However, because such losses are normally immaterial in amount, they are usually added to cost of goods sold for external reporting purposes.

EVENTS AFFECTING SALES

To this point we assumed JPS did not offer cash discounts to its customers. However, sales, as well as purchases of inventory, can be affected by returns, allowances, and discounts. **Sales discounts** are price reductions offered by sellers to encourage buyers to pay promptly. To illustrate, assume JPS engaged in the following selected events during January 2014.

EVENT 1A JPS sold on account merchandise with a list price of $8,500. Payment terms were 1/10, n/30. The merchandise had cost JPS $4,000.

The sale increases both assets (accounts receivable) and shareholders' equity (retained earnings). Recognizing revenue increases net income. The statement of cash flows is not affected. The effects on the financial statements follow.

Assets					=	Liab.	+	Stockholders' Equity			Rev.	−	Exp.	=	Net Inc.	Cash Flow
Cash	+	Accts. Rec.	+	Inventory	=	Note Pay.	+	Com. Stk.	+	Retained Earnings						
NA	+	8,500	+	NA	=	NA	+	NA	+	8,500	8,500	−	NA	=	8,500	NA

EVENT 1B JPS recognized $4,000 of cost of goods sold.

Recognizing the expense decreases assets (merchandise inventory) and stockholders' equity (retained earnings). Cost of goods sold increases and net income decreases. Cash flow is not affected. The effects on the financial statements follow.

Assets					=	Liab.	+	Stockholders' Equity			Rev.	−	Exp.	=	Net Inc.	Cash Flow
Cash	+	Accts. Rec.	+	Inventory	=	Note Pay.	+	Com. Stk.	+	Retained Earnings						
NA	+	NA	+	(4,000)	=	NA	+	NA	+	(4,000)	NA	−	4,000	=	(4,000)	NA

Accounting for Sales Returns and Allowances

EVENT 2A A customer from Event 1A returned inventory with a $1,000 list price. The merchandise had cost JPS $450.

The sales return decreases both assets (accounts receivable) and stockholders' equity (retained earnings) on the balance sheet. Sales and net income decrease. Cash flow is not affected. The effects on the financial statements follow.

Assets					=	Liab.	+	Stockholders' Equity			Rev.	−	Exp.	=	Net Inc.	Cash Flow
Cash	+	Accts. Rec.	+	Inventory	=	Note Pay.	+	Com. Stk.	+	Retained Earnings						
NA	+	(1,000)	+	NA	=	NA	+	NA	+	(1,000)	(1,000)	−	NA	=	(1,000)	NA

EVENT 2B The cost of the goods ($450) is returned to the inventory account.

Since JPS got the inventory back, the sales return increases both assets (merchandise inventory) and stockholders' equity (retained earnings). The expense (cost of goods sold) decreases and net income increases. Cash flow is not affected. The effects on the financial statements follow.

Assets					=	Liab.	+	Stockholders' Equity			Rev.	−	Exp.	=	Net Inc.	Cash Flow
Cash	+	Accts. Rec.	+	Inventory	=	Note Pay.	+	Com. Stk.	+	Retained Earnings						
NA	+	NA	+	450	=	NA	+	NA	+	450	NA	−	(450)	=	450	NA

Accounting for Sales Discounts

EVENT 3 JPS collected the balance of the accounts receivable generated in Event 1A. Recall the goods were sold under terms 1/10, net/30.

ALTERNATIVE 1 The collection occurs before the discount period has expired (within 10 days from the date of the sale).

JPS would give the buyer a 1 percent discount. Given the original sales amount of $8,500 and a sales return of $1,000, the amount of the discount is $75 [($8,500 − $1,000) × .01]. The sales discount reduces the amount of accounts receivable and retained earnings on the balance sheet. It also reduces the amount of revenue and the net income shown on the balance sheet. It does not affect the statement of cash flows. The effects on the financial statements follow.

Assets					=	Liab.	+	Stockholders' Equity			Rev.	−	Exp.	=	Net Inc.	Cash Flow
Cash	+	Accts. Rec.	+	Inventory	=	Note Pay.	+	Com. Stk.	+	Retained Earnings						
NA	+	(75)	+	NA	=	NA	+	NA	+	(75)	(75)	−	NA	=	(75)	NA

The balance due on the account receivable is $7,425 ($8,500 original sales − $1,000 sales return − $75 discount). The collection increases the Cash account and decreases the Accounts Receivable account. The income statement is not affected. The cash inflow is shown in the operating activities section of the statement of cash flows. The effects on the financial statements follow.

Assets					=	Liab.	+	Stockholders' Equity			Rev.	−	Exp.	=	Net Inc.	Cash Flow
Cash	+	Accts. Rec.	+	Inventory	=	Accts. Pay.	+	Com. Stk.	+	Retained Earnings						
7,425	+	(7,425)	+	NA	=	NA	+	NA	+	NA	NA	−	NA	=	NA	7,425 OA

Net Sales

The gross amount of sales minus **sales returns and allowance** and sales discounts is commonly called **net sales.** Companies are not required by GAAP to show sales returns and allowance and sales discount on their income statement. Indeed, most companies show only the amount of *net sales* on the income statement. In this case the net sales amount to $7,425 ($8,500 original sales − $1,000 sales return − $75 discount).

ALTERNATIVE 2 The collection occurs after the discount period has expired (after 10 days from the date of the sale).

Under these circumstances there is no sales discount. The amount collected is $7,500 ($8,500 original sale − $1,000 sales return). Net sales shown on the income statement would also be $7,500.

COMMON SIZE FINANCIAL STATEMENTS

How good is a $1,000,000 increase in net income? The answer is not clear because there is no indication as to the size of the company. A million dollar increase may be excellent for a small company but would be virtually meaningless for a company the size of Exxon. To enable meaningful comparisons analysts prepare **common size financial statements.** Common size statements display information in percentages as well as absolute dollar amounts.

To illustrate, we expand the income statements for JPS to include percentages. The results are shown in Exhibit 3.7. The percentage data are computed by defining net sales as the base figure, or 100 percent. The other amounts on the statements are then

LO 7

Use common sizes financial statements to evaluate managerial performance.

Answers to The Curious Accountant

The income statement data show that compared to **Zales**, **Blue Nile** does save money by not operating bricks-and-mortar stores. This can be determined by comparing each company's net income to its sales. For Blue Nile this percentage is 4.2% ($12,800 ÷ $302,134), which means that while 4.2% of each dollar of revenue goes to profit, 95.8% goes to pay for expenses. For Zales this percentage is a *negative* 10.6% [($189,503) ÷ 1,779,744]. Clearly, Blue Nile did better than Zales. This result is despite the fact that compared to Blue Nile, Zales charges a higher price for the jewelry it sells. Compare each company's gross margin to its sales. Blue Nile's gross margin is 21.6% of its sales ($65,344 ÷ $302,134), which means that 78.4% of each dollar of revenue goes to pay for the product that was sold. For Zales these percentages are 46.7% for the gross margin [(1,779,744 – $948,572) ÷ 1,779,744] and 53.3% for cost of goods sold. This shows that while Blue Nile charges less for its products, it makes up for the lower gross margin with lower operating expenses.

shown as a percentage of net sales. For example, the *cost of goods sold percentage* is the dollar amount of *cost of goods sold* divided by the dollar amount of *net sales,* which produces a percentage of 66.7 percent ($8,000 ÷ $12,000) for 2012 and 46.5 percent ($11,500 ÷ $24,750) for 2013. Other income statement items are computed using the same approach.

These common size statements provide insight into the company's operating strategy. For example, assume JPS relocated its store in an upscale mall in early 2013.

EXHIBIT 3.7 Common Size Financial Statements

JUNE'S PLANT SHOP
Income Statement
For the Period Ended

	2012		2013	
Net sales*	$12,000	100.0%	$24,750	100.0%
Cost of goods sold	(8,000)	66.7	(11,500)	46.5
Gross margin	4,000	33.3	13,250	53.5
Less: Operating expenses				
Selling and administrative expense	(1,000)	8.3	(5,000)	20.2
Transportation-out			(450)	1.8
Operating income	3,000	25.0	7,800	31.5
Nonoperating items				
Interest expense			(360)	(1.5)
Gain on the sale of land			700	2.8
Net income	$ 3,000	25.0	$ 8,140	32.9

*Since JPS did not offer sales discounts or have sales returns and allowances during 2012 or 2013, the amount of sales revenue is equal to the amount of net sales. We use the term *net sales* here because it is more commonly used in business practice. Percentages do not add exactly because they have been rounded.

Management realized that the company would have to pay more for operating expenses but believed those expenses could be offset by charging significantly higher prices. The common size income statement confirms that the company's goals were accomplished. Note that the gross margin increased from 33.3 percent of sales to 53.5 percent, confirming that the company was able to increase prices. Also, note that operating expenses increased. Selling and administrative expense increased from 8.3 percent of sales to 20.2 percent. Also, the company experienced a new expense, transportation out, for delivering merchandise to its customers. These increases in expenses confirm the fact that JPS is paying more for rental space and providing additional services to its customers. The common size statements, therefore, support the conclusion that JPS's increase in net income from $3,000 to $8,140 was a result of management's new operating strategy. As a side note, the new operating strategy may also explain why JPS sold its land in late 2013. Considering the success the company experienced at the new location, there was no motive to build a store on the land.

A Look Back <<

Merchandising companies earn profits by selling inventory at prices that are higher than the cost paid for the goods. Merchandising companies include *retail companies* (companies that sell goods to the final consumer) and *wholesale companies* (companies that sell to other merchandising companies). The products sold by merchandising companies are called *inventory.* The costs to purchase inventory, to receive it, and to ready it for sale are *product costs,* which are first accumulated in an inventory account (balance sheet asset account) and then recognized as cost of goods sold (income statement expense account) in the period in which goods are sold. Purchases and sales of inventory can be recorded continually as goods are bought and sold (perpetual system) or at the end of the accounting period (periodic system, discussed in the chapter appendix).

Accounting for inventory includes the treatment of cash discounts, transportation costs, and returns and allowances. The cost of inventory is the list price less any purchase returns and allowances and purchase discounts, plus transportation-in costs. The cost of freight paid to acquire inventory (*transportation-in*) is considered a product cost. The cost of freight paid to deliver inventory to customers (*transportation-out*) is a selling expense. *Sales returns and allowances* and *sales discounts* are subtracted from sales revenue to determine the amount of *net sales* reported on the income statement. Purchase returns and allowances reduce product cost. Theoretically, the cost of lost, damaged, or stolen inventory is an operating expense. However, because these costs are usually immaterial in amount they are typically included as part of cost of goods sold on the income statement.

Some companies use a *multistep income statement* which reports product costs separately from selling and administrative costs. Cost of goods sold is subtracted from sales revenue to determine *gross margin. S*elling and administrative expenses are subtracted from gross margin to determine income from operations. Other companies report income using a *single-step format* in which the cost of goods sold is listed along with selling and administrative items in a single expense category that is subtracted in total from revenue to determine income from operations.

Managers of merchandising businesses operate in a highly competitive environment. They must manage company operations carefully to remain profitable. *Common size financial statements* (statements presented on a percentage basis) and ratio analysis are useful monitoring tools. Common size financial statements permit ready comparisons among different-size companies. Although a $1 million increase in sales may be good for a small company and bad for a large company, a 10 percent increase can apply to any size company.

>> A Look Forward

To this point, the text has explained the basic accounting cycle for service and merchandising businesses. Future chapters more closely address specific accounting issues. For example, in Chapter 5 you will learn how to deal with inventory items that are purchased at differing prices. Other chapters will discuss a variety of specific practices that are widely used by real-world companies.

APPENDIX

LO 8

Identify the primary features of the periodic inventory system.

Periodic Inventory System

Under certain conditions, it is impractical to record inventory sales transactions as they occur. Consider the operations of a fast-food restaurant. To maintain perpetual inventory records, the restaurant would have to transfer from the Inventory account to the Cost of Goods Sold account the *cost* of each hamburger, order of fries, soft drink, or other food items as they were sold. Obviously, recording the cost of each item at the point of sale would be impractical without using highly sophisticated computer equipment (recording the selling price the customer pays is captured by cash registers; the difficulty lies in capturing inventory cost).

The **periodic inventory system** offers a practical solution for recording inventory transactions in a low-technology, high-volume environment. Inventory costs are recorded in a Purchases account at the time of purchase. Purchase returns and allowances and transportation-in are recorded in separate accounts. No entries for the cost of merchandise purchases or sales are recorded in the Inventory account during the period. The cost of goods sold is determined at the end of the period as shown in Exhibit 3.8.

EXHIBIT 3.8

Schedule of Cost of Goods Sold for 2013

Beginning inventory	$ 6,000
Purchases	11,000
Purchase returns and allowances	(1,000)
Purchase discounts	(200)
Transportation-in	300
Cost of goods available for sale	16,100
Ending inventory	4,600
Cost of goods sold	$11,500

The perpetual and periodic inventory systems represent alternative procedures for recording the same information. The amounts of cost of goods sold and ending inventory reported in the financial statements will be the same regardless of the method used.

The **schedule of cost of goods sold** presented in Exhibit 3.8 is used for internal reporting purposes. It is normally not shown in published financial statements. The amount of cost of goods sold is reported as a single line item on the income statement. The income statement in Exhibit 3.3 will be the same whether JPS maintains perpetual or periodic inventory records.

Advantages and Disadvantages of the Periodic System versus the Perpetual System

The chief advantage of the periodic method is recording efficiency. Recording inventory transactions occasionally (periodically) requires less effort than recording them continually (perpetually). Historically, practical limitations offered businesses like fast-food restaurants or grocery stores no alternative to using the periodic system. The sheer volume of transactions made recording individual decreases to the Inventory account balance as each item was sold impossible. Imagine the number of transactions a grocery store would have to record every business day to maintain perpetual records.

Although the periodic system provides a recordkeeping advantage over the perpetual system, perpetual inventory records provide significant control advantages over periodic records. With perpetual records, the book balance in the Inventory account should agree with the amount of inventory in stock at any given time. By comparing that book balance with the results of a physical inventory count, management can determine the amount of lost, damaged, destroyed, or stolen inventory. Perpetual records also permit more timely and accurate reorder decisions and profitability assessments.

When a company uses the *periodic* inventory system, lost, damaged, or stolen merchandise is automatically included in cost of goods sold. Because such goods are not included in the year-end physical count, they are treated as sold regardless of the reason for their absence. Since the periodic system does not separate the cost of lost, damaged, or stolen merchandise from the cost of goods sold, the amount of any inventory shrinkage is unknown. This feature is a major disadvantage of the periodic system. Without knowing the amount of inventory losses, management cannot weigh the costs of various security systems against the potential benefits.

Advances in such technology as electronic bar code scanning and increased computing power have eliminated most of the practical constraints that once prevented merchandisers with high-volume, low dollar-value inventories from recording inventory transactions on a continual basis. As a result, use of the perpetual inventory system has expanded rapidly in recent years and continued growth can be expected. This text, therefore, concentrates on the perpetual inventory system.

A step-by-step audio-narrated series of slides is provided on the text website at www.mhhe.com/edmondssurvey3e.

SELF-STUDY REVIEW PROBLEM

Academy Sales Company (ASC) started the 2012 accounting period with the balances given in the financial statements model shown below. During 2012 ASC experienced the following business events.

1. Purchased $16,000 of merchandise inventory on account, terms 2/10, n/30.
2. The goods that were purchased in Event 1 were delivered FOB shipping point. Freight costs of $600 were paid in cash by the responsible party.
3. Returned $500 of goods purchased in Event 1.
4a. Recorded the cash discount on the goods purchased in Event 1.
4b. Paid the balance due on the account payable within the discount period.
5a. Recognized $21,000 of cash revenue from the sale of merchandise.
5b. Recognized $15,000 of cost of goods sold.
6. The merchandise in Event 5a was sold to customers FOB destination. Freight costs of $950 were paid in cash by the responsible party.
7. Paid cash of $4,000 for selling and administrative expenses.
8. Sold the land for $5,600 cash.

Required

a. Record the above transactions in a financial statements model like the one shown below.

Event No.	Cash	+	Inventory	+	Land	=	Accts. Pay.	+	Com. Stk.	+	Ret. Earn.	Rev./ Gain	−	Exp.	=	Net Inc.	Cash Flow
Bal.	25,000	+	3,000	+	5,000	=	–0–	+	18,000	+	15,000	NA	−	NA	=	NA	NA

b. Prepare a schedule of cost of goods sold. (Appendix)
c. Prepare a multistep income statement. Include common size percentages on the income statement.
d. ASC's gross margin percentage in 2011 was 22%. Based on the common size data in the income statement, did ASC raise or lower its prices in 2012? (Appendix)
e. Assuming a 10 percent rate of growth, what is the amount of net income expected for 2013?

Solution

a.

Event No.	Cash	+	Inventory	+	Land	=	Accts. Pay.	+	Com. Stk.	+	Ret. Earn.	Rev./Gain	−	Exp.	=	Net Inc.	Cash Flow	
Bal.	25,000	+	3,000	+	5,000	=	–0–	+	18,000	+	15,000	NA	−	NA	=	NA	NA	
1		+	16,000			=	16,000	+		+			−		=			
2	(600)	+	600			=		+		+			−		=		(600)	OA
3		+	(500)			=	(500)	+		+			−		=			
4a		+	(310)			=	(310)	+		+			−		=			
4b	(15,190)	+				=	(15,190)	+		+			−		=		(15,190)	OA
5a	21,000	+				=		+		+	21,000	21,000	−		=	21,000	21,000	OA
5b		+	(15,000)			=		+		+	(15,000)		−	15,000	=	(15,000)		
6	(950)	+				=		+		+	(950)		−	950	=	(950)	(950)	OA
7	(4,000)	+				=		+		+	(4,000)		−	4,000	=	(4,000)	(4,000)	OA
8	5,600	+			(5,000)	=		+		+	600	600	−		=	600	5,600	IA
Bal.	30,860	+	3,790		–0–	=	–0–	+	18,000	+	16,650	21,600	−	19,950	=	1,650	5,860	NC

b.

ACADEMY SALES COMPANY
Schedule of Cost of Goods Sold
For the Period Ended December 31, 2012

Beginning inventory	$ 3,000
Plus purchases	16,000
Less: Purchase returns and allowances	(500)
Less: Purchases discounts	(310)
Plus: Transportation-in	600
Goods available for sale	18,790
Less: Ending inventory	3,790
Cost of goods sold	$(15,000)

c.

ACADEMY SALES COMPANY
Income Statement*
For the Period Ended December 31, 2012

Net sales	$21,000	100.0%
Cost of goods sold	(15,000)	71.4
Gross margin	6,000	28.6
Less: Operating expenses		
Selling and administrative expense	(4,000)	19.0
Transportation-out	(950)	4.5
Operating income	1,050	5.0
Nonoperating items		
Gain on the sale of land	600	2.9
Net income	$ 1,650	7.9

*Percentages do not add exactly because they have been rounded.

d. All other things being equal, the higher the gross margin percentage, the higher the sales prices. Since the gross margin percentage increased from 22% to 28.6%, the data suggest that Academy raised its sales prices.

e. $1,155 [$1,050 + (.10 × $1,050)]. Note that the gain is not expected to recur.

KEY TERMS

Cash discount 94
Common size financial statements 103
Cost of goods available for sale 89
Cost of Goods Sold 89
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Single-step income statement 99
Transportation-in (freight-in) 95
Transportation-out (freight-out) 95
2/10, n/30 94
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QUESTIONS

1. Define *merchandise inventory*. What types of costs are included in the Merchandise Inventory account?
2. What is the difference between a product cost and a selling and administrative cost?
3. How is the cost of goods available for sale determined?
4. What portion of cost of goods available for sale is shown on the balance sheet? What portion is shown on the income statement?
5. When are period costs expensed? When are product costs expensed?
6. If PetCo had net sales of $600,000, goods available for sale of $450,000, and cost of goods sold of $375,000, what is its gross margin? What amount of inventory will be shown on its balance sheet?
7. Describe how the perpetual inventory system works. What are some advantages of using the perpetual inventory system? Is it necessary to take a physical inventory when using the perpetual inventory system?
8. What are the effects of the following types of transactions on the accounting equation? Also identify the financial statements that are affected. (Assume that the perpetual inventory system is used.)
   a. Acquisition of cash from the issue of common stock.
   b. Contribution of inventory by an owner of a company.
   c. Purchase of inventory with cash by a company.
   d. Sale of inventory for cash.
9. Northern Merchandising Company sold inventory that cost $12,000 for $20,000 cash. How does this event affect the accounting equation? What financial statements and accounts are affected? (Assume that the perpetual inventory system is used.)
10. If goods are shipped FOB shipping point, which party (buyer or seller) is responsible for the shipping costs?
11. Define *transportation-in*. Is it a product or a period cost?
12. Quality Cellular Co. paid $80 for freight on merchandise that it had purchased for resale to customers (transportation-in) and paid $135 for freight on merchandise delivered to customers (transportation-out). The $80 payment is added to what account? The $135 payment is added to what account?
13. Why would a seller grant an allowance to a buyer of the his merchandise?
14. Dyer Department Store purchased goods with the terms 2/10, n/30. What do these terms mean?
15. Eastern Discount Stores incurred a $5,000 cash cost. How does the accounting for this cost differ if the cash were paid for inventory versus commissions to sales personnel?
16. What is the purpose of giving a cash discount to charge customers?
17. Define *transportation-out*. Is it a product cost or a period cost for the seller?
18. Ball Co. purchased inventory with a list price of $4,000 with the terms 2/10, n/30. What amount will be added to the Merchandise Inventory account?
19. Explain the difference between purchase returns and sales returns. How do purchase returns affect the financial statements of both buyer and seller? How do sales returns affect the financial statements of both buyer and seller?

20. Explain the difference between gross margin and a gain.

21. What is the difference between a multistep income statement and a single-step income statement?

22. What is the advantage of using common size income statements to present financial information for several accounting periods?

23. What is the purpose of preparing a schedule of cost of goods sold?

24. Explain how the periodic inventory system works. What are some advantages of using the periodic inventory system? What are some disadvantages of using the periodic inventory system? Is it necessary to take a physical inventory when using the periodic inventory system?

25. Why does the periodic inventory system impose a major disadvantage for management in accounting for lost, stolen, or damaged goods?

MULTIPLE-CHOICE QUESTIONS

Multiple-choice questions are provided on the text website at www.mhhe.com/edmondssurvey3e.

EXERCISES

All applicable Exercises are available with McGraw-Hill's *Connect Accounting*.

When the instructions for *any* exercise or problem call for the preparation of an income statement, use the *multistep format* unless otherwise indicated.

LO 1, 2

Exercise 3-1 *Comparing a merchandising company with a service company*

The following information is available for two different types of businesses for the 2012 accounting period. Eady CPAs is a service business that provides accounting services to small businesses. Campus Clothing is a merchandising business that sells sports clothing to college students.

Data for Eady CPAs

1. Borrowed $40,000 from the bank to start the business.
2. Provided $30,000 of services to customers and collected $30,000 cash.
3. Paid salary expense of $20,000.

Data for Campus Clothing

1. Borrowed $40,000 from the bank to start the business.
2. Purchased $25,000 inventory for cash.
3. Inventory costing $16,400 was sold for $30,000 cash.
4. Paid $3,600 cash for operating expenses.

Required

a. Prepare an income statement, a balance sheet, and a statement of cash flows for each of the companies.
b. Which of the two businesses would have product costs? Why?
c. Why does Eady CPAs not compute gross margin on its income statement?
d. Compare the assets of both companies. What assets do they have in common? What assets are different? Why?

LO 2

Exercise 3-2 *Effect of inventory transactions on financial statements: perpetual system*

Mark Dixon started a small merchandising business in 2012. The business experienced the following events during its first year of operation. Assume that Dixon uses the perpetual inventory system.

1. Acquired $40,000 cash from the issue of common stock.
2. Purchased inventory for $30,000 cash.
3. Sold inventory costing $20,000 for $32,000 cash.

Required

a. Record the events in a statements model like the one shown below.

Assets			=	Equity			Rev.	−	Exp.	=	Net Inc.	Cash Flow
Cash	+	Inv.	=	Com. Stk.	+	Ret. Earn.						

b. Prepare an income statement for 2012 (use the multistep format).
c. What is the amount of total assets at the end of the period?

Exercise 3-3 *Effect of inventory transactions on the income statement and statement of cash flows: Perpetual system* LO 2

During 2012, Knight Merchandising Company purchased $15,000 of inventory on account. Knight sold inventory on account that cost $12,500 for $17,500. Cash payments on accounts payable were $10,000. There was $11,000 cash collected from accounts receivable. Knight also paid $3,500 cash for operating expenses. Assume that Knight started the accounting period with $14,000 in both cash and common stock.

Required

a. Identify the events described in the preceding paragraph and record them in a horizontal statements model like the following one:

Assets					=	Liab.	+	Equity			Rev.	−	Exp.	=	Net inc.	Cash Flow
Cash	+	Accts. Rec.	+	Inv.	=	Accts. Pay.	+	Com. Stk.	+	Ret. Earn.						
14,000	+	NA	+	NA	=	NA	+	14,000	+	NA	NA	−	NA	=	NA	NA

b. What is the balance of accounts receivable at the end of 2012?
c. What is the balance of accounts payable at the end of 2012?
d. What are the amounts of gross margin and net income for 2012?
e. Determine the amount of net cash flow from operating activities.
f. Explain why net income and retained earnings are the same for Knight. Normally would these amounts be the same? Why or why not?

Exercise 3-4 *Recording inventory transactions in a financial statements model* LO 2

Kona Clothing experienced the following events during 2012, its first year of operation:

1. Acquired $14,000 cash from the issue of common stock.
2. Purchased inventory for $8,000 cash.
3. Sold inventory costing $6,000 for $9,000 cash.
4. Paid $800 for advertising expense.

Required

Record the events in a statements model like the one shown below.

Assets			=	Equity			Rev.	−	Exp.	=	Net Inc.	Cash Flow
Cash	+	Inv.	=	Com. Stk.	+	Ret. Earn.						

Exercise 3-5 *Understanding the freight terms FOB shipping point and FOB destination*

Required

Determine which party, buyer or seller, is responsible for freight charges in each of the following situations:

a. Sold merchandise, freight terms, FOB destination.
b. Sold merchandise, freight terms, FOB shipping point.
c. Purchased merchandise, freight terms, FOB destination.
d. Purchased merchandise, freight terms, FOB shipping point.

LO 2, 3

Exercise 3-6 *Effect of purchase returns and allowances and freight costs on the financial statements: perpetual system*

The beginning account balances for Jerry's Auto Shop as of January 1, 2012 follows:

Account Titles	Beginning Balances
Cash	$28,000
Inventory	14,000
Common stock	36,000
Retained earnings	6,000
Total	$42,000

The following events affected the company during the 2012 accounting period:

1. Purchased merchandise on account that cost $18,000.
2. The goods in Event 1 were purchased FOB shipping point with freight cost of $1,000 cash.
3. Returned $3,600 of damaged merchandise for credit on account.
4. Agreed to keep other damaged merchandise for which the company received a $1,400 allowance.
5. Sold merchandise that cost $16,000 for $34,000 cash.
6. Delivered merchandise to customers in Event 5 under terms FOB destination with freight costs amounting to $800 cash.
7. Paid $12,000 on the merchandise purchased in Event 1.

Required

a. Organize appropriate ledger accounts under an accounting equation. Record the beginning balances and the transaction data in the accounts.
b. Prepare an income statement and a statement of cash flows for 2012.
c. Explain why a difference does or does not exist between net income and net cash flow from operating activities.

LO 2, 3

Exercise 3-7 *Accounting for product costs: Perpetual inventory system*

Which of the following would be *added* to the Inventory account for a merchandising business using the perpetual inventory system?

Required

a. Transportation-out.
b. Purchase discount.
c. Transportation-in.
d. Purchase of a new computer to be used by the business.
e. Purchase of inventory.
f. Allowance received for damaged inventory.

Exercise 3-8 *Effect of product cost and period cost: horizontal statements model* LO 1, 2, 3

The Toy Store experienced the following events for the 2012 accounting period:

1. Acquired $20,000 cash from the issue of common stock.
2. Purchased $56,000 of inventory on account.
3. Received goods purchased in Event 2 FOB shipping point; freight cost of $600 paid in cash.
4. Sold inventory on account that cost $35,000 for $57,400.
5. Freight cost on the goods sold in Event 4 was $420. The goods were shipped FOB destination. Cash was paid for the freight cost.
6. Customer in Event 4 returned $4,000 worth of goods that had a cost of $2,400.
7. Collected $47,000 cash from accounts receivable.
8. Paid $44,000 cash on accounts payable.
9. Paid $1,100 for advertising expense.
10. Paid $1,000 cash for insurance expense.

Required

a. Which of these events affect period (selling and administrative) costs? Which result in product costs? If neither, label the transaction NA.

b. Record each event in a horizontal statements model like the following one. The first event is recorded as an example.

Assets					=	Liab.	+	Equity			Rev.	−	Exp.	=	Net Inc.	Cash Flow
Cash	+	Accts. Rec.	+	Inv.	=	Accts. Pay.	+	C. Stk.	+	Ret. Earn.						
20,000	+	NA	+	NA	=	NA	+	20,000	+	NA	NA	−	NA	=	NA	20,000 FA

Exercise 3-9 *Cash discounts and purchase returns* LO 3

On April 6, 2012, Taylor Furnishings purchased $12,400 of merchandise from Bergin's Imports, terms 2/10 n/45. On April 8, Taylor returned $1,200 of the merchandise to Bergin's Imports for credit. Taylor paid cash for the merchandise on April 15, 2012.

Required

a. What is the amount that Taylor must pay Bergin's Imports on April 15?

b. Record the events in a horizontal statements model like the following one.

Assets			=	Liab.	+	Equity			Rev.	−	Exp.	=	Net Inc.	Cash Flow
Cash	+	Inv.	=	Accts. Pay.	+	C. Stock.	+	Ret. Earn.						

c. How much must Taylor pay for the merchandise purchased if the payment is not made until April 20, 2012?

d. Record the payment in event (c) in a horizontal statements model like the one above.

e. Why would Taylor want to pay for the merchandise by April 15?

Exercise 3-10 *Effect of sales returns and allowances and freight costs on the financial statements: perpetual system* LO 2, 3

Stash Company began the 2012 accounting period with $10,000 cash, $38,000 inventory, $25,000 common stock, and $23,000 retained earnings. During the 2012 accounting period, Stash experienced the following events.

1. Sold merchandise costing $28,000 for $46,000 on account to Jack's Furniture Store.
2. Delivered the goods to Jack's under terms FOB destination. Freight costs were $500 cash.

3. Received returned goods from Jack's. The goods cost Stash $2,000 and were sold to Jack's for $3,000.
4. Granted Jack's $2,000 allowance for damaged goods that Jack's agreed to keep.
5. Collected partial payment of $25,000 cash from accounts receivable.

Required

a. Record the events in a statements model like the one shown below.

Assets					=	Equity			Rev. − Exp. = Net Inc.	Cash Flow
Cash	+	Accts. Rec.	+	Inv.	=	Com. Stk.	+	Ret. Earn.		

b. Prepare an income statement, a balance sheet, and a statement of cash flows.
c. Why would Stash grant the $2,000 allowance to Jack's? Who benefits more?

LO 2, 3

Exercise 3-11 *Effect of cash discounts on financial statements: perpetual system*

Campus Computers was started in 2012. The company experienced the following accounting events during its first year of operation.

1. Started business when it acquired $50,000 cash from the issue of common stock.
2. Purchased merchandise with a list price of $46,000 on account, terms 2/10, n/30.
3. Paid off one-half of the accounts payable balance within the discount period.
4. Sold merchandise on account that had a list price of $48,000. Credit terms were 1/20, n/30. The merchandise had cost Campus Computers $28,000.
5. Collected cash from the account receivable within the discount period.
6. Paid $7,200 cash for operating expenses.
7. Paid the balance due on accounts payable. The payment was not made within the discount period.

Required

a. Record the events in a horizontal statements model like the following one.

Assets					=	Liab.	+	Equity			Rev. − Exp. = Net Inc.	Cash Flow
Cash	+	Accts. Rec.	+	Inv.	=	Accts. Pay.	+	Com. Stk.	+	Ret. Earn.		

b. What is the amount of gross margin for the period? What is the net income for the period?
c. Why would Campus Computers sell merchandise with the terms 1/20, n/30?
d. What do the terms 2/10, n/30 in Event 2 mean to Campus Computers?

LO 2, 3

Exercise 3-12 *Comparing gross margin and gain on sale of land*

Usrey Sales Company had the following balances in its accounts on January 1, 2012.

Cash	$ 70,000
Merchandise Inventory	50,000
Land	120,000
Common Stock	100,000
Retained Earnings	140,000

Usrey experienced the following events during 2012.

1. Sold merchandise inventory that cost $40,000 for $75,000.
2. Sold land that cost $50,000 for $80,000.

Required

a. Determine the amount of gross margin recognized by Usrey.
b. Determine the amount of the gain on the sale of land recognized by Usrey.
c. Comment on how the gross margin versus the gain will be recognized on the income statement.
d. Comment on how the gross margin versus the gain will be recognized on the statement of cash flows.

Exercise 3-13 *Effect of inventory losses: perpetual system*

LO 2, 6

Reeves Design experienced the following events during 2012, its first year of operation.

1. Started the business when it acquired $40,000 cash from the issue of common stock.
2. Paid $28,000 cash to purchase inventory.
3. Sold inventory costing $21,500 for $34,200 cash.
4. Physically counted inventory showing $5,800 inventory was on hand at the end of the accounting period.

Required

a. Determine the amount of the difference between book balance and the actual amount of inventory as determined by the physical count.
b. Explain how differences between the book balance and the physical count of inventory could arise. Why is being able to determine whether differences exist useful to management?

Exercise 3-14 *Determining the effect of inventory transactions on the horizontal statements model: perpetual system*

LO 2

Causey Sales Company experienced the following events:

1. Purchased merchandise inventory for cash.
2. Purchased merchandise inventory on account.
3. Sold merchandise inventory for cash. Label the revenue recognition 3a and the expense recognition 3b.
4. Sold merchandise inventory on account. Label the revenue recognition 4a and the expense recognition 4b.
5. Returned merchandise purchased on account.
6. Paid cash for selling and administrative expenses.
7. Paid cash on accounts payable not within the discount period.
8. Paid cash for transportation-in.
9. Collected cash from accounts receivable.
10. Paid cash for transportation-out.

Required

Identify each event as asset source (AS), asset use (AU), asset exchange (AE), or claims exchange (CE). Also explain how each event affects the financial statements by placing a + for increase, − for decrease, or NA for not affected under each of the components in the following statements model. Assume the company uses the perpetual inventory system. The first event is recorded as an example.

Event No.	Event Type	Assets	=	Liab.	+	Equity	Rev.	−	Exp.	=	Net Inc.	Cash Flow
1	AE	+ −	=	NA	+	NA	NA	−	NA	=	NA	− OA

LO 4

Exercise 3-15 *Single-step and multistep income statements*

The following information was taken from the accounts of Healthy Foods Market, a small grocery store at December 31, 2012. The accounts are listed in alphabetical order, and all have normal balances.

Accounts payable	$ 300
Accounts receivable	1,040
Advertising expense	200
Cash	820
Common stock	600
Cost of goods sold	900
Interest expense	140
Merchandise inventory	500
Prepaid rent	280
Retained earnings	1,050
Sales revenue	2,400
Salaries expense	260
Supplies expense	210
Gain on sale of land	75

Required

First, prepare an income statement for the year using the single-step approach. Then prepare another income statement using the multistep approach.

LO 2

Exercise 3-16 *Determining the cost of financing inventory*

On January 1, 2012, Fran started a small flower merchandising business that she named Fran's Flowers. The company experienced the following events during the first year of operation.

1. Started the business by issuing common stock for $20,000 cash.
2. Paid $28,000 cash to purchase inventory.
3. Sold merchandise that cost $16,000 for $36,000 on account.
4. Collected $30,000 cash from accounts receivable.
5. Paid $7,500 for operating expenses.

Required

a. Organize ledger accounts under an accounting equation and record the events in the accounts.
b. Prepare an income statement, a balance sheet, and a statement of cash flows.
c. Since Fran sold inventory for $36,000, she will be able to recover more than half of the $40,000 she invested in the stock. Do you agree with this statement? Why or why not?

LO 3

Exercise 3-17 *Inventory financing costs*

Joan Sweatt comes to you for advice. She has just purchased a large amount of inventory with the terms 2/10, n/30. The amount of the invoice is $540,000. She is currently short of cash but has decent credit. She can borrow the money needed to settle the account payable at an annual interest rate of 7%. Joan is sure she will have the necessary cash by the due date of the invoice but not by the last day of the discount period.

Required

a. Convert the discount rate into an annual interest rate.
b. Make a recommendation regarding whether Sweatt should borrow the money and pay off the account payable within the discount period.

LO 8

Exercise 3-18 *Effect of inventory transactions on the income statement and balance sheet: periodic system (Appendix)*

Joe Dodd owns Joe's Sporting Goods. At the beginning of the year, Joe's had $8,400 in inventory. During the year, Joe's purchased inventory that cost $42,000. At the end of the year, inventory on hand amounted to $17,600.

Required

Calculate the following:

a. Cost of goods available for sale during the year.
b. Cost of goods sold for the year.
c. Amount of inventory Joe's would report on the year-end balance sheet.

Exercise 3-19 *Determining cost of goods sold: periodic system (Appendix)* LO 8

Lane Antiques uses the periodic inventory system to account for its inventory transactions. The following account titles and balances were drawn from Lane's records: beginning balance in inventory, $24,000; purchases, $150,000; purchase returns and allowances, $10,000; sales, $400,000; sales returns and allowances, $2,500; freight-in, $750; and operating expenses, $26,000. A physical count indicated that $18,000 of merchandise was on hand at the end of the accounting period.

Required

a. Prepare a schedule of cost of goods sold.
b. Prepare a multistep income statement.

Exercise 3-20 *Using common size statements and ratios to make comparisons* LO 7

At the end of 2012, the following information is available for Chicago and St. Louis companies:

	Chicago	St. Louis
Sales	$3,000,000	$3,000
Cost of goods sold	1,800,000	2,100
Selling and administrative expenses	960,000	780
Total assets	3,750,000	3,750
Stockholders' equity	1,000,000	1,200

Required

a. Prepare common size income statements for each company.
b. One company is a high-end retailer, and the other operates a discount store. Which is the discounter? Support your selection by referring to the common size statements.

PROBLEMS

All applicable Problems are available with McGraw-Hill's *Connect Accounting.*

Problem 3-21 *Basic transactions for three accounting cycles: perpetual system* LO 2

CHECK FIGURES
2012 Net Income: $8,000
2014 Total Assets: $112,000

Ginger's Flower Company was started in 2012 when it acquired $80,000 cash from the issue of common stock. The following data summarize the company's first three years' operating activities. Assume that all transactions were cash transactions.

	2012	2013	2014
Purchases of inventory	$ 60,000	$ 90,000	$ 130,000
Sales	102,000	146,000	220,000
Cost of goods sold	54,000	78,000	140,000
Selling and administrative expenses	40,000	52,000	72,000

Required

Prepare an income statement (use multistep format) and balance sheet for each fiscal year. (*Hint:* Record the transaction data for each accounting period in the accounting equation before preparing the statements for that year.)

LO 1

CHECK FIGURE
a. Period cost

Problem 3-22 *Identifying product and period costs*

Required

Indicate whether each of the following costs is a product cost or a period (selling and administrative) cost.

a. Advertising expense.
b. Insurance on vans used to deliver goods to customers.
c. Salaries of sales supervisors.
d. Monthly maintenance expense for a copier.
e. Goods purchased for resale.
f. Cleaning supplies for the office.
g. Freight on goods purchased for resale.
h. Salary of the marketing director.
i. Freight on goods sold to customer with terms FOB destination.
j. Utilities expense incurred for office building.

LO 3

CHECK FIGURE
Event (b): Period Cost: $300

Problem 3-23 *Identifying freight costs*

Required

For each of the following events, determine the amount of freight paid by The Dive Shop. Also indicate whether the freight cost would be classified as a product or period (selling and administrative) cost.

a. Purchased merchandise inventory with freight costs of $1,400. The merchandise was shipped FOB destination.
b. Shipped merchandise to customers, freight terms FOB destination. The freight costs were $300.
c. Purchased inventory with freight costs of $500. The goods were shipped FOB shipping point.
d. Sold merchandise to a customer. Freight costs were $800. The goods were shipped FOB shipping point.

LO 2, 3

CHECK FIGURES
a. Ending Cash: $58,490
b. Net Income: $13,100

Problem 3-24 *Effect of purchase returns and allowances and purchase discounts on the financial statements: perpetual system*

The following events were completed by Chan's Imports in September 2012.

Sept. 1 Acquired $60,000 cash from the issue of common stock.
1 Purchased $36,000 of merchandise on account with terms 2/10, n/30.
5 Paid $800 cash for freight to obtain merchandise purchased on September 1.
8 Sold merchandise that cost $20,000 to customers for $38,000 on account, with terms 2/10, n/30.
8 Returned $1,500 of defective merchandise from the September 1 purchase to the supplier.
10 Paid cash for the balance due on the merchandise purchased on September 1.
20 Received cash from customers of September 8 sale in settlement of the account balances, but not within the discount period.
30 Paid $4,900 cash for selling expenses.

Required

a. Record each event in a statements model like the following one. The first event is recorded as an example.

Assets					=	Liab.	+	Equity			Rev.	−	Exp.	=	Net Inc.	Cash Flow	
Cash	+	Accts. Rec.	+	Inv.	=	Accts. Pay.	+	Com. Stk.	+	Ret. Earn.							
60,000	+	NA	+	NA	=	NA	+	60,000	+	NA	NA	−	NA	=	NA	60,000	FA

b. Prepare an income statement for the month ending September 30.
c. Prepare a statement of cash flows for the month ending September 30.
d. Explain why there is a difference between net income and cash flow from operating activities.

Problem 3-25 *Comprehensive cycle problem: Perpetual system*

LO 2, 3, 5, 6

CHECK FIGURES
c. Net Income: $1,500
Total Assets: $14,800

At the beginning of 2012, the Jeater Company had the following balances in its accounts:

Cash	$ 4,300
Inventory	9,000
Common stock	10,000
Retained earnings	3,300

During 2012, the company experienced the following events.

1. Purchased inventory that cost $2,200 on account from Blue Company under terms 1/10, n/30. The merchandise was delivered FOB shipping point. Freight costs of $110 were paid in cash.
2. Returned $200 of the inventory that it had purchased because the inventory was damaged in transit. The freight company agreed to pay the return freight cost.
3. Paid the amount due on its account payable to Blue Company within the cash discount period.
4. Sold inventory that had cost $3,000 for $5,500 on account, under terms 2/10, n/45.
5. Received merchandise returned from a customer. The merchandise originally cost $400 and was sold to the customer for $710 cash during the previous accounting period. The customer was paid $710 cash for the returned merchandise.
6. Delivered goods FOB destination in Event 4. Freight costs of $60 were paid in cash.
7. Collected the amount due on the account receivable within the discount period.
8. Took a physical count indicating that $7,970 of inventory was on hand at the end of the accounting period.

Required

a. Identify these events as asset source (AS), asset use (AU), asset exchange (AE), or claims exchange (CE).
b. Record each event in a statements model like the following one.

Event	Balance Sheet					Income Statement			Statement of Cash Flows
	Assets			= Liab.	= Equity	Rev.	− Exp.	= Net Inc.	
	Cash	+ Accts. Rec.	+ Mdse. Inv.	= Accts. Pay.	+ Ret. Earn.				

c. Prepare an income statement, a statement of changes in stockholders' equity, a balance sheet, and a statement of cash flows.

Problem 3-26 *Using common size income statements to make comparisons*

LO 7

The following income statements were drawn from the annual reports of Pierro Sales Company.

	2012*	2013*
Net sales	$520,600	$580,500
Cost of goods sold	(369,600)	(401,500)
Gross margin	151,000	179,000
Less: Operating expense		
Selling and administrative expenses	(64,800)	(81,300)
Net income	$ 86,200	$ 97,700

*All dollar amounts are reported in thousands.

The president's message in the company's annual report stated that the company had implemented a strategy to increase market share by spending more on advertising. The president indicated that prices held steady and sales grew as expected. Write a memo indicating whether you agree with the president's statements. How has the strategy affected profitability? Support your answer by measuring growth in sales and selling expenses. Also prepare common size income statements and make appropriate references to the differences between 2012 and 2013.

LO 5, 8

eXcel

CHECK FIGURES

a. Cost of Goods Available for Sale: $48,675

b. Net Income: $55,000

Problem 3-27 *Preparing a schedule of cost of goods sold and multistep and single-step income statements: Periodic system (Appendix)*

The following account titles and balances were taken from the adjusted trial balance of Brisco Farm Co. for 2012. The company uses the periodic inventory system.

Account Title	Balance
Sales returns and allowances	$ 3,250
Miscellaneous expense	400
Transportation-out	700
Sales	69,750
Advertising expense	2,750
Salaries expense	8,500
Transportation-in	1,725
Purchases	42,000
Interest expense	360
Merchandise inventory, January 1	6,200
Rent expense	5,000
Merchandise inventory, December 31	4,050
Purchase returns and allowances	1,250
Loss on sale of land	3,400
Utilities expense	710

Required

a. Prepare a schedule to determine the amount of cost of goods sold.

b. Prepare a multistep income statement.

c. Prepare a single-step income statement.

LO 8

eXcel

CHECK FIGURES

a. Ending Cash: $70,524

b. Cost of Goods Sold: $94,876

Problem 3-28 *Comprehensive cycle problem: Periodic system (Appendix)*

The following trial balance pertains to Nate's Grocery as of January 1, 2012:

Account Title	Beginning Balances
Cash	$26,000
Accounts receivable	4,000
Merchandise inventory	50,000
Accounts payable	4,000
Common stock	43,000
Retained earnings	33,000
Totals	$80,000

The following events occurred in 2012. Assume that Nate's uses the periodic inventory method.

1. Purchased land for $9,000 cash.
2. Purchased merchandise on account for $96,000, terms 1/10 n/45.
3. Paid freight of $1,000 cash on merchandise purchased FOB shipping point.
4. Returned $3,600 of defective merchandise purchased in Event 2.
5. Sold merchandise for $86,000 cash.
6. Sold merchandise on account for $90,000, terms 2/10 n/30.
7. Paid cash within the discount period on accounts payable due on merchandise purchased in Event 2.

8. Paid $11,600 cash for selling expenses.
9. Collected $50,000 of the accounts receivable from Event 6 within the discount period.
10. Collected $40,000 of the accounts receivable but not within the discount period.
11. Paid $6,400 of other operating expenses.
12. A physical count indicated that $47,600 of inventory was on hand at the end of the accounting period.

Required

a. Record the above transactions in a horizontal statements model like the following one.

Event	Balance Sheet							Income Statement			Statement of Cash Flows
	Assets				= Equity			Rev. −	Exp. =	Net Inc.	
	Cash +	Accts. Rec. +	Mdse. Inv. +	Land =	Accts. Pay. +	Com. Stock +	Ret. Earn.				

b. Prepare a schedule of cost of goods sold and an income statement.

ANALYZE, THINK, COMMUNICATE

ATC 3-1 Business Application Case *Understanding real world annual reports*

Target Corporation

Use the **Target Corporation**'s annual report in Appendix B to answer the following questions related to Target's 2009 fiscal year.

Required

a. What percentage of Target's *total revenues* end up as net earnings?
b. What percentage of Target's *sales* go to pay for the costs of the goods being sold?
c. What costs does Target include in its Cost of Sales account?
d. When does Target recognize revenue from the sale of gift cards?

ATC 3-2 Group Exercise *Multistep income statement*

The following quarterly information is given for Raybon for the year ended 2012 (amounts shown are in millions).

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Net Sales	$736.0	$717.4	$815.2	$620.1
Gross Margin	461.9	440.3	525.3	252.3
Net Income	37.1	24.6	38.6	31.4

Required

a. Divide the class into groups and organize the groups into four sections. Assign each section financial information for one of the quarters.
 (1) Each group should compute the cost of goods sold and operating expenses for the specific quarter assigned to its section and prepare a multistep income statement for the quarter.
 (2) Each group should compute the gross margin percentage and cost of goods sold percentage for its specific quarter.
 (3) Have a representative of each group put that quarter's sales, cost of goods sold percentage, and gross margin percentage on the board.

Class Discussion

b. Have the class discuss the change in each of these items from quarter to quarter and explain why the change might have occurred. Which was the best quarter and why?

ATC 3-3 Research Assignment *Analyzing Amazon.com's income statement*

Complete the requirements below using the most recent financial statements available [20xx] on Amazon.com's corporate website. Obtain the statements on the internet by following the steps below. (Be aware that the formatting of the company's website may have changed since these instructions were written.)

- Go to www.amazon.com.
- At the bottom of the screen, under "Get to Know Us," click on "Investor Relations."
- Annual Reports and Proxies.
- Click on "20xx Annual Report" (the most recent year).

Read the following sections of the annual report:

- The income statement, which Amazon.com calls the "Consolidated Statement of Operations."
- In the footnotes section, "Note 1—Description of Business and Accounting Policies," read the subsections titled "*Revenues,*" "*Shipping Activities,*" and "*Cost of Sales.*"

Required

a. What percentage of Amazon's sales end up as net income?

b. What percentage of Amazon's sales go to pay for the costs of the goods being sold?

c. What specific criteria are necessary before Amazon will recognize a sale as having been completed and record the related revenue?

d. How does Amazon account for (report on its income statement) the shipping costs it incurs to ship goods to its customers?

ATC 3-4 Written Assignment, Critical Thinking *Effect of sales returns on financial statements*

Bell Farm and Garden Equipment reported the following information for 2012:

Net Sales of Equipment	$2,450,567
Other Income	6,786
Cost of Goods Sold	1,425,990
Selling, General, and Administrative Expense	325,965
Net Operating Income	$ 705,398

Selected information from the balance sheet as of December 31, 2012, follows.

Cash and Marketable Securities	$113,545
Inventory	248,600
Accounts Receivable	82,462
Property, Plant, and Equipment—Net	335,890
Other Assets	5,410
Total Assets	$785,907

Assume that a major customer returned a large order to Bell on December 31, 2012. The amount of the sale had been $146,800 with a cost of sales of $94,623. The return was recorded in the books on January 1, 2013. The company president does not want to correct the books. He argues that it makes no difference as to whether the return is recorded in 2012 or 2013. Either way, the return has been duly recognized.

Required

a. Assume that you are the CFO for Bell Farm and Garden Equipment Co. Write a memo to the president explaining how omitting the entry on December 31, 2012, could cause the financial statements to be misleading to investors and creditors. Explain how omitting the return from the customer would affect net income and the balance sheet.

b. Why might the president want to record the return on January 1, 2013, instead of December 31, 2012?