1 Introduction to Managerial Accounting

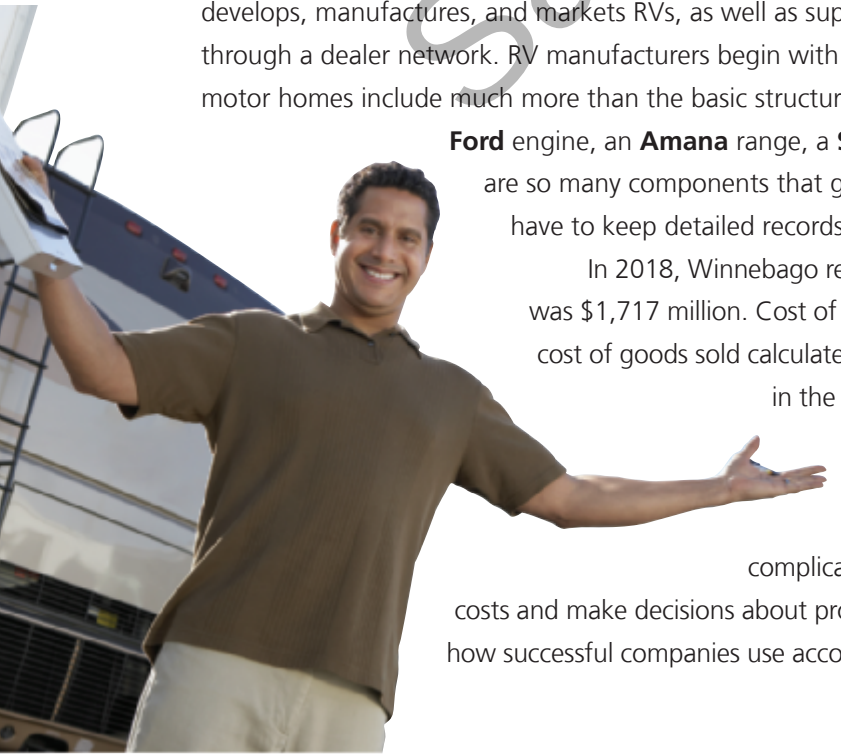
Which One Will They Buy?

Gerald is enjoying working at Starwood Campers, a recreational vehicle (RV) manufacturer, as a sales representative. He has met a lot of people who are looking at the various motor homes and camping trailers on display. He met one young couple who wants to purchase an RV to use during the summers as they explore the country while on break from their teaching jobs. He met a family looking for a way to spend quality time together on the weekends. He has also met a couple ready to retire, sell their home, and hit the road for a few years. The RV showroom has lots of models on display to meet all of these needs. There are many choices with different designs that make the small living spaces efficient and comfortable.

Gerald realizes that these potential customers are not just interested in comfort, however. They also want quality-built RVs that can be used for many years and travel many miles. As Gerald talks to the customers, he also shares information about the construction materials and manufacturing processes his company uses. He even invites interested parties to schedule a factory tour to get a better understanding of the manufacturing process.

Why Managerial Accounting?

Have you ever wondered how companies like **Winnebago Industries, Inc.** make their products? Winnebago is a leading manufacturer of recreational vehicles (RVs), including motorized and towable products. The company designs, develops, manufactures, and markets RVs, as well as supporting products and services. The RVs are sold to consumers through a dealer network. RV manufacturers begin with raw materials, such as steel, aluminum, and fiberglass, but motor homes include much more than the basic structure. If you purchase a Winnebago motor home, it may have a **Ford** engine, an **Amana** range, a **Sleep Number** mattress, and a **Sony** sound system. There are so many components that go into the finished product that managers at Winnebago have to keep detailed records of inventory used and other costs incurred to build the RVs.



In 2018, Winnebago reported net revenues of $2,017 million, and cost of goods sold was $1,717 million. Cost of goods sold represented 85% of net revenues. How was the cost of goods sold calculated? Cost of goods sold includes not only the materials used in the manufacturing process, but also the costs of the labor of the men and women who built the RVs and the costs of operating the factory, such as utilities, insurance, and depreciation. Determining cost of goods sold for a manufacturer can be complicated. These companies use *managerial accounting* to help track costs and make decisions about production. Let's begin our study of managerial accounting to see how successful companies use accounting information to make good internal business decisions.

Chapter 1 Learning Objectives

1 Define managerial accounting and understand how it is used
2 Classify costs used in managerial accounting
3 Prepare financial statements for a manufacturer, including a balance sheet, income statement, and schedule of cost of goods manufactured
4 Describe business trends affecting managerial accounting
5 Describe how managerial accounting is used in service and merchandising companies

WHY IS MANAGERIAL ACCOUNTING IMPORTANT?

Learning Objective 1
Define managerial accounting and understand how it is used

Managerial Accounting
The field of accounting that focuses on providing information for internal decision makers.

Financial Accounting
The field of accounting that focuses on providing information for external decision makers.

Managerial accounting focuses on providing information for internal decision makers. This type of accounting concentrates on both financial and nonfinancial information for managers and other business users, such as supervisors, foremen, and directors. **Financial accounting** focuses on providing information for external decision makers. While managers use financial accounting to report monetary transactions and prepare financial statements, managerial accounting helps managers make decisions needed to be successful. Individuals in management roles, such as department heads, division managers, chief executive officers, and vice presidents, rely on managerial accounting to help them plan, direct, control, and make decisions about the business. Exhibit M:1-1 illustrates the major differences between managerial and financial accounting.

Exhibit M:1-1 | Financial Accounting Versus Managerial Accounting

	Financial Accounting	Managerial Accounting
Primary users	External—investors, creditors, and government authorities	Internal—the company's managers and employees
Purpose of information	Help investors and creditors make investment and credit decisions	Help managers and employees plan, direct, and control operations
Focus and time dimension of the information	Relevant and faithfully representative information and focus on the past Example: 2023 actual performance reported in 2024	Relevant information and focus on the future Example: 2024 budget prepared in 2023
Rules and restrictions	Required to follow Generally Accepted Accounting Principles (GAAP); public companies required to be audited by an independent CPA	Not required to follow GAAP
Scope of information	Summary reports prepared primarily on the company as a whole, usually on a quarterly or annual basis	Detailed reports prepared on parts of the company (products, departments, territories), often on a daily or weekly basis
Behavioral	Concern about adequacy of disclosures; behavioral implications are secondary	Concern about how reports will affect employee behavior

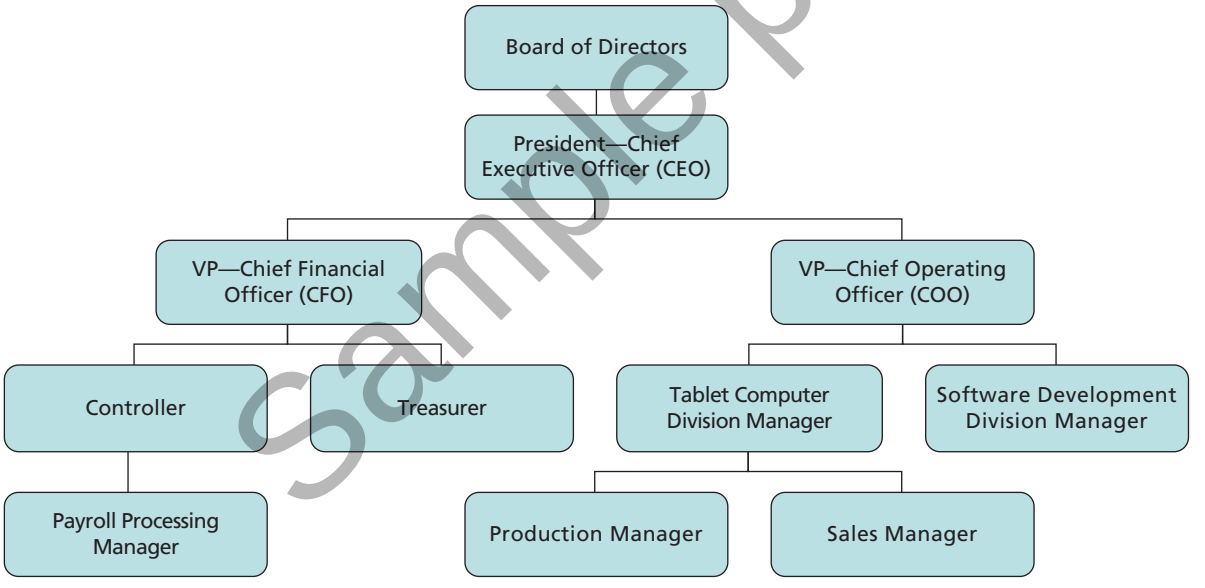
Managers' Role in the Organization

Managers occur in all different parts of a company's structure. Most companies structure their organization along departments or divisions. A company's **organizational chart** helps show the relationship between departments and divisions and the managers who are responsible for each section.

Organizational Chart
Shows the relationship between departments and divisions and managers responsible for each section.

Exhibit M:1-2 provides a partial organizational chart for Smart Touch Learning, a fictional company that we use to illustrate the concepts in each chapter. Smart Touch Learning began operations as a service company that specialized in providing online courses in accounting, economics, marketing, and management. The company later evolved into a merchandising company selling tablet computers that are preloaded with its e-learning software programs. The demand for Smart Touch Learning's tablets has grown because customers like the online courses offered as part of their tablet computer purchase. Smart Touch Learning has done well, but the competition is requiring Smart Touch Learning to once again look at its strategy. Smart Touch Learning has decided that in order to maintain its market share and to stay competitive, the company will begin manufacturing its own tablets rather than purchasing them. Smart Touch Learning believes that the company can manufacture a tablet at a cost lower than the current purchase cost and still offer customers the value they have come to expect. Later in this chapter, we will determine if this strategy did indeed pay off.

Exhibit M:1-2 | Organizational Chart for Smart Touch Learning (Partial)



The decision to change Smart Touch Learning's business model is made by the board of directors. Notice that the board of directors is listed at the top of Smart Touch Learning's organizational chart. The **board of directors** is elected by the stockholders, the owners of Smart Touch Learning, and is responsible for developing the strategic goals of the corporation. The board also selects the president—chief executive officer.

Board of Directors
Elected by the stockholders and responsible for developing the strategic goals of a corporation.

The President—**chief executive officer (CEO)** of Smart Touch Learning is ultimately responsible for developing a plan to meet the company's short- and long-term strategies as well as overseeing the implementation of the plans. The CEO is the liaison between the board of directors and the management of the company, and delegates the responsibility of implementing the plans to the vice presidents of the organization. The vice presidents of Smart Touch Learning are each responsible for a different area, such as

Chief Executive Officer (CEO)
Officer of a company that has ultimate responsibility for implementing the company's short- and long-term plans.

finance and operations. Each position in a company can be classified as either a line or staff position. **Line positions** are directly involved in providing goods or services to customers. Examples of line positions for Smart Touch Learning are vice president—chief operating officer (COO), tablet computer division manager, software development division manager, production manager, and sales manager. **Staff positions** support the line positions. Vice president—chief financial officer (CFO), controller, treasurer, and payroll processing manager are examples of staff positions.

Line Position
Job that is directly involved in providing goods or services to customers.

Staff Position
Job that provides support for line positions.

Managerial Accounting Functions

Business managers need information that will help them plan, direct, and control operations as they lead the business. This includes managing the company's plant, equipment, and human resources.

Planning
Choosing goals and deciding how to achieve them.

Strategic Planning
Involves developing long-term strategies to achieve a company's goals.

Operational Planning
Focuses on short-term actions dealing with a company's day-to-day operations.

Directing
Running the day-to-day operations of a business.

Controlling
Monitoring operations and keeping the company on track.

- **Planning** means choosing goals and deciding how to achieve them. Planning requires managers to look to the future and establish goals for the business. A business's goals could be varied. For example, a common goal of all businesses is to increase operating income. Another goal might be to develop a new product or begin operations in a new territory. Planning can be classified as strategic or operational. **Strategic planning** involves developing long-term strategies to achieve a company's goals. Strategic plans often span 3 to 10 years. **Operational planning**, on the other hand, focuses on short-term actions dealing with a company's day-to-day operations. Operational plans are most often one year in length, but may also span only a week, a month, or a quarter.
- **Directing** involves running the day-to-day operations of a business. Managers are responsible for coordinating the company's activities including purchasing, manufacturing, and selling. For example, a division manager must ensure that a company has enough materials on hand to meet the customers' demand. Managers are also responsible for motivating employees. A marketing manager's responsibilities might include coordinating the marketing plan and training sales representatives on the sale of a new product.
- **Controlling** is the process of monitoring day-to-day operations and keeping the company on track. Controlling involves comparing actual results to expected results. For example, managers can compare actual costs to expected costs to evaluate their performance. If actual costs fall below budgeted costs, that is usually good news. However, if actual costs exceed the expected costs, managers will evaluate why the results were different and if modifications or changes need to be made.

Businesses rely on managers to make decisions and managerial accountants assist by providing financial and nonfinancial data needed to make good decisions. Many accountants obtain professional certifications, which have education, experience, and examination requirements. Managerial accountants may become certified as a **Certified Management Accountant (CMA)**. CMAs have demonstrated specialized knowledge in budgeting and forecasting, planning and analysis, risk management and internal controls, and performance management. You can learn more about becoming a CMA on the Institute of Management Accountants (IMA) Web site (**http://www.imanet.org**). Another professional certification is the **Chartered Global Management Accountant (CGMA)**, which distinguishes accountants as professionals with advanced knowledge in finance, operations, strategy, and management. You can learn more about becoming a CGMA on their Web site (**https://www.cgma.org/aboutcgma.html**).

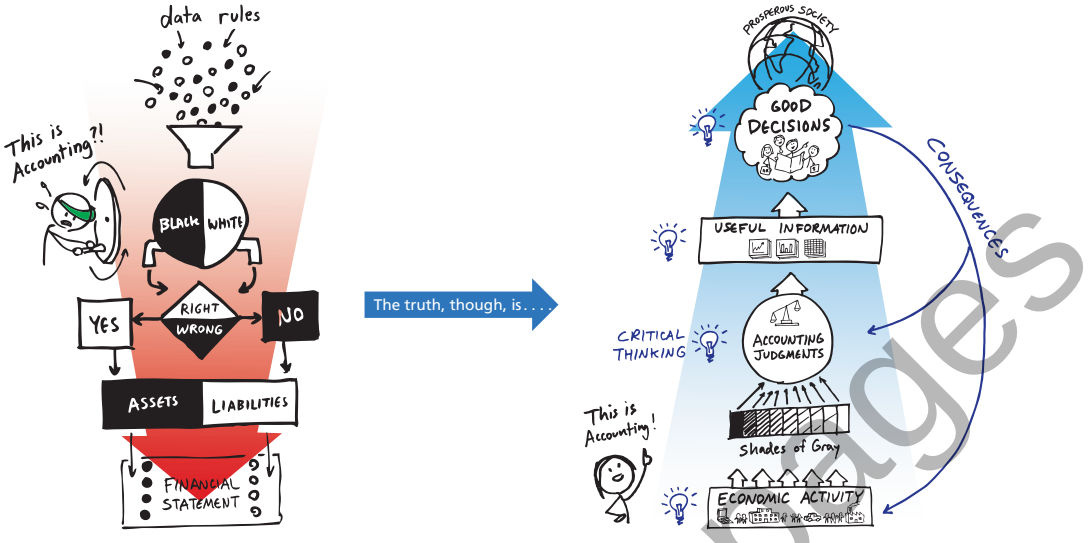
Certified Management Accountant (CMA)
Professional accountant who specializes in accounting and financial management knowledge.

Chartered Global Management Accountant (CGMA)
Professional accountant with advanced knowledge in finance, operations, strategy, and management.

Decision making is a part of all three functions (planning, directing, and controlling) and good decision making results in a prosperous company. Accounting plays an important role in a manager's decision making. The Pathways Vision Model (see Exhibit M:1-3) provides a visual way to understand the role of managerial accounting in making good

decisions. Managers review information about economic activities and then use critical thinking and accounting judgment to create useful information. This useful information helps managers make good decisions that in turn have an impact on society and future economic activity, thus creating a circular flow of cause and effect.

Exhibit M:1-3 | Pathways Vision Model



We tend to think of accountants as boring and dry.

Accountants are instrumental in helping to create a prosperous society.

This work is by The Pathways Commission. The Pathways Vision Model: AI artwork: AAA Commons. American Accounting Association.

Ethical Standards of Managers

Managers often face ethical challenges. The Institute of Management Accountants (IMA) has developed standards that managerial accountants are expected to uphold when faced with ethical challenges. The IMA standards remind us that society expects professional accountants to exhibit the highest level of ethical behavior. An excerpt from the IMA's Statement of Ethical Professional Practice, effective July 1, 2017, appears in Exhibit M:1-4 (on the next page). These standards require managerial accountants to do the following:

- Maintain their professional competence.
- Preserve the confidentiality of the information they handle.
- Act with integrity and credibility.

To resolve ethical dilemmas, the IMA suggests following organizationally established policies. If the policies do not result in a resolution, the IMA recommends discussing the ethical situation with: (1) an immediate supervisor; (2) an objective adviser; and, if necessary, (3) an attorney.

Exhibit M:1-4 | **IMA Statement of Ethical Professional Practice (Excerpt)**

IMA's overarching principles include: Honesty, Fairness, Objectivity, and Responsibility. The standards of ethical practice include the following:

I. COMPETENCE

1. Maintain an appropriate level of professional leadership and expertise by enhancing knowledge and skills.
2. Perform professional duties in accordance with relevant laws, regulations, and technical standards.
3. Provide decision support information and recommendations that are accurate, clear, concise, and timely. Recognize and help manage risk.

II. CONFIDENTIALITY

1. Keep information confidential except when disclosure is authorized or legally required.
2. Inform all relevant parties regarding appropriate use of confidential information. Monitor to ensure compliance.
3. Refrain from using confidential information for unethical or illegal advantage.

III. INTEGRITY

1. Mitigate actual conflicts of interest. Regularly communicate with business associates to avoid apparent conflicts of interest. Advise all parties of any potential conflicts.
2. Refrain from engaging in any conduct that would prejudice carrying out duties ethically.
3. Abstain from engaging in or supporting any activity that might discredit the profession.
4. Contribute to a positive ethical culture and place integrity of the profession above personal interests.

IV. CREDIBILITY

1. Communicate information fairly and objectively.
2. Provide all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, analyses, or recommendations.
3. Report any delays or deficiencies in information, timeliness, processing, or internal controls in conformance with organization policy and/or applicable law.
4. Communicate professional limitations or other constraints that would preclude responsible judgment or successful performance of an activity.

Source: Institute of Management Accounts. (2017). *IMA statement of ethical professional practice*. Retrieved from https://www.imanet.org/-/media/635508439d8848b89e544a4ac2888f88.ashx?la=en

ETHICS

Where do you draw the line?

As the staff accountant of Casey Computer Co., Sam Butler is aware of the company's weak financial condition. The company is close to signing a lucrative contract that should ensure its future. The controller, who is Sam's supervisor, states that the company *must* report a profit this year. He suggests: "Two customers have placed orders that are scheduled to be shipped on January 3, when production of those orders is completed. Let's record the goods as finished and bill the customer on December 31 so we can show the profit from those orders in the current year."

What should Sam do? What would you do?

Solution

Sam could consider working with the production manager to get the orders completed and shipped in December. The orders could then be recorded in December, and the profits would be reflected in the current year's financial statements. However, if that is not possible, Sam should convince the controller that the income manipulation is not ethical and violates the revenue recognition principle—and that the company should not record these transactions in December. If Sam is unable to convince the controller, he has an obligation to report the situation to the controller's supervisor.

Try It!

Identify the following characteristics as primarily related to financial accounting (FA) or managerial accounting (MA):

1. Helps creditors make lending decisions.
2. Helps in planning, directing, and controlling operations.
3. Is not required to follow GAAP.
4. Has a focus on the future.
5. Summary reports prepared quarterly or annually.

Check your answers online in MyLab Accounting or at http://www.pearsonglobaleditions.com/Horngren.

For more practice, see Short Exercises S-M:1-1 and S-M:1-2. MyLab Accounting

HOW ARE COSTS CLASSIFIED?

Learning Objective 2
Classify costs used in managerial accounting

How costs are classified depends on the type of business the company engages in. Businesses are generally classified as service, merchandising, or manufacturing companies. **Service companies** sell their time, skills, and knowledge. Examples of service companies include accounting firms such as Ernst & Young and law offices such as Baker & McKenzie. **Merchandising companies** resell products they buy from suppliers. Merchandisers keep an inventory of products, and managers are accountable for the purchase, storage, and sale of the products. Companies such as Home Depot and Lowe's are examples of merchandising companies.

Service Company
A company that sells services—time, skills, and knowledge—instead of products.

Merchandising Company
A company that resells products previously bought from suppliers.

Manufacturing Companies

Unlike service and merchandising companies, **manufacturing companies** use labor, equipment, supplies, and facilities to convert raw materials into finished products. Managers in manufacturing companies must use these resources to create a product that customers want at a price customers are willing to pay. Honda Motor Co., Ltd., The Coca-Cola Company, and The Boeing Company are all examples of manufacturing companies.

Manufacturing Company
A company that uses labor, equipment, supplies, and facilities to convert raw materials into finished products.

In contrast with service and merchandising companies, manufacturing companies track costs using three kinds of inventory:

1. **Raw Materials Inventory (RM)** includes materials used to make a product. For example, Smart Touch Learning's raw materials include the processor, screen, tablet case, and glue.
2. **Work-in-Process Inventory (WIP)** includes goods that are in the manufacturing process but are not yet complete. Some production activities have taken place that transformed the materials, but the product is not yet finished and ready for sale. Smart Touch Learning's Work-in-Process Inventory could include tablets that only include the electronic components but not the screen.
3. **Finished Goods Inventory (FG)** includes completed goods that have not yet been sold. Finished goods are the products that the manufacturer sells, such as Smart Touch Learning's finished tablet.

Raw Materials Inventory (RM)
Materials converted through the manufacturing process into a finished product.

Work-in-Process Inventory (WIP)
Goods that have been started in the manufacturing process but are not yet complete.

Finished Goods Inventory (FG)
Completed goods that have not yet been sold.

Direct and Indirect Costs

Direct Cost
Cost that can be easily and cost-effectively traced to a cost object.

Cost Object
Anything for which managers want a separate measurement of cost.

Manufacturing companies classify costs in many different ways. For example, costs can be classified as direct or indirect. A **direct cost** is a cost that can be easily and cost-effectively traced to a cost object. A **cost object** is anything for which managers want a separate measurement of cost and may be a product, department, sales territory, or activity. For example, the cost object for Smart Touch Learning would be the tablet, and a direct cost of the tablet would be the cost of materials used, such as the processor, screen, and case.

Don't confuse prices with costs. Price (or sales price) is the amount the company charges the customer for the goods or services provided. Cost is the amount the company incurs to acquire the goods or services. If a company purchases an item for $4 and sells it for $10, the cost is $4 and the price is $10.

Indirect Cost
Cost that cannot be easily or cost-effectively traced to a cost object.

Costs that cannot be easily or cost-effectively traced directly to a cost object are **indirect costs**. For Smart Touch Learning, indirect costs might include the salary of the production supervisor. Although the production supervisor is involved in the factory, he or she is not directly responsible for producing the product.

Manufacturing Costs

In a manufacturing company, such as Smart Touch Learning, costs can be classified into three categories.

Direct Materials (DM)
The cost of raw materials that are converted into the finished product and are easily traced to the product.

Direct Labor (DL)
The cost of wages and salaries of employees who convert raw materials into finished products.

Manufacturing Overhead (MOH)
Manufacturing costs that cannot be easily and cost-effectively traced to a cost object. Includes all manufacturing costs except direct materials and direct labor.

1. **Direct materials (DM)** are the cost of raw materials that are converted into the finished product and are easily traced to the product. The cost of such materials are considered direct materials. Smart Touch Learning's direct materials would include the processor, the screen, and the tablet case.
2. **Direct labor (DL)** is the cost of wages and salaries of employees who convert the raw materials into the finished product. Direct labor is also a direct cost that can be easily traced to the finished product. Direct labor for Smart Touch Learning would include the wages of the employees who assemble the tablets.
3. **Manufacturing overhead (MOH)** refers to indirect manufacturing costs that cannot be easily traced to specific products. It includes all manufacturing costs other than direct materials and direct labor. These costs are created by all of the supporting production activities, including storing materials, setting up machines, and cleaning the work areas. Examples include costs of indirect materials, manufacturing factory managers' salaries and other indirect labor, repair and maintenance costs, and depreciation on manufacturing buildings and equipment. Other examples include the following costs for the factory: utilities, rent, insurance, and property taxes. Manufacturing overhead is also called *factory overhead* or *indirect manufacturing costs*.

Let's look at two of the components of manufacturing overhead more closely. It is important to be able to distinguish between direct and indirect materials and direct and indirect labor.

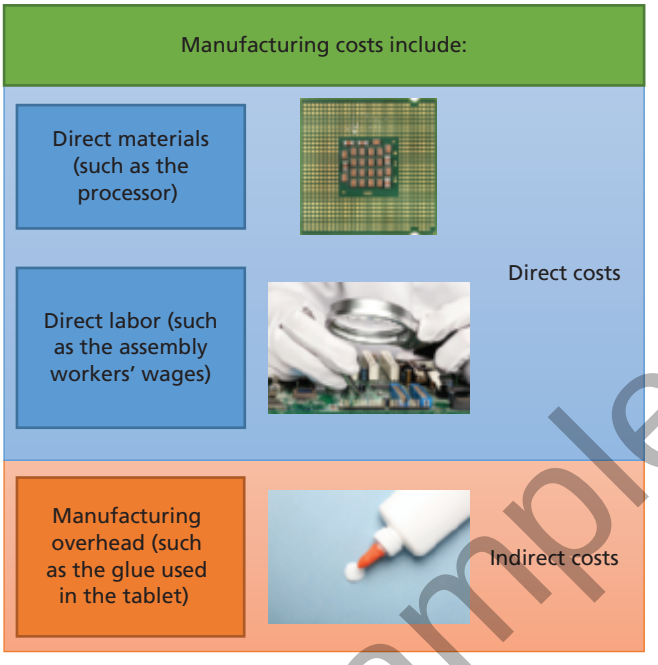
- **Indirect materials** are the cost of raw materials that are difficult or not cost-effective to trace directly to the product. For Smart Touch Learning, it may be the cost of glue used in assembling the tablets. The cost of tracing the drops of glue used on each tablet and then determining the cost of those drops exceeds the benefit of having this information.
- **Indirect labor** includes the cost of wages and salaries in the factory for persons not directly producing the product. Examples include production supervisors, factory janitors, workers who repair factory equipment, and factory groundskeepers.

Indirect Materials
The cost of raw materials that cannot be conveniently traced directly to specific finished products or are not large enough to justify tracing to the specific product.

Indirect Labor
The cost of wages and salaries in the factory for persons not directly producing the product and cannot be conveniently traced directly to specific finished products or are not large enough to justify tracing to the specific product.

Exhibit M:1-5 illustrates the three different manufacturing costs and the difference between direct and indirect costs.

Exhibit M:1-5 | Manufacturing Costs



Prime and Conversion Costs

The purpose of managerial accounting is to provide useful information to managers. To make cost information more useful, manufacturing costs are sometimes combined in different ways, depending on the managers' needs.

Prime costs combine the direct costs: direct materials and direct labor. In a manufacturing process that is labor-intensive, the direct costs are the *primary* costs. *Labor-intensive* means people do most of the work, not machines. In that type of environment, managers may want to concentrate on these direct, or prime, costs. To be profitable, it is vital for the company to control these costs.

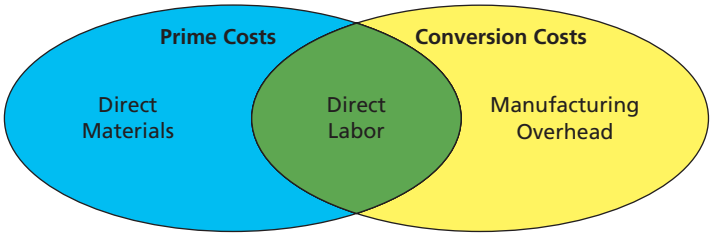
Prime Costs
The direct costs of the manufacturing process: Direct materials plus direct labor.

Conversion costs combine direct labor with manufacturing overhead. These are the costs to *convert* the direct materials into the finished product. In a manufacturing process that is machine-intensive, the cost of direct labor is minimal because machines do most of the work. Employees primarily set up and oversee the machine production. Overhead costs, however, can be substantial, including the cost of utilities and depreciation on the machinery. In that type of environment, managers may want to focus on the total conversion cost rather than tracking direct labor and manufacturing overhead separately.

Conversion Costs
The cost to convert direct materials into finished goods: Direct labor plus manufacturing overhead.

Exhibit M:1-6 (on the next page) illustrates the relationship between prime costs and conversion costs. Notice that direct labor is considered both a prime cost and a conversion cost.

Exhibit M:1-6 Prime and Conversion Costs



Product and Period Costs

Product Cost
The cost of purchasing or making a product. The cost is recorded as an asset (inventory) and then expensed (Cost of Goods Sold) when the product is sold.

Period Cost
Operating cost that is expensed in the accounting period in which it is incurred.

Another way costs can be classified is as product or period costs. This characterization is required when preparing financial statements. **Product costs** include the costs of purchasing or making a product. Direct materials, direct labor, and manufacturing overhead are all examples of product costs. Product costs are recorded as assets in inventory accounts on the balance sheet when they are incurred. The cost does not become an expense until the company has sold the inventory. At that time, the cost is reported as Cost of Goods Sold on the income statement.

Period costs, on the other hand, are non-manufacturing costs. Period costs are selling and administrative expenses and other expenses such as taxes and interest. These costs are matched with the revenue of a specific time period and expensed in the same accounting period. Examples of period costs might include the salaries and wages of the accounting staff, rent for the administrative building, sales commissions paid to sales representatives, or utilities paid for the marketing office. Exhibit M:1-7 illustrates the difference between product and period costs and Exhibit M:1-8 provides some examples of Smart Touch Learning's period and product costs.

Exhibit M:1-7 Period Versus Product Costs

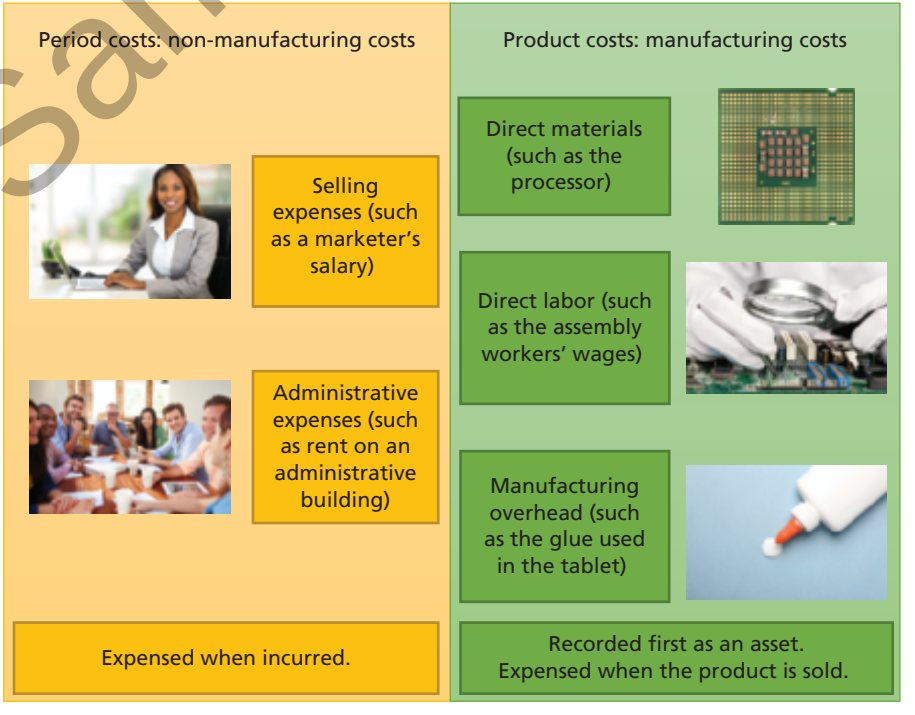


Exhibit M:1-8 | **Period and Product Costs for Smart Touch Learning**

Cost Incurred	Period Costs	Product Costs		
	Selling and Administrative	Direct Materials	Direct Labor	Manufacturing Overhead
Depreciation on manufacturing equipment				X
Depreciation on office equipment	X			
Advertising	X			
Property taxes and insurance on office	X			
Property taxes and insurance on factory				X
Production supervisor's salary				X
CEO's salary	X			
Wages for assembly line workers			X	
Batteries, processors, and other materials used in making tablets		X		
Manufacturing supplies				X
Freight costs on purchase of materials		X		
Delivery expense	X			

Overhead costs can be confusing. For example, for a service or merchandising company, the cost of rent is a period cost and is classified as a selling and administrative expense. For a manufacturing company, you must consider the reason for the cost. If the rent is for the corporate office, it is still a period cost. However, if the rent is for the factory, then it is a product cost because it is a cost incurred in the manufacturing process. Because the rent is neither direct materials nor direct labor, it is classified as manufacturing overhead.

Try It!

Identify each cost as a period cost or a product cost. If it is a product cost, further indicate if the cost is direct materials, direct labor, or manufacturing overhead. Then determine if the product cost is a prime cost and/or a conversion cost.

6. Wages of assembly line workers for a factory
7. Wages of the office receptionist in an administrative office
8. Property taxes on the factory
9. Sugar and flour used to make cookies
10. Salary of the factory maintenance supervisor
11. Salary of the sales manager

Check your answers online in MyLab Accounting or at http://www.pearsonglobaleditions.com/Horngren.

For more practice, see Short Exercises S-M:1-3 through S-M:1-5. MyLab Accounting

HOW DO MANUFACTURING COMPANIES PREPARE FINANCIAL STATEMENTS?

Learning Objective 3
Prepare financial statements for a manufacturer, including a balance sheet, income statement, and schedule of cost of goods manufactured

In financial accounting, you learned about the financial statements for service and merchandising companies. In this chapter, we will focus on how the financial statements are different for manufacturing companies.

Balance Sheet

Let's first begin by concentrating on the balance sheet. Service companies sell their time, skills, and knowledge and therefore carry no inventories on their balance sheet. Merchandising companies resell products they buy from suppliers and record the cost of inventory purchased as an asset, Merchandise Inventory, on their balance sheet. As you learned earlier, manufacturing companies keep track of costs using three inventory accounts, Raw Materials Inventory, Work-in-Process Inventory, and Finished Goods Inventory. On a manufacturing company's balance sheet the three inventory accounts will be listed in the asset section.

Exhibit M:1-9 shows a comparison of balance sheets for service, merchandising, and manufacturing companies. Notice the accounts highlighted in blue, which illustrate the different kinds of inventory accounts used by various types of companies.

Exhibit M:1-9 | Balance Sheet Comparison

Service Company Balance Sheet (Partial) December 31, 2025		Merchandising Company Balance Sheet (Partial) December 31, 2025		Manufacturing Company Balance Sheet (Partial) December 31, 2025	
Assets		**Assets**		**Assets**	
Cash	$ 10,500	Cash	$ 10,500	Cash	$ 10,500
Accounts Receivable	8,750	Accounts Receivable	8,750	Accounts Receivable	8,750
Equipment	60,000	Merchandise Inventory	2,200	Raw Materials Inventory	1,500
		Equipment	60,000	Work-in-Process Inventory	800
				Finished Goods Inventory	2,200
				Equipment	60,000
Total Assets	$ 79,250	Total Assets	$ 81,450	Total Assets	$ 83,750

Income Statement

On the income statement, because service companies do not have any product costs, they only record period costs such as salaries expense and rent expense. In contrast with service companies, merchandisers' income statements usually report Cost of Goods Sold as the major expense. Cost of Goods Sold represents the business's cost of the merchandise inventory sold. In a manufacturing company, as in a merchandising company, Cost of Goods Sold is usually the largest expense. However, because a manufacturer makes the product it sells, the calculation of cost of goods sold is different. Exhibit M:1-10 illustrates the difference between a merchandising company's calculation of cost of goods sold and a manufacturer's calculation of cost of goods sold. Notice that the differences are highlighted in blue.

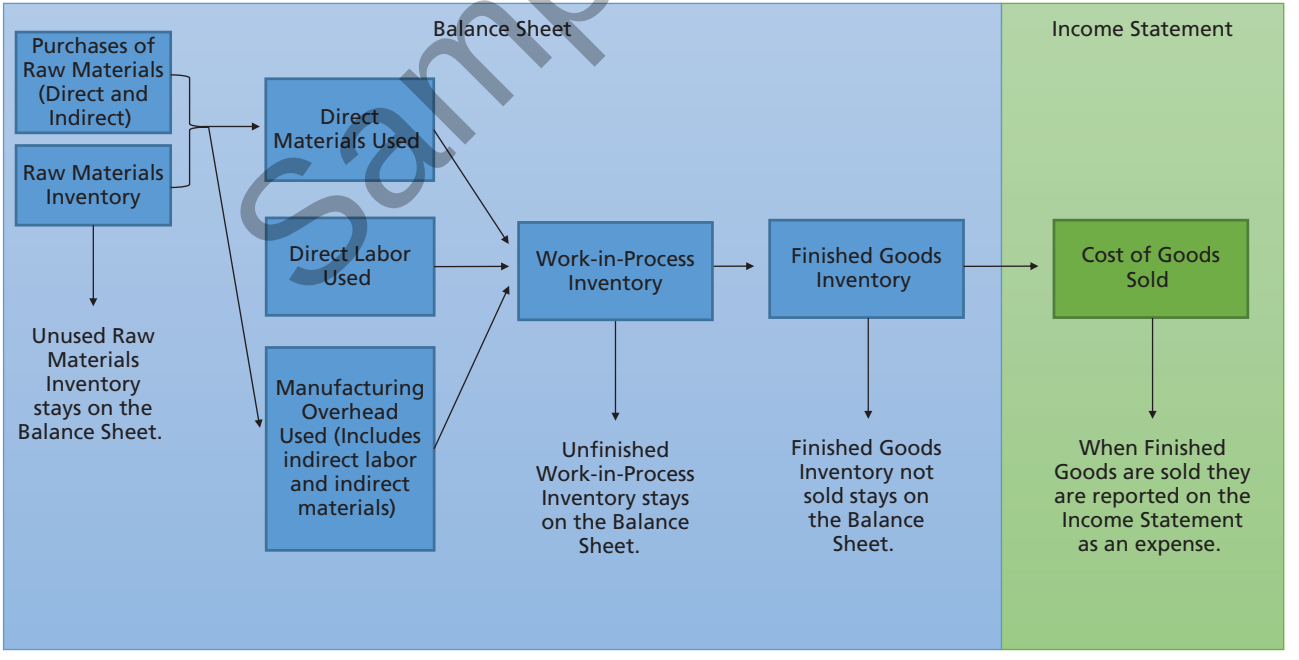
Exhibit M:1-10 Income Statement Comparison

Service Company Income Statement Month Ended December 31, 2025			Merchandising Company Income Statement Month Ended December 31, 2025			Manufacturing Company Income Statement Month Ended December 31, 2025		
Revenues:			Net Sales Revenue		$ 7,600	Net Sales Revenue		$ 7,600
Service Revenue		$ 7,600	Cost of Goods Sold:			Cost of Goods Sold:		
Expenses:			Beginning Merchandise Inventory	$ 2,000		Beginning Finished Goods Inventory	$ 2,000	
Salaries Expense	$ 3,800		Purchases and Freight In	3,800		Cost of Goods Manufactured	3,800	
Rent Expense	1,000		Cost of Goods Available for Sale	5,800		Cost of Goods Available for Sale	5,800	
Utilities Expense	400		Ending Merchandise Inventory	(2,200)		Ending Finished Goods Inventory	(2,200)	
Total Expenses		5,200	Cost of Goods Sold		3,600	Cost of Goods Sold		3,600
Operating Income		**$ 2,400**	Gross Profit		4,000	Gross Profit		4,000
			Selling and Administrative Expenses		1,600	Selling and Administrative Expenses		1,600
			Operating Income		**$ 2,400**	Operating Income		**$ 2,400**

Flow of Product Costs in a Manufacturing Company

Understanding how to calculate cost of goods manufactured and ultimately cost of goods sold requires knowledge of how product costs flow through a manufacturing company. Exhibit M:1-11 illustrates the flow of product costs.

Exhibit M:1-11 Flow of Product Costs in a Manufacturing Company



First, because manufacturing companies convert raw materials into a finished product, you will notice that the flow of costs starts with raw materials. Any raw materials purchased, along with any beginning raw materials inventory, gives the company raw materials available for use. The raw materials are either used in production or remain in the raw materials inventory and are reported on the balance sheet.

During production, the manufacturer uses direct labor and manufacturing overhead (including indirect labor and indirect materials) to convert direct materials into Work-in-Process Inventory. The cost of the beginning work-in-process units are added to the cost of direct materials, direct labor, and manufacturing overhead incurred during the period. This is the work-in-process inventory costs to account for. When the manufacturing process is complete, the costs are then transferred to Finished Goods Inventory. The cost of manufacturing the finished goods make up the **cost of goods manufactured**. If the work-in-process units are incomplete, the costs remain in Work-in-Process Inventory and are reported on the balance sheet. The cost of goods manufactured is used on the income statement to determine the cost of goods sold. Only when finished goods are sold will the costs be transferred from the balance sheet to the income statement as cost of goods sold.

Cost of Goods Manufactured
The manufacturing costs of the goods that finished the production process in a given accounting period.

Calculating Cost of Goods Manufactured

Let's use Smart Touch Learning to help illustrate the calculation of cost of goods manufactured using the following three steps:

Step 1: Calculate direct materials used. Assume Smart Touch Learning begins the period with a direct materials balance of $70,000. During the year, Smart Touch Learning purchased $350,000 of direct materials and the ending balance of direct materials was $65,000. Smart Touch Learning can calculate the cost of direct materials used as follows:

Beginning Direct Materials	$ 70,000
Purchases of Direct Materials (Including Freight In)	350,000
Direct Materials Available for Use	420,000
Ending Direct Materials	(65,000)
Direct Materials Used	$ 355,000

Step 2: Calculate total manufacturing costs incurred during the year. Smart Touch Learning will next determine the total manufacturing costs incurred during the year, which includes direct materials used (see Step 1), direct labor used ($169,000), and manufacturing overhead. Smart Touch Learning's manufacturing overhead includes indirect materials ($17,000), indirect labor ($28,000), depreciation on the plant and equipment ($20,000), and plant utilities, insurance, and property taxes ($18,000). The total manufacturing costs incurred is calculated as follows:

Direct Materials Used		$ 355,000
Direct Labor		169,000
Manufacturing Overhead:		
Indirect Materials	$ 17,000	
Indirect Labor	28,000	
Depreciation—Plant and Equipment	20,000	
Plant Utilities, Insurance, and Property Taxes	18,000	
Total Manufacturing Overhead		83,000
Total Manufacturing Costs Incurred during the Year		$ 607,000

Step 3: Calculate cost of goods manufactured. Smart Touch Learning will calculate cost of goods manufactured by adding the total manufacturing costs incurred during the year (see Step 2) to the beginning Work-in-Process Inventory ($80,000) to determine the total manufacturing costs to account for. The units that are represented by these costs will either be completed and transferred to Finished Goods Inventory or be partially completed and remain as ending Work-in-Process Inventory. Assume Smart Touch Learning has some tablets partially finished representing $27,000 of ending Work-in-Process Inventory. To determine the cost of goods manufactured, Smart Touch Learning will subtract the ending Work-in-Process Inventory from the total manufacturing costs to account for as follows:

Beginning Work-in-Process Inventory	$ 80,000
Total Manufacturing Costs Incurred during the Year	607,000
Total Manufacturing Costs to Account for	687,000
Ending Work-in-Process Inventory	(27,000)
Cost of Goods Manufactured	$ 660,000

Exhibit M:1-12 shows a completed schedule of cost of goods manufactured for Smart Touch Learning, including all three steps. This schedule is prepared by companies to show detailed information about the costs of making its inventory and is part of the calculation of cost of goods sold.

Exhibit M:1-12 | Schedule of Cost of Goods Manufactured

SMART TOUCH LEARNING Schedule of Cost of Goods Manufactured Year Ended December 31, 2026			
Beginning Work-in-Process Inventory			$ 80,000
Direct Materials Used:			
Beginning Direct Materials	$ 70,000		
Purchases of Direct Materials (including Freight In)	350,000		
Direct Materials Available for Use	420,000		
Ending Direct Materials	(65,000)		
Direct Materials Used		$ 355,000	
Direct Labor		169,000	
Manufacturing Overhead:			
Indirect Materials	17,000		
Indirect Labor	28,000		
Depreciation—Plant and Equipment	20,000		
Plant Utilities, Insurance, and Property Taxes	18,000		
Total Manufacturing Overhead		83,000	
Total Manufacturing Costs Incurred during the Year			607,000
Total Manufacturing Costs to Account For			687,000
Ending Work-in-Process Inventory			(27,000)
Cost of Goods Manufactured			**$ 660,000**

Calculating Cost of Goods Sold

Now that Smart Touch Learning has calculated cost of goods manufactured, the calculation of cost of goods sold is determined. Cost of goods sold represents the cost of the Finished Goods Inventory that has been sold. Assume Smart Touch Learning has beginning Finished Goods Inventory of $0 and its ending Finished Goods Inventory is $60,000. Smart Touch Learning will calculate cost of goods sold as follows:

Beginning Finished Goods Inventory	$ 0
Cost of Goods Manufactured	660,000
Cost of Goods Available for Sale	660,000
Ending Finished Goods Inventory	(60,000)
Cost of Goods Sold	$ 600,000

Exhibit M:1-13 shows the completed income statement for Smart Touch Learning. Notice cost of goods sold is subtracted from net sales revenue to determine gross profit. Next, the period costs, selling and administrative expenses, are subtracted to determine operating income. Lastly, other income and expenses and income tax expense are subtracted to determine net income.

Exhibit M:1-13 | Income Statement—Manufacturing Company

SMART TOUCH LEARNING Income Statement Year Ended December 31, 2026		
Net Sales Revenue		$ 1,000,000
Cost of Goods Sold:		
Beginning Finished Goods Inventory	$ 0	
Cost of Goods Manufactured	660,000	
Cost of Goods Available for Sale	660,000	
Ending Finished Goods Inventory	(60,000)	
Cost of Goods Sold		600,000
Gross Profit		400,000
Selling and Administrative Expenses:		
Wages Expense	120,000	
Rent Expense	100,000	
Insurance Expense	10,000	
Depreciation Expense	6,000	
Supplies Expense	5,000	
Total Selling and Administrative Expenses		241,000
Operating Income		159,000
Other Income and (Expenses):		
Interest Expense		(7,600)
Income Before Income Tax Expense		151,400
Income Tax Expense		53,000
Net Income		$ 98,400

COGS is a product cost.

S&A Expenses, Interest Expense, and Income Tax Expense are period costs.

Flow of Product Costs Through the Inventory Accounts

Exhibit M:1-14 summarizes the flow of product costs through Smart Touch Learning's inventory accounts. Notice that the format is the same for all three inventory accounts:

Beginning balance + Additions − Ending balance = Amount used, manufactured, or sold

The final amount at each stage is added at the beginning of the next stage. Take time to see how the schedule of cost of goods manufactured in Exhibit M:1-12 uses the cost flows of the Raw Materials and Work-in-Process stages, and the income statement in Exhibit M:1-13 uses the cost flows of the Finished Goods stage. Understanding the flow of costs through a manufacturing company's accounts is very important and will be used in future chapters.

Exhibit M:1-14 | Flow of Product Costs Through Smart Touch Learning's Inventory Accounts

Raw Materials Inventory*		Work-in-Process Inventory		Finished Goods Inventory	
Beginning Direct Materials	$ 70,000	Beginning WIP Inventory	$ 80,000	Beginning FG Inventory	$ 0
+ Purchases of Direct Materials (including Freight In)	350,000	+ Direct Materials Used	355,000	+ Cost of Goods Manufactured	660,000
= Direct Materials Available for Use	420,000	+ Direct Labor	169,000	= Cost of Goods Available for Sale	660,000
− Ending Direct Materials	(65,000)	+ Manufacturing Overhead	83,000	− Ending FG Inventory	(60,000)
= Direct Materials Used	$ 355,000	= Total Manufacturing Costs to Account For	687,000	= Cost of Goods Sold	$ 600,000
		− Ending WIP Inventory	(27,000)		
		= Cost of Goods Manufactured	$ 660,000		

*Direct materials portion only

Using the Schedule of Cost of Goods Manufactured to Calculate Unit Product Cost

Managers can use the schedule of cost of goods manufactured to calculate the unit product cost. Why would knowing the unit product cost be important to a manager? Knowing the unit product cost helps managers decide on the prices to charge for each product to ensure that each product is profitable. They can then measure operating income and determine the cost of Finished Goods Inventory. Smart Touch Learning produced 2,200 tablets during 2026. What did it cost to make each tablet?

Cost of goods manufactured	/	Total units produced	=	Unit product cost
$660,000	/	2,200 tablets	=	$300 per tablet

During 2026, Smart Touch Learning sold 2,000 tablets, and the company knows each tablet cost $300 to produce. With this information, Smart Touch Learning can compute its Cost of Goods Sold as follows:

Number of units sold	×	Unit product cost	=	Cost of Goods Sold
2,000 tablets	×	$300 per tablet	=	$600,000

Keep in mind that knowing the unit product cost is only part of the information that is needed to determine the sales price to charge for each product. In addition to product costs, manufacturers still have period costs such as selling and administrative expenses that are reported separately on the income statement. The sales price of a product must cover both the product and period costs in order to make a profit.

TYING IT ALL TOGETHER

In the chapter opener, we introduced **Winnebago Industries, Inc.** Winnebago is headquartered in Forest City, Iowa, and is a leading manufacturer of recreational vehicles (RVs), including motorized and towable products. The company designs, develops, manufactures, and markets RVs as well as supporting products and services. The RVs are sold to consumers through a dealer network.

On the August 25, 2018, balance sheet, Winnebago reported total inventory of $195 million. What type of inventory accounts would Winnebago have?

Winnebago is a manufacturer, so it would have Raw Materials, Work-in-Process, and Finished Goods Inventory accounts.

For the year ended August 25, 2018, Winnebago reported cost of goods sold of $1,717 million and operating expenses of $139 million. Which costs are period costs? Which costs are product costs?

The operating expenses are period costs and the cost of goods sold is a product cost.

List some examples of product costs for Winnebago.

Product costs include direct materials, direct labor, and manufacturing overhead. For Winnebago, direct materials would include items such as steel, aluminum, and fiberglass. Direct materials would also include tires, engines, refrigerators, sinks, washers, and dryers. Direct labor would include the costs of the men and women working on the assembly lines. Manufacturing overhead would include indirect factory costs, such as plant utilities, plant insurance, indirect materials, indirect labor, and depreciation on plant buildings and equipment.

Try It!

12. ABC Manufacturing Company has the following data for 2024 (amounts in millions):

Direct Materials, January 1	$ 5
Direct Materials, December 31	7
Work-in-Process Inventory, January 1	12
Work-in-Process Inventory, December 31	16
Finished Goods Inventory, January 1	8
Finished Goods Inventory, December 31	6
Direct Materials Purchased, including Freight In	25
Direct Labor	36
Manufacturing Overhead	17

Prepare the schedule of cost of goods manufactured and the cost of goods sold section of the income statement for the year ended December 31, 2024.

Check your answers online in MyLab Accounting or at www.pearsonglobaleditions.com/Horngren.

For more practice, see Short Exercises S-M:1-6 through S-M:1-10. MyLab Accounting