CHAPTER 1

WHAT IS MANAGERIAL ACCOUNTING?

LESSONS

CAREERS IN MANAGERIAL ACCOUNTING

NINTENDO OF AMERICA, INC.

Nintendo of America, Inc., based in Redmond, WA, is a wholly-owned subsidiary of Nintendo Co., Ltd., of Kyoto, Japan. It manufactures and markets hardware and software for its home video game systems. More than 40% of U.S. households are estimated to own a Nintendo game system. The company is famous for the games Mario, Donkey Kong, and Pokemon.

Finance Managers at Nintendo establish policies and procedures for cash management, investments, and expense reporting. They design and implement accounting procedures and provide financial information and analysis services. Finance Managers need knowledge of generally accepted accounting principles. They must possess excellent communication, time management, and organizational skills. They need to be able to summarize and analyze large amounts of data, work under pressure, and handle multiple projects and deadlines. Applicants should have experience in treasury, marketing, or advertising and an undergraduate degree in accounting, finance, or a related field.

THINK CRITICALLY

1. Which job responsibilities of Finance Managers interest you the most? Why?
2. Why do you think Finance Managers at Nintendo need to have marketing or advertising experience?

VIDEO

The Chapter 1 video for this module introduces the concepts in this chapter.

PROJECT

Managerial Accounting and Financial Statements

PROJECT OBJECTIVES

- Identify the skills and abilities required for success in managerial accounting
- Demonstrate the ability to create and analyze an income statement
- Demonstrate the ability to create and analyze a balance sheet

GETTING STARTED

Read through the Project Process below. Make a list of any materials you will need. Decide how you will get the needed materials or information.

- Form small groups and make a list of the following departments that may be found in a typical merchandising business:

Sales	Marketing	Human Resources
Advertising	Accounting	MIS

- Add columns to your list for Personal Skills and Accounting-Related Skills
- Create a fictitious corporation that sells merchandise. Use spreadsheet software to create an income statement and balance sheet for the business. Use formulas for all calculations. Be sure to add component percentages.

PROJECT PROCESS

Part 1 **LESSON 1.1** Discuss in class the personal and account-related skills needed for workers in each department. Add them to your list.

Part 2 **LESSON 1.2** Add columns to the income statement for the next year and copy the current year's results into the new columns. Make changes to the next year's figures to show the effects of improved operations.

Part 3 **LESSON 1.3** Add columns to the balance sheet for the next year and copy the current year's results into the new columns. Make changes to the next year's figures to show the effects of improved operations.

CHAPTER REVIEW

Project Wrap-up Hold a class debate on the following statement or a similar one: "All employees of a business should be concerned with the results reported on the business's financial statements." As a class, evaluate the debate and come to a consensus on the issue.

LESSON 1.1
MANAGERIAL ACCOUNTING

GOALS

EXPLAIN the difference between financial accounting and managerial accounting

INDENTIFY the education, skills, and abilities required for a career in managerial accounting

TYPES OF ACCOUNTING

Businesses buy and sell goods and services for cash or credit. They buy land and build offices, stores, and factories. They buy supplies, equipment, merchandise to sell, and raw materials to manufacture goods. They hire employees and pay salaries and benefits. All of these activities need to be measured, analyzed, and recorded.

Accounting is the set of procedures used to analyze, measure, and record the activities of a business. For this reason, accounting is often called the *language of business*. There are two main types of accounting: financial accounting and managerial accounting.

ON THE $CENE

Annette Mitchell is a first-year college student pursuing a degree in accounting. She is only interested, however, in accounting and math courses. When her advisor told her that her program also requires courses in most other business subject areas, as well as in communications, she questioned the relevance of those courses to her career choice of managerial accounting. Why would nonaccounting courses be important for a career as a managerial accountant?

FINANCIAL ACCOUNTING

Financial accounting uses generally accepted accounting principles (GAAP) to record the activities of a business and to report the results of a business's operations. Every transaction that occurs is recorded as an entry in a journal. Each kind of activity has an account in a general ledger, and the journal entries are subsequently sorted by posting them to a general ledger account. Periodically, the balances in the general ledger accounts are used to prepare financial statements, such as an income statement and balance sheet.

Many people, both inside and outside the business, use financial statements. Managers use financial statements to establish how well the business is performing, to determine what the business is worth, and to make decisions. Financial institutions examine financial statements to learn about the business's debts and profitability when deciding whether to lend money to the business. Investors analyze financial statements to determine whether a business would be a good investment. Regulatory agencies, such as the Securities and Exchange Commission, may examine financial statements to determine compliance with regulations. Competitors may compare a business's financial statements to their own or analyze financial statements to gain a competitive advantage. Industry organizations may use financial statements to compile information about the industry, which then may be published in journals or otherwise distributed.

In a group, brainstorm to produce a list of businesses and the products or services they sell.

MANAGERIAL ACCOUNTING

The focus of managerial accounting is on the decisions made by the managers of a business. Managerial accounting organizes accounting information to help plan and operate a business. There are two primary differences between financial accounting and managerial accounting.

First, managerial accounting is concerned only with decisions made within the business. Therefore, people outside the business are not the audience for managerial accounting information. Instead, managerial accounting provides information for people inside the business to use in making decisions.

Second, managerial accounting does not necessarily follow generally accepted accounting principles. Instead, managerial accounting involves preparing the information that is most needed for making a particular decision. The type and form of the information varies with the decision to be made. Managerial accounting is used for making decisions such as

- Setting prices
- Determining the cost of manufacturing an item
- Granting credit to customers
- Managing the amount of inventory on hand
- Introducing a new product
- Building a new factory
- Leasing or buying equipment
- Financing an investment
- Projecting revenues and costs

did you KNOW?

More than one million people are employed as accountants in the United States. Ten percent are self-employed and 25 percent work for account-ing, auditing, or bookkeeping firms.

- Determining the level of sales needed to break even
- Deciding the best sales mix for various products
- Estimating amounts on budgets
- Setting goals for a business

TYPES OF MANAGERIAL ACCOUNTING

Managerial accounting involves advising and supporting decision makers at all levels of an organization and providing control mechanisms to ensure that a company meets its goals. There are four major areas of managerial accounting: management planning and forecasting, cost accounting, tax accounting, and internal auditing.

Management Planning and Forecasting Effective businesses set goals for the business and create a business plan in the form of a budget. Budgets are created for every aspect of a business and are based on estimates of planned future performance. Many different departments and managers participate in creating a budget, and a managerial accountant may advise these managers as well as compile a final master budget. Individual managers usually need assistance in estimating costs and results to make sure the budgets are as accurate as possible. Individual projects, such as a new product launch, may also have their own budgets. Managerial accountants analyze the costs and results of alternative plans to help managers choose the best plans.

Cost Accounting Cost accounting usually applies to a manufacturing company and involves compiling and analyzing the costs of manufacturing. Cost accounting may deal with actual products currently being manufactured as well as with proposals for manufacturing new products. Managerial accountants may suggest ways to lower the costs of manufacturing.

Tax Accounting Tax accounting considers the effects of tax rules and regulations on management decisions. Taxes frequently make one decision more cost-effective than another.

Internal Auditing Auditors examine the accounting procedures and processes of a business for accuracy, consistency, and compliance. External auditors are independent of a business and examine the business's financial statements. External auditors are concerned about compliance with generally accepted accounting principles. Internal auditors, however, are employees of a business who examine the control structures of the business, such as the budget and expenditures, as well as the efficiency of the business's operations. Therefore, internal auditors are managerial accountants.

CHECKPOINT

What are the two main differences between financial accounting and managerial accounting?

CAREERS IN MANAGERIAL ACCOUNTING

Because businesses today are concerned about efficiency of operations, the demand for managerial accountants is high. Also, the career path of a managerial accountant often leads to executive positions.

EDUCATION REQUIREMENTS

Managerial accounting positions generally require a college education in accounting. In addition to specialized courses in accounting, a broad background in all business subjects is valuable because a managerial accountant advises managers in all areas of business. For example, a sales manager might need to know the costs of additional sales representatives; a fleet manager might want to compare the costs of leasing and buying company cars; and an advertising or marketing manager might need to know what percentage of a product's selling price would be available for an advertising campaign. Managerial accountants in a particular industry also must quickly learn the characteristics of the industry in which they are working and grasp the nature of the competition within the industry.

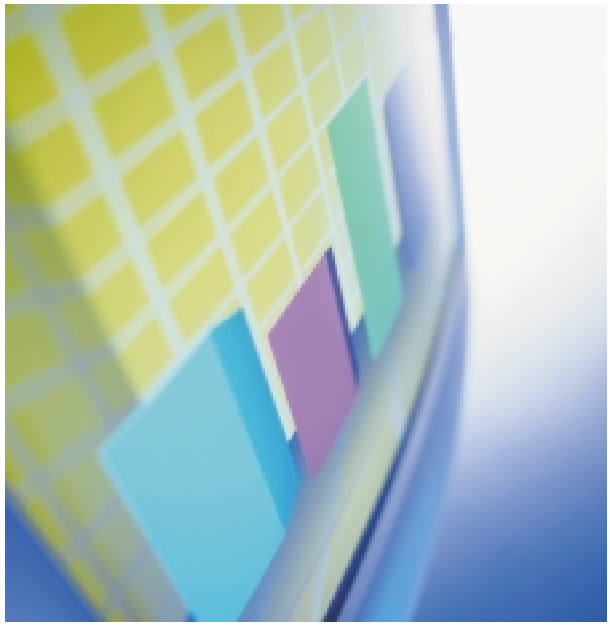
PERSONAL SKILLS AND ABILITIES

As with any profession, in addition to formal education, certain skills and abilities are necessary to be successful.

People Skills Managerial accountants must work closely with managers within an organization. Often a managerial accountant's analysis conflicts with a manager's decision, such as when a certain promotional plan costs more than the additional profit on the sales it will generate. Therefore, excellent people skills are necessary.

Communication Skills Managerial accountants work with numbers and calculations, often at high levels of complexity. They need superior communication skills to convey the results of such calculations to managers who may not be as skilled at numerical analysis.

In small groups, discuss ways managerial accountants communicate with other managers in a business. Identify the kinds of courses and experiences that could prepare a managerial accountant to communicate successfully with these managers.



Math and Analysis Skills Managerial accountants advise on a wide range of management decisions. Often new situations require new solutions and analyses. Managerial accountants must be able to apply the appropriate mathematical analysis to each decision scenario.

Computer Skills The number of decisions made daily by a business organization requires a great deal of numerical analyses. Spreadsheet software is integral to managing the volume of analysis required. Word processing and presentation software skills can be critical to effectively communicating the results of numerical analysis to managers. Therefore, a high degree of computer skills is necessary in this profession.

Team Orientation Whether a business uses a team structure or not, a managerial accountant may support many different people and decisions within an organization. The managerial accountant must deal with both individual managers and the overall goals of the organization. Therefore, the managerial accountant is very much a part of many different teams and needs to function as an effective team member.

WORLD VIEW

TRUST ON THE WEB

With e-commerce sales worldwide expected to exceed $2 trillion by 2004, there is an increasing need for global standards aimed at protecting privacy, reducing the risk of online fraud, and bolstering consumer confidence in e-commerce sites. To address these important consumer concerns, the American Institute of Certified Public Accountants (AICPA) and the Canadian Institute of Chartered Accountants (CICA) launched the CPA WebTrust service in 1997. Now offered in both countries as well as throughout Europe and Asia, the WebTrust "seal of assurance" sets international standards for e-commerce business practices regarding online privacy protection, security, and business integrity.

THINK CRITICALLY What e-commerce consumer concerns does the WebTrust service address?

THE PROFESSION OF MANAGERIAL ACCOUNTING

The Institute of Certified Management Accountants (ICMA) is the professional organization of managerial accountants in the United States. Other countries have similar professional organizations. In addition to supporting education and research in the profession, the ICMA administers the examinations for the professional designation of Certified Management Accountant (CMA). The CMA designation requires certain academic credentials and professional experience as well as a passing score on the examination. Once the CMA designation is earned, it must be maintained by adhering to the ethical standards of the profession and engaging in continuing education.

MANAGERIAL ACCOUNTING FOR NONACCOUNTANTS

People pursuing careers in business do not have to aspire to careers in managerial accounting to make the study of managerial accounting useful. The skills and knowledge acquired through the study of managerial accounting are useful to managers in all departments of businesses. They also are extremely useful to owners and managers of small businesses who may not have ready access to a managerial accountant.

All managers and owners of a business have to make decisions that affect how a business performs. More informed decisions are made if some of the skills of managerial accounting are applied. For example, a business owner needs to know how to analyze the business's financial statements to determine how well the business is doing and to plan changes to make the business more successful. A manager of a human resources department needs to know the costs of hiring employees to better plan staffing levels. Marketing and sales managers need to know the effects of their decisions on the success of the business. Clearly, managerial accounting is not just for accountants.

CHECKPOINT

What are the requirements for earning and maintaining the CMA designation?

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___

Prepare a chart with four columns: (1) skills of managerial accountants, (2) skills you already have, (3) skills you still need, and (4) ways to acquire the skills you still need. Present your chart to the class.

THINK CRITICALLY

1. Julie Kister records journal entries and posts them to ledger accounts. She says that she is a managerial accountant because this information is used by managerial accountants to help managers make decisions. Do you agree or would you consider these financial accounting functions? Explain your reasons.

2. When Marie Espino met with her college advisor and learned that she would have to take courses in English, business writing, and communications in her accounting program, she said, "If I wanted to take those courses I would major in liberal arts. I don't see why I need them to be an accountant." What is your opinion of Marie's statement?

3. Why would the skills and knowledge acquired through the study of managerial accounting be useful to nonaccountants?

MAKE CONNECTIONS

4. **MARKETING** Use a search engine to locate the Web site of the Institute of Certified Management Accountants (ICMA). Read the procedures for obtaining the CMA certification and write a brief explanation of the requirements.

5. **MARKETING** Imagine that you are a buyer for a major retailer of housewares. You are responsible for purchasing items for a new department of prestige cookware. List several ways a managerial accountant could help you.

LESSON 1.2

THE INCOME STATEMENT

GOALS

DESCRIBE the parts of an income statement

ANALYZE an income statement using component percentages

PARTS OF AN INCOME STATEMENT

Businesses summarize the results of their operations and their current status periodically in the form of financial statements. Financial accountants generally prepare the financial statements; however, managerial accountants analyze financial statements to determine how well a business is doing and how it could improve.

The first financial statement prepared is an income statement. An **income statement** is a financial statement that reports the revenues and expenses of a business as well as its net income at the end of a fiscal period. An income statement may be prepared at any time but is always prepared at the end of a fiscal year to show the results of the year's operations. See, for example, the income statement for Computer World, Inc., on the next page. To check progress during the year, some businesses also prepare monthly and quarterly income statements. Daily income statements would not be useful because it is difficult to detect trends in performance in one day's time.

ON THE $CENE

Managers of Prometheus Corporation are primarily interested in the "bottom line" on the income statement. The bottom line is the amount of net income after federal income tax. In order to increase the bottom line, they try to increase sales and decrease expenses. The managerial accountants have attempted to persuade these managers that this way of thinking needs to be adjusted to include the concept of increasing some expenses in order to create additional sales. Which group's position is more likely to lead to long-term success for the company?

Computer World, Inc.
Income Statement
For Year Ended December 31, 20—

			Percent of Net Sales
Operating Revenue			
Sales	$746,700		
Less: Sales Discount	1,210		
Sales Returns and Allowances	1,760		
Net Sales		$743,730	100.0
Cost Of Merchandise Sold			
Merchandise Inventory, Jan. 1, 20—		$165,400	
Purchases	$321,900		
Less: Purchases Discount	4,590		
Purchases Returns and Allowances	1,760		
Net Purchases		315,550	42.4
Total Cost of Merchandise Available for Sale		$480,950	
Less: Merchandise Inventory, Dec. 31, 20—		171,250	
Cost of Merchandise Sold		$309,700	41.6
Gross Profit On Operations		$434,030	58.4
Operating Expenses			
Selling Expenses			
Advertising Expense	$ 7,710		
Credit Card Fee Expense	8,870		
Depreciation Expense—Store Equipment	16,400		
Miscellaneous Expense—Sales	8,260		
Salary Expense—Sales	66,210		
Supplies Expense—Sales	13,240		
Total Selling Expenses		$120,690	16.2
Administrative Expenses			
Depreciation Expense—Building	$ 4,600		
Depreciation Expense—Office Equipment	4,220		
Insurance Expense	8,600		
Miscellaneous Expense—Admin	11,230		
Payroll Taxes Expense	10,610		
Property Tax Expense	3,700		
Salary Expense—Admin	30,250		
Supplies Expense—Admin	7,400		
Uncollectible Accounts Expense	4,100		
Utilities Expense	14,650		
Total Administrative Expenses		99,360	13.4
Total Operating Expenses		$220,050	29.6
Income From Operations		$213,980	28.8
Other Revenue And Expenses			
Interest Income	$ 1,300		
Interest Expense	22,800		
Net Deduction from Other Rev. and Exp.		21,500	
Net Income Before Federal Income Tax		$192,480	25.9
Less Federal Income Tax Expense		96,240	
Net Income After Federal Income Tax		$ 96,240	12.9

REVENUE

The revenue section of an income statement shows the amount of sales the company made during the period. The amount of sales is adjusted by subtracting any returns or discounts on sales to arrive at the net sales amount. This is called the **operating revenue** because it is the revenue from the normal operations of the business.

COST OF MERCHANDISE SOLD

The cost of merchandise sold section reports how much was paid for the merchandise that was sold. The cost of merchandise sold shown on the income statement for Computer World, Inc., is calculated as follows:

Merchandise on hand at the beginning of the year	$165,400
Plus net purchases for the year	+315,550
Equals cost of merchandise available for sale	$480,950
Minus merchandise on hand at the end of the year	−171,250
Equals cost of merchandise sold	$309,700

The income statement shown for Computer World, Inc., represents a merchandising business—a business that buys goods and resells them, such as a retailer, wholesaler, importer, or exporter.

A service business would have only an Operating Revenue section in its income statement because there is no merchandise. A manufacturing business would have a section for Cost of Goods Manufactured instead of Cost of Merchandise Sold.

GROSS PROFIT ON OPERATIONS

Gross profit on operations is the result of subtracting cost of merchandise sold from net sales. It is a significant figure because it is the amount remaining from operations to cover the expenses of a business and provide the net income or profit.

OPERATING EXPENSES

Operating expenses are expenses due to the normal operation of a business. The business must pay for items such as advertising, employee salaries, taxes on salaries, supplies, insurance, and utilities. A business that does not own its own building and land must pay a rent expense. Depreciation expense is a noncash expense related to allocating the cost of major assets over the life of the assets. Expenses on an income statement may be grouped in categories, such as selling and administrative expenses. Listing all expenses makes it easier to analyze which ones might need to be adjusted to improve net income.

OTHER REVENUE AND EXPENSES

The section for other revenue and expenses is for sources of revenue and expenditures that are not part of the normal operations of a business. For example, a business may earn interest on accounts with its customers, but that is not the primary function of the business. Therefore, such interest revenue is separated from normal operating revenue. Interest paid on notes and loans is also separated from normal operating expenses.

did you KNOW?

Corporations publish their financial statements in annual reports that are sent to stockholders. Lucent Technologies printed 4.7 million copies of its annual report in 1999. Pinnacle West of Arizona spent $516,000 to publish and send annual reports to its shareholders.

NET INCOME

Net income is calculated by subtracting all costs and expenses from net sales. It often is referred to as "the bottom line" because it is the last line on an income statement. Net income also may be referred to as "earnings" or "profit." Corporations must pay federal income tax on net income, so a corporation's income statement usually shows net income both before and after federal income taxes. In this chapter, a tax rate of 50% is used for all federal income tax calculations.

CHECKPOINT

What are the six major sections of an income statement for a merchandising business?

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____

As a group, discuss how different categories of expenses may affect the sales revenue and net income of a company. Identify which expenses might lead to increased sales. Determine whether a certain increase in a category automatically increases (or decreases) sales by the same percentage.

VERTICAL ANALYSIS OF AN INCOME STATEMENT

Managerial accountants use an income statement as a starting point. The job of a managerial accountant is to analyze an income statement to understand the relationships among the different components in order to determine whether the business has operated successfully and met its goals. The percentages shown in the column labeled "Percent of Net Sales" are calculated by dividing each major item on the income statement by the amount of net sales. A **component percentage** shows the percentage relationship between one item on a financial statement and the item that includes it. For an income statement, net sales is the base item that is distributed to all other items on the statement. Therefore, the component percentage for any item is calculated by dividing that item by the amount of net sales and then multiplying by 100 to convert it to a percentage. The component percentage for cost of merchandise sold, for example, is calculated as shown below.

Cost of Merchandise Sold	÷ Net Sales	× 100 =	Percent of Net Sales
$309,700	÷ $743,730	× 100 =	41.64%

Usually, it is not useful to have greater accuracy than what is provided by rounding to the nearest tenth of one percent. Therefore, on the income statement, 41.64% has been rounded to 41.6%.

Other items on the income statement also are divided by the net sales amount to calculate their component percentages. The calculation of component percentages is called *vertical analysis* because the percentages are calculated by working *down* the income statement.

ANALYZING COMPONENT PERCENTAGES

Once component percentages are calculated, they need to be analyzed. Percentages are compared to the percentages planned for each item. Some-

BUSINESS MATH CONNECTION

Accountants frequently round the results of mathematical calculations. To round a result, calculations are performed to one position greater than the desired result. If the last digit is 5 or greater, the digit before it is increased by 1. If the last digit is less than 5, the digit before it is not increased.

Round the following calculations to the nearest tenth.

$\frac{1}{3}$ $\qquad$ 0.07×35.2

Round the following amounts to the nearest $100.

$25,423 $\qquad$ $133,467.55

SOLUTION

$\frac{1}{3} = 0.33$ $\qquad$ $0.07 \times 35.2 = 2.46$

$25,423 $\qquad$ $133,467.55

times a range of acceptable percentages is planned, such as "cost of merchandise sold no greater than 40%." In the income statement shown, the performance would be unacceptable because it is 41.6%, which is greater than 40%. Steps would need to be taken to improve this percentage.

Percentages are also compared to previous years' percentages to see whether they have increased or decreased. Items with unacceptable percentages are analyzed further to plan changes for future years.

IMPROVING COMPONENT PERCENTAGES

A component percentage can be improved by changing either the amount of net sales or the amount of the analyzed item. If the analyzed item is decreased, the percentage will decrease. If it is increased, the percentage will increase. The component percentage can also be changed by increasing or decreasing the amount of net sales. If the analyzed item remains the same, an increase in net sales will decrease the component percentage, and a decrease in net sales will increase the component percentage.

Suppose the component percentage for cost of merchandise sold is too high. At the same level of net sales, assuming inventory levels remain about the same, it would be necessary to decrease the amount of net purchases in order to decrease the component percentage for cost of merchandise sold. Managers, with the advice of managerial accountants, would have to consider all the factors involved. If they decide to purchase less merchandise, sales may decline because there's not enough merchandise on hand. However, they may be able to find alternative sources of merchandise at lower prices.

Individual expense items also can be decreased; however, managers would need to consider whether the cutbacks, such as less pleasant surroundings in stores or fewer sales representatives, could negatively affect sales.

CHECKPOINT

Explain why the amount of net sales is used as the base for all other income statement items for calculating component percentages.

THINK CRITICALLY

1. Tony James is the sales manager of Pro-Expert Corporation. He believes that for the business to make more money it needs to reduce expenses. What is the possible pitfall of this plan?

2. If a business had planned for a component percentage for cost of merchandise sold to be no greater than 45% but the actual percentage was 50%, what steps could be taken to correct this percentage?

3. Calculate and record the component percentages for the major items on the income statement for Century, Inc., on the next page.

MAKE CONNECTIONS

4. **TECHNOLOGY** Use a search engine to find the financial statements of a business on the Internet. Compare the types of information on this income statement with the one provided in this lesson. Summarize the major similarities and differences.

5. **BUSINESS MATH** Round the following items to the required places.
   a. 2/3, rounded to the nearest one hundredth ______
   b. 1,567,924, rounded to the nearest thousand ______
   c. 5,200 ÷ 9,500, rounded to the nearest tenth of a percent ______
   d. 16.3% of $5,079, rounded to the nearest dollar ______

6. **COMMUNICATION** Use presentation software to show a plan for increasing the net income shown on the income statement for Century, Inc., by 50 percent.

7. **BUSINESS STATISTICS** Use the graphics functions of spreadsheet software to prepare a pie chart of the major parts of the income statement shown for Century, Inc.

Century, Inc.
Income Statement
For Year Ended December 31, 20—

			Percent of Net Sales
Operating Revenue			
Sales	$376,700		
Less: Sales Discount	500		
Sales Returns and Allowances	800		
Net Sales		$375,350	
Cost Of Merchandise Sold			
Merchandise Inventory, Jan. 1, 20—		$87,100	
Purchases	$155,650		
Less: Purchases Discount	2,640		
Purchases Returns and Allowances	930		
Net Purchases		$152,080	
Total Cost of Merchandise Available for Sale		$239,180	
Less: Merchandise Inventory, Dec. 31, 20—		86,900	
Cost of Merchandise Sold		$152,280	
Gross Profit On Operations		$223,070	
Operating Expenses			
Selling Expenses			
Advertising Expense	$ 3,900		
Credit Card Fee Expense	4,400		
Depreciation Expense—Store Equipment	9,700		
Miscellaneous Expense—Sales	6,800		
Salary Expense—Sales	36,500		
Supplies Expense—Sales	7,200		
Total Selling Expenses		$68,500	
Administrative Expenses			
Depreciation Expense—Building	$ 2,400		
Depreciation Expense—Office Equipment	2,100		
Insurance Expense	4,400		
Miscellaneous Expense—Admin	6,500		
Payroll Taxes Expense	5,200		
Property Tax Expense	2,300		
Salary Expense—Admin	20,100		
Supplies Expense—Admin	6,400		
Uncollectible Accounts Expense	1,900		
Utilities Expense	9,300		
Total Administrative Expenses		60,600	
Total Operating Expenses		$129,100	
Income From Operations		$ 93,970	
Other Revenue And Expenses			
Interest Income	$ 480		
Interest Expense	11,400		
Net Deduction from Other Rev. and Exp.		$ 10,920	
Net Income Before Federal Income Tax		$83,050	
Less Federal Income Tax Expense		41,525	
Net Income After Federal Income Tax		$ 41,525	

LESSON 1.3
THE BALANCE SHEET

GOALS

DESCRIBE the sections of a balance sheet

ANALYZE a balance sheet using vertical analysis

PARTS OF A BALANCE SHEET

Another important financial statement prepared by financial accountants is the balance sheet. A **balance sheet** is a financial statement that reports the assets, liabilities, and owners' equity of a business at a particular moment in time. As they do with the income statement, managerial accountants analyze a balance sheet to determine how well a business is doing. Creditors, investors, and regulatory groups also are interested in information reported on a balance sheet.

The three major sections of a balance sheet are assets, liabilities, and owners' equity. A balance sheet must always be in balance, which means that the total assets must always equal the total liabilities plus owners' equity.

Assets = Liabilities + Owners' equity

ON THE $CENE

Thomas Hogue is the president of a small corporation that sells imported goods. He wants to borrow some money from his bank to pay for a large shipment of new goods. The bank has asked him to furnish a balance sheet to determine the financial health of the corporation. Thomas Hogue asks his managerial accountant to prepare the balance sheet, but he doesn't understand why the bank is requesting it or what information the bank might be seeking. What kinds of things do you think the bank wants to know?

Computer World, Inc.
Balance Sheet
December 31, 20—

				Percent
Assets				
Current Assets				
Cash		$53,500		9.0
Notes Receivable		18,000		3.0
Accounts Receivable	$34,900			5.8
Less Allowance for Uncollectible Accounts	3,200	31,700		0.5
Merchandise Inventory		171,250		28.7
Supplies—Sales		11,200		1.9
Supplies—Administrative		5,670		0.9
Prepaid Insurance		4,500		0.8
Total Current Assets			$295,820	49.5
Plant Assets				
Store Equipment	$66,700			11.2
Less Accumulated Depreciation—Store Equip	22,000	$44,700		3.7
Building	$148,000			24.8
Less Accumulated Depreciation—Building	27,800	120,200		4.7
Office Equipment	$56,800			9.5
Less Accumulated Depreciation—Office Equip.	24,500	32,300		4.1
Land		104,500		17.5
Total Plant Assets			$301,700	50.5
Total Assets			$597,520	100.0
Liabilities				
Current Liabilities				
Notes Payable		$12,000		2.0
Interest Payable		3,500		0.6
Accounts Payable		23,760		4.0
Employee Income Tax Payable		3,560		0.6
Federal Income Tax Payable		18,700		3.1
Social Security Tax Payable		280		0.0
Medicare Tax Payable		60		0.0
Salaries Payable		4,300		0.7
Sales Tax Payable		1,220		0.2
Unemployment Tax Payable—Federal		120		0.0
Unemployment Tax Payable—State		570		0.1
Total Current Liabilities			$68,070	11.4
Long-Term Liability				
Mortgage Payable			$115,000	19.2
Total Liabilities			$183,070	30.6
Stockholders' Equity				
Common Stock, 22,000 shares		$220,000		36.8
Retained Earnings		194,450		32.5
Total Stockholders' Equity			414,450	69.4
Total Liability and Stockholders' Equity			$597,520	100.0

As a group, review the balance sheet for Computer World, Inc., a merchandising business. Discuss the differences, if any, that you might expect to find on the balance sheet if the company were a service business or a manufacturing business.

A balance sheet may be prepared at any time to check the financial condition of a business. However, a balance sheet always is prepared at the end of an accounting period. Unlike an income statement that reports the operations of a business over a period of time, such as a year, a balance sheet reports the financial condition of a business at one particular moment. A balance sheet is like a photograph of a business at a particular point in time.

ASSETS

A business owns many things needed to operate the business. Anything owned by a business is an **asset**. Assets can be divided into two main categories. Current assets are items a business owns that can be disposed of in a relatively short time, usually less than a year. **Long-term assets** are more permanent and have a life greater than a year.

Current Assets Current assets are assets that are disposed of within a year. They consist of cash, receivables, inventory, supplies, and other current assets.

- ***Cash*** Cash consists of cash in checking accounts and cash on hand in petty cash funds, which is used for paying small, incidental amounts, such as tips for delivery people.
- ***Receivables*** For the convenience of customers, businesses sell merchandise "on account." When a customer buys merchandise on account, the amount of the sale is recorded as an account receivable. The business collects this amount from the customer sometime in the future. On a balance sheet, accounts receivable must be reduced by an estimated amount for accounts that may not be collected. This amount is called allowance for uncollectible accounts. Sometimes a business also accepts a note receivable from a customer for an extension of payment time or for longer payment terms than accounts receivable. Interest also is collected on notes receivable.
- ***Merchandise inventory*** Merchandise inventory consists of the goods a business purchases to sell to customers. Merchandise inventory is usually a significant portion of current assets. Merchandise inventory must be properly managed so as to have enough merchandise on hand to avoid losing a sale, yet not so much merchandise on hand that too much cash is invested in it.
- ***Supplies*** Supplies are needed to operate a business. They may be categorized by their purpose and use, such as sales supplies and administrative supplies. Office supplies may include paper, toner, pens, paper clips, and other supplies used in an office. Store supplies may consist of bags, wrapping materials, and other materials used in sales.

- ***Other current assets*** A business might have other kinds of current assets. Prepaid insurance, for example, is the amount of premiums paid to an insurance company for insurance coverage that has not yet expired. A business that rents its store or office space might pay rent in advance and have one or more months of prepaid rent.

Plant Assets Plant assets are long-term assets that are held for more than one year and used to operate a business. They may also be called *fixed assets* or *property, plant, and equipment*. Plant assets may be buildings, land, and equipment. Due to use and the passage of time, plant assets decrease in value, making them worth less than on the day they were purchased. The amount by which an asset decreases in value over time is called **depreciation expense**. Depreciation expense is accumulated over the life of each asset and is recorded as a deduction in the asset's value on the balance sheet. When the accumulated depreciation account balance shown on the balance sheet is nearly equal to the plant asset value, this indicates that the plant assets may be near the end of their useful lives, which could negatively impact the business's success.

LIABILITIES

Liabilities are amounts owed by a business. They usually have the word *payable* in their account titles. *Current liabilities* are payable within a year while *long-term liabilities*, such as a 20-year mortgage loan on a building, are paid over a longer period of time.

- ***Notes and interest payable*** Notes payable are usually short-term loans to a business to pay current operating expenses or to buy other assets. Interest payable is the interest on those notes payable.
- ***Accounts payable*** Businesses frequently buy merchandise inventory from vendors on account. In effect, the vendor offers a short-term, interest-free loan when a business buys merchandise on account.
- ***Taxes payable*** Businesses incur tax liabilities during a fiscal period that may not actually have to be paid to the government until a later time. For example, payroll taxes are owed at the time employees are paid, yet government regulations may not require payment until a later time. The taxes are liabilities for the period in which the business becomes liable for the taxes but does not yet legally have to pay them.

did you KNOW?

Stocks of major corporations are bought and sold on the stock markets of the world every day. One large company, Microsoft Corporation, has more than 2.5 billion shares of stock that can be bought and sold.

STOCKHOLDERS' EQUITY

Businesses are created when owners invest money to start the business and make additional investments to fund continuing operations. The investment of the owner or owners is referred to as owners' equity or, in a corporation, stockholders' equity. A business owned by one person would have a capital account titled *Tom Smith, Capital*. A partnership with two or more owners would have a similar capital account for each of the partners. A corporation is formed by issuing stock to the investors. It would not be practical to show the names of every stockholder on a balance sheet because there could be many thousands of stockholders. For a corporation, the account title used reflects the type of stock, such as common stock, that was issued to the stockholders as evidence of their investment.

A second stockholders' equity account is called retained earnings. **Retained earnings** consist of the accumulated net income of a business. Retained earnings are kept in the business to pay dividends to stockholders and to finance major purchases.

CHECKPOINT

What are the three major sections of a balance sheet and what is the relationship among the sections?

____

____

VERTICAL ANALYSIS OF A BALANCE SHEET

Managerial accountants use the same kinds of techniques to analyze a balance sheet as they do to analyze an income statement. However, the intention is slightly different. For a balance sheet, managers are interested in knowing the makeup of the structure of the business. It is important to know, for example, how much of a business is financed by debt (liabilities) and how much is financed by equity (stockholders' equity).

The balance sheet for Computer World, Inc., shows percentages in the percent column for each item as a percentage of total assets and total liabilities and stockholders' equity. These percentages are calculated by dividing each item on the balance sheet by the amount of total assets or total liabilities and stockholders' equity. The component percentage for total liabilities, for example, is calculated as shown below.

Total Liabilities	÷	Total Liabilities and Stockholders' Equity	× 100	= Percent
183,070	÷	597,520	× 100	= 30.63%

As with the income statement, 30.63 has been rounded to the nearest tenth of one percent, 30.6%.

TECH TALK

SPREADSHEETS FOR WHAT-IF ANALYSIS Spreadsheet software has made the work of accountants much more efficient. Spreadsheets can be designed to automatically total columns of numbers and calculate percentages, averages, and interest. But even better is the spreadsheet feature that allows the user to change one or more numbers and have the results instantly recalculated. Accountants use this feature to perform What-If analysis to answer questions such as "If we increase advertising by 20% and that results in a 15% increase in sales, what will our net income be?" or "Which is a better deal: a 10-year loan at 10% interest or an 8-year loan at 11% interest?"

THINK CRITICALLY Suggest at least two other What-If questions that could be quickly answered using spreadsheet software.

ANALYZING COMPONENT PERCENTAGES

Component percentages are analyzed after they have been calculated. Percentages are compared to the percentages planned for each item. Sometimes a range of acceptable percentages is planned, such as "current assets at least 50% of total assets." In the balance sheet shown for Computer World, Inc., the performance would be unacceptable because the component percentage is 49.5%. Steps would need to be taken to improve this percentage.

Component percentages also are compared to previous years' percentages to see whether they have increased or decreased. Items with unacceptable percentages are analyzed further to plan changes for future years.

IMPROVING COMPONENT PERCENTAGES

A component percentage can be improved either by changing the item or the total that includes the item. If the item is increased and the total remains the same, the percentage will increase. If the item remains the same and the total increases, the percentage will decrease. However, improvements are not as clear cut as with income statement percentages. It may not be appropriate, for example, to increase or decrease the amount of merchandise inventory. Other factors must be weighed, such as how a decrease in merchandise inventory will affect sales if merchandise is not available when customers desire it. On the other hand, increasing merchandise inventory may tie up too much cash that could be placed instead into interest-earning investments or used to pay liabilities.

Another way to analyze component percentages is to compare them to the published financial statements of other companies in the same industry, especially successful companies.

CHECKPOINT

What are two ways to analyze whether the component percentages for items on a balance sheet are acceptable?

____

____

THINK CRITICALLY

1. A business owner believes that it is a waste of time to prepare a balance sheet because the only important thing is how much the business is making, which is shown on the income statement. What is your opinion of this statement? Why is a balance sheet important?

2. Name the two classifications of liabilities and provide examples of each.

3. Avatar Corporation's balance sheet shows that the amounts for plant assets are nearly equal to the amounts of accumulated depreciation. What would that suggest?

4. Calculate and record the component percentages for all items on the balance sheet for Century, Inc., on the next page.

MAKE CONNECTIONS

5. **TECHNOLOGY** Use a search engine to find the financial statements of a business on the Internet. Compare the types of information on a balance sheet with the one provided in this lesson. Summarize the major similarities and differences.

6. **COMMUNICATIONS** Use presentation software to explain each part of a balance sheet and demonstrate its preparation step by step.

7. **STATISTICS** Use the graphics functions of spreadsheet software to prepare a pie chart of the current assets section of the balance sheet shown for Century, Inc.

Computer World, Inc. Balance Sheet December 31, 20—		
		Percent
Assets		
Current Assets		
Cash	$42,500	
Notes Receivable	22,000	
Accounts Receivable	56,100	
Less Allowance for Uncollectible Accounts	2,300	
Merchandise Inventory	86,900	
Supplies—Sales	9,800	
Supplies—Administrative	3,600	
Prepaid Insurance	2,300	
Total Current Assets	$220,900	
Plant Assets		
Store Equipment	$67,900	
Less Accumulated Depreciation—Store Equip	37,700	
Building	48,000	
Less Accumulated Depreciation—Building	27,700	
Office Equipment	53,000	
Less Accumulated Depreciation—Office Equip.	25,300	
Land	99,000	
Total Plant Assets	$177,200	
Total Assets	$398,100	
Liabilities		
Current Liabilities		
Notes Payable	$27,000	
Interest Payable	4,630	
Accounts Payable	30,400	
Employee Income Tax Payable	410	
Federal Income Tax Payable	120	
Social Security Tax Payable	300	
Medicare Tax Payable	70	
Salaries Payable	1,900	
Sales Tax Payable	720	
Unemployment Tax Payable—Federal	80	
Unemployment Tax Payable—State	570	
Total Current Liabilities	$66,200	
Long-Term Liability		
Mortgage Payable	22,000	
Total Liabilities	$88,200	
Stockholders' Equity		
Common Stock, 22,000 shares	$180,000	
Retained Earnings	$129,900	
Total Stockholders' Equity	$309,900	
Total Liability and Stockholders' Equity	$398,100	

REVIEW

CHAPTER SUMMARY

LESSON 1.1 Managerial Accounting

A. Financial accounting follows generally accepted accounting principles to report the activities of a business while managerial accounting focuses on the decisions made by the managers of a business. The four major areas of managerial accounting are management planning and forecasting, cost accounting, tax accounting, and internal auditing.

B. Managerial accounting careers require a college education and a team orientation as well as people, communication, math, analysis, and computer skills. The CMA designation certifies the profession of managerial accounting. Nonaccountants need managerial accounting skills to successfully manage a business.

LESSON 1.2 The Income Statement

A. An income statement shows the results of a business's operations over a period of time by reporting revenue, cost of merchandise sold, gross profit on operations, operating expenses, other revenue and expenses, and net income.

B. An income statement is analyzed vertically by calculating component percentages for significant items on the income statement. Action must then be taken to improve the items that do not meet targeted goals.

LESSON 1.3 The Balance Sheet

A. A balance sheet reports the condition of a business at a particular moment in time by reporting its assets, liabilities, and stockholders' equity. Total assets must equal total liabilities plus total stockholders' equity.

B. Balance sheet items are analyzed vertically by calculating component percentages. Action must then be taken to improve the items that do not meet targeted goals.

VOCABULARY BUILDER

Choose the term that best fits the definition. Write the letter of the answer in the space provided. Some terms may not be used.

____ 1. Anything owned by a business

____ 2. The accumulated net income of a business

____ 3. Amounts owed by a business

____ 4. Assets that are held for more than one year and used to operate a business

____ 5. Revenue from the normal operations of a business

____ 6. Net sales minus cost of merchandise sold

____ 7. A financial statement that reports the assets, liabili-

a. **asset**
b. **balance sheet**
c. **component percentage**
d. **current assets**
e. **depreciation expense**
f. **gross profit on operations**
g. **income statement**
h. **liabilities**
i. **operating revenue**
j. **plant assets**
k. **retained earnings**

Overmatter for Page 26

ties, and owners' equity of a business at a particular moment in time

____ 8. The percentage relationship between one item on a financial statement and the item that includes it

____ 9. The amount by which an asset decreases in value over time

____ 10. A financial statement that reports the revenues and expenses of a business as well as its net income at the end of a fiscal period

REVIEW CONCEPTS

11. List three specific ways a managerial accountant advises managers.

12. What are the education requirements for managerial accounting positions?

13. When is an income statement prepared?

14. How is cost of merchandise sold calculated?

15. What is the difference between operating expenses and other kinds of expenses?

16. Why is gross profit on operations significant?

17. What is the difference between current and long-term assets?

18. What are three ways of determining whether a financial statement item's component percentage is favorable or unfavorable?

REVIEW

19. Explain why increasing or decreasing the level of merchandise inventory may be undesirable.

APPLY WHAT YOU LEARNED

20. Why would a bank that is considering loaning money to a business be interested in seeing the business's financial statements?

21. Martin Liu suggests that his company's income statement would be a lot easier to understand if it listed only the total expenses instead of showing all the expense items. Do you agree with Mr. Liu? Explain your answer.

22. The income statements illustrated in this chapter show operating results for an entire year. Do you think it would be a good idea for a company to prepare more frequent income statements, such as quarterly or monthly statements? What about daily income statements?

23. Why would an investor who is considering buying stock in a corporation be interested in seeing the company's income statement and balance sheet?

24. A company's balance sheet shows that total liabilities are 82% of total liabilities and stockholders' equity. What does this suggest about the company?

MAKE CONNECTIONS

25. **STATISTICS** Prepare a line graph using the following income statement information. Use the horizontal axis for the years and the vertical axis for the amounts. Before preparing the graph, answer the following questions.
    a. What should the direction and slope of the two lines be?
    b. Predict where on the graph the total expenses will be found.

Year	1	2	3	4	5
Gross profit on operations	$500,000	$550,000	$625,000	$675,000	$750,000
Net income after taxes	$210,000	$230,000	$270,000	$300,000	$350,000

26. **ETHICS** Marcia Levitz is preparing her company's balance sheet and knows that assets must equal liabilities plus stockholders' equity. However, the bank needs the balance sheet in the morning to consider lending the company money, and her assets total is $50,000 greater than the total of liabilities and stockholders' equity. She decides to add $50,000 to stockholders' equity to make the totals balance because she doesn't have time to find the error. Is this an ethical practice? Explain your answer.

27. **TECHNOLOGY** Create a spreadsheet for the Century, Inc., income statement. Use formulas for all calculations. Also use a formula for Payroll Taxes Expense to be 10% of the total of the two salary expense accounts. Use a formula for federal income tax to be 50% of the net income before federal income tax. Then perform What-If analysis for a variety of changes to the income statement. For example, change the amount of net sales or net purchases and examine the results. Change some of the expense categories and examine the results. After you have experimented, present your observations to the class.

28. **CAREERS** Use the Internet to search for predictions on the occupational outlook for accounting careers. Conduct another search to find examples of tasks accountants perform. Prepare a brief report summarizing your findings.