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team for success

5TH EDITION

Managerial Accounting

TOOLS FOR BUSINESS DECISION MAKING

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chapter

1

Managerial Accounting

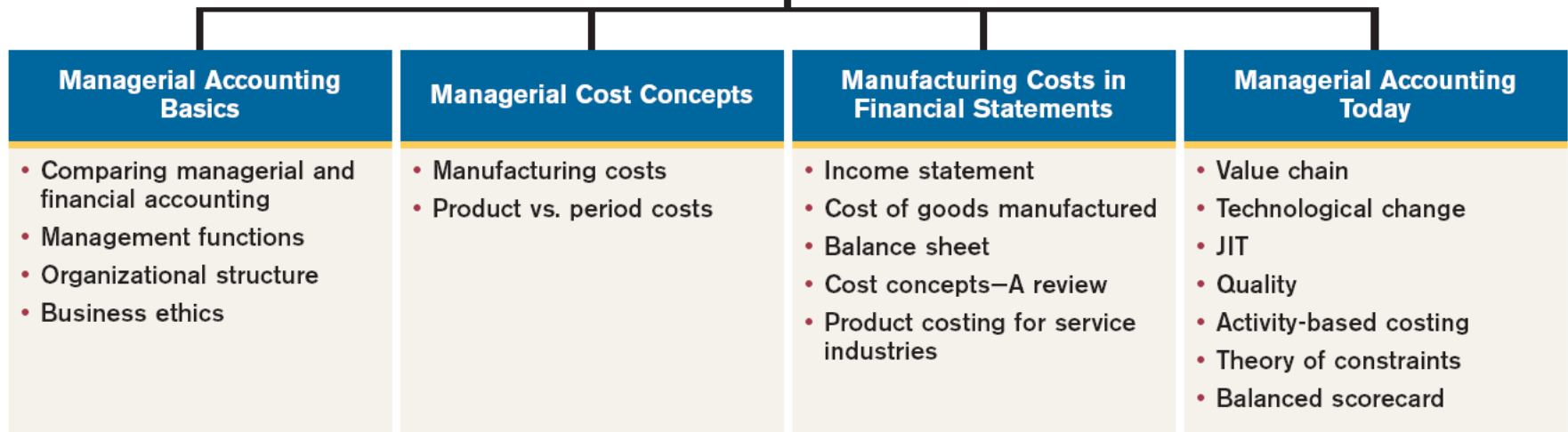
Managerial Accounting
Fifth Edition
Weygandt • Kimmel • Kieso

study objectives

1. Explain the distinguishing features of managerial accounting.
2. Identify the three broad functions of management.
3. Define the three classes of manufacturing costs.
4. Distinguish between product and period costs.
5. Explain the difference between a merchandising and a manufacturing income statement.
6. Indicate how cost of goods manufactured is determined.
7. Explain the difference between a merchandising and a manufacturing balance sheet.
8. Identify trends in managerial accounting.

preview of chapter 1

Managerial Accounting



Managerial Accounting Basics

Managerial accounting, also called **management accounting**, is a field of accounting that provides economic and financial information for managers and other internal users.

Managerial accounting applies to all types of businesses.

- Corporations
- Proprietorships
- Partnerships
- Not-for-profit

Managerial Accounting Basics

Managerial Accounting Activities

1. Explaining manufacturing and nonmanufacturing costs and how they are reported in the financial statements. (Chapter 1)
2. Computing the cost of providing a service or manufacturing a product. (Chapters 2, 3, and 4)
3. Determining the behavior of costs and expenses as activity levels change and analyzing cost-volume-profit relationships within a company. (Chapters 5 and 6)

Managerial Accounting Basics

Managerial Accounting Activities

4. Accumulating and presenting data for management decision making. (Chapter 7)
5. Determining prices for external and internal transactions. (Chapter 8)
6. Assisting management in profit planning and formalizing these plans in the form of budgets. (Chapter 9)

Managerial Accounting Basics


Managerial Accounting Activities

7. Providing a basis for controlling costs and expenses by comparing actual results with planned objectives and standard costs. (Chapters 10 and 11)
8. Accumulating and presenting data for capital expenditure decisions. (Chapter 12)

Managerial Accounting Basics

Comparing Managerial And Financial Accounting

Illustration 1-1

Financial Accounting		Managerial Accounting
 <ul style="list-style-type: none"> • External users: stockholders, creditors, and regulators. • Financial statements. • Quarterly and annually. • General-purpose. • Pertains to business as a whole. • Highly aggregated (condensed). • Limited to double-entry accounting and cost data. • Generally accepted accounting principles. • Audit by CPA. 	Primary Users of Reports	<ul style="list-style-type: none"> • Internal users: officers and managers.
	Types and Frequency of Reports	<ul style="list-style-type: none"> • Internal reports. • As frequently as needed.
	Purpose of Reports	<ul style="list-style-type: none"> • Special-purpose for specific decisions.
	Content of Reports	<ul style="list-style-type: none"> • Pertains to subunits of the business. • Very detailed. • Extends beyond double-entry accounting to any relevant data. • Standard is relevance to decisions.
	Verification Process	<ul style="list-style-type: none"> • No independent audits.



Managerial Accounting Basics

Review Question

Managerial accounting:

- a. Is governed by generally accepted accounting principles.
- b. Places emphasis on special-purpose information.
- c. Pertains to the entity as a whole and is highly aggregated.
- d. Is limited to cost data.

Managerial Accounting Basics

Management Functions

Planning

- Maximize short-term profit and market share
- Commit to environmental protection and social programs
- Add value to the business

Directing

- Coordinate diverse activities and human resources
- Implement planned objectives
- Provide incentives to motivate employees
- Hire and train employees
- Produce smooth-running operation

Controlling

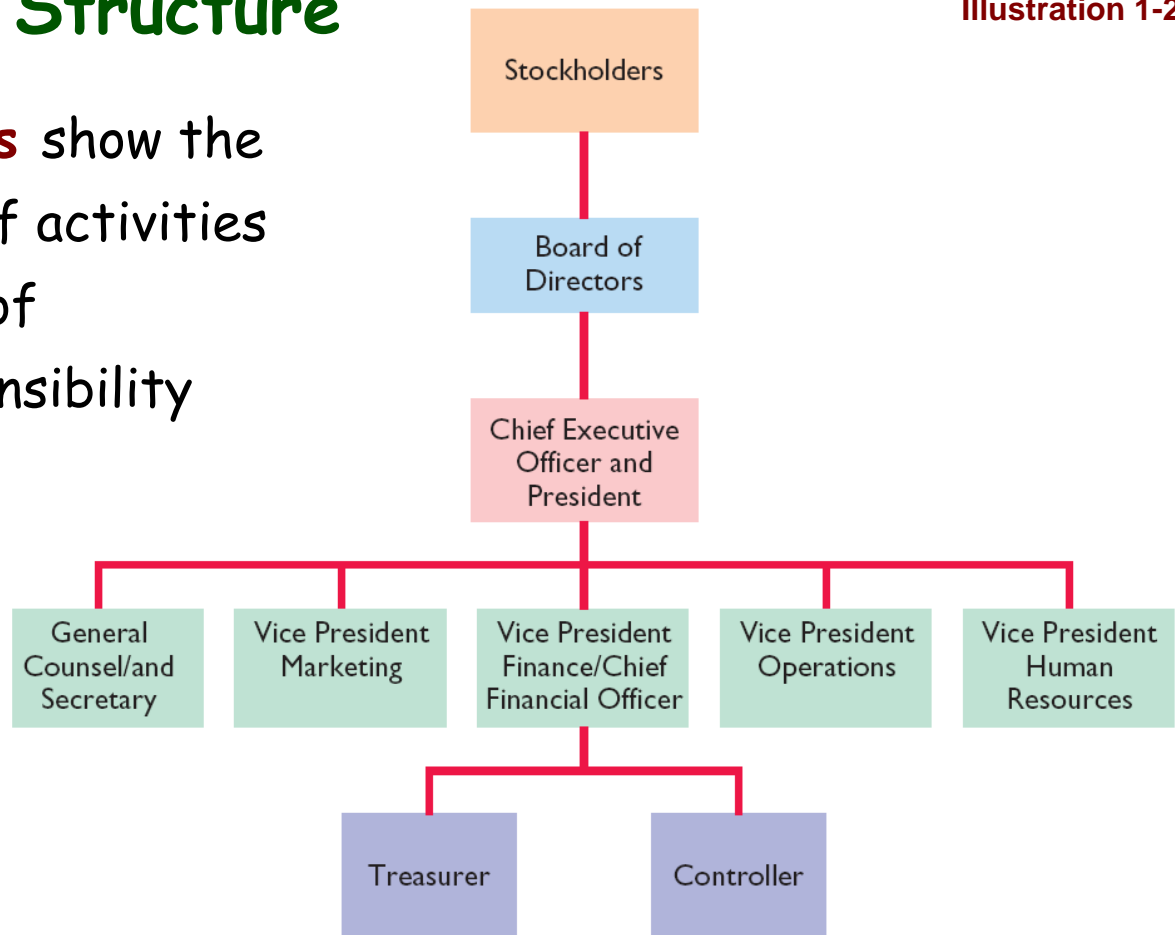
- Keeping activities on track
- Determine whether goals are met
- Decide changes needed to get back on track
- May use an informal or formal system of evaluations

Managerial Accounting Basics

Organizational Structure

Organization charts show the interrelationships of activities and the delegation of authority and responsibility within the company.

Illustration 1-2



Managerial Accounting Basics

Business Ethics

- All employees are expected to act ethically.
- Many organizations have codes of business ethics.
- Recent financial frauds:

✓ Enron,



✓ Global Crossing,



✓ WorldCom



Managerial Accounting Basics

Business Ethics

Creating Proper Incentives

- Systems and controls sometimes create incentives for managers to take unethical actions.
- Controls need to be effective and realistic.

Managerial Accounting Basics

Business Ethics

Code of Ethical Standards

Sarbanes-Oxley Act of 2002 (SOX)

- ✓ Clarifies management's responsibilities
- ✓ Requires certifications by CEO and CFO
- ✓ Selection criteria for Board of Directors and Audit Committee
- ✓ Substantially increased penalties for misconduct

Managerial Accounting Basics

Review Question

The management of an organization performs several broad functions. They are:

- a. Planning, directing, and selling.
- b. Directing, manufacturing, and controlling.
- c. Planning, manufacturing, and controlling.
- d. Planning, directing, and controlling.

Managerial Accounting Basics

Do it!

Indicate whether the following statements are **true** or **false**.

☐

1. Managerial accountants have a single role within an organization, collecting and reporting costs to management.

☐

2. Financial accounting reports are general-purpose and intended for external users.

☐

3. Managerial accounting reports are special-purpose and issued as frequently as needed.

Managerial Accounting Basics

Do it!

Indicate whether the following statements are **true** or **false**.

☐

4. Managers' activities and responsibilities can be classified into three broad functions: cost accounting, budgeting, and internal control.

☐

5. As a result of the Sarbanes-Oxley Act of 2002, managerial accounting reports must now comply with generally accepted accounting principles (GAAP).

☐

6. Top managers must certify that a company maintains an adequate system of internal controls.

Managerial Cost Concepts

Managers should ask questions such as the following.

1. What costs are involved in making a product or providing a service?
2. If we decrease production volume, will costs decrease?
3. What impact will automation have on total costs?
4. How can we best control costs?

Managerial Cost Concepts

Manufacturing Costs

Manufacturing consists of activities and processes that convert raw materials into finished goods.

Illustration 1-3



Manufacturing Costs

Materials

Raw Materials

Basic materials and parts used in manufacturing process.



Direct Materials

Raw materials that can be physically and directly associated with the finished product during the manufacturing process.

Manufacturing Costs

Materials

Indirect Materials

- Raw materials that *cannot* be easily associated with the finished product.
- Not physically part of the finished product *or* they are an insignificant part of finished product in terms of cost.
- Considered part of **manufacturing overhead**.

Manufacturing Costs

Labor

Direct Labor

Work of factory employees that can be physically and directly associated with converting raw materials into finished goods.



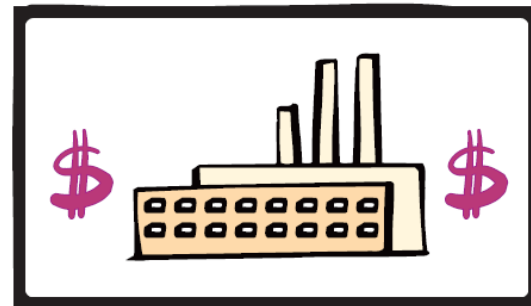
Indirect Labor

Work of factory employees that has no physical association with the finished product or for which it is impractical to trace costs to the goods produced.

Manufacturing Costs

Manufacturing Overhead

- Costs that are **indirectly** associated with manufacturing the finished product.
- Includes all manufacturing costs **except** direct materials and direct labor.
- Also called factory overhead, indirect manufacturing costs, or burden.



Manufacturing Costs


Review Question

Which of the following is not an element of manufacturing overhead?

- a. Sales manager's salary.
- b. Plant manager's salary.
- c. Factory repairman's wages.
- d. Product inspector's salary.

Product Versus Period Costs

Product Costs

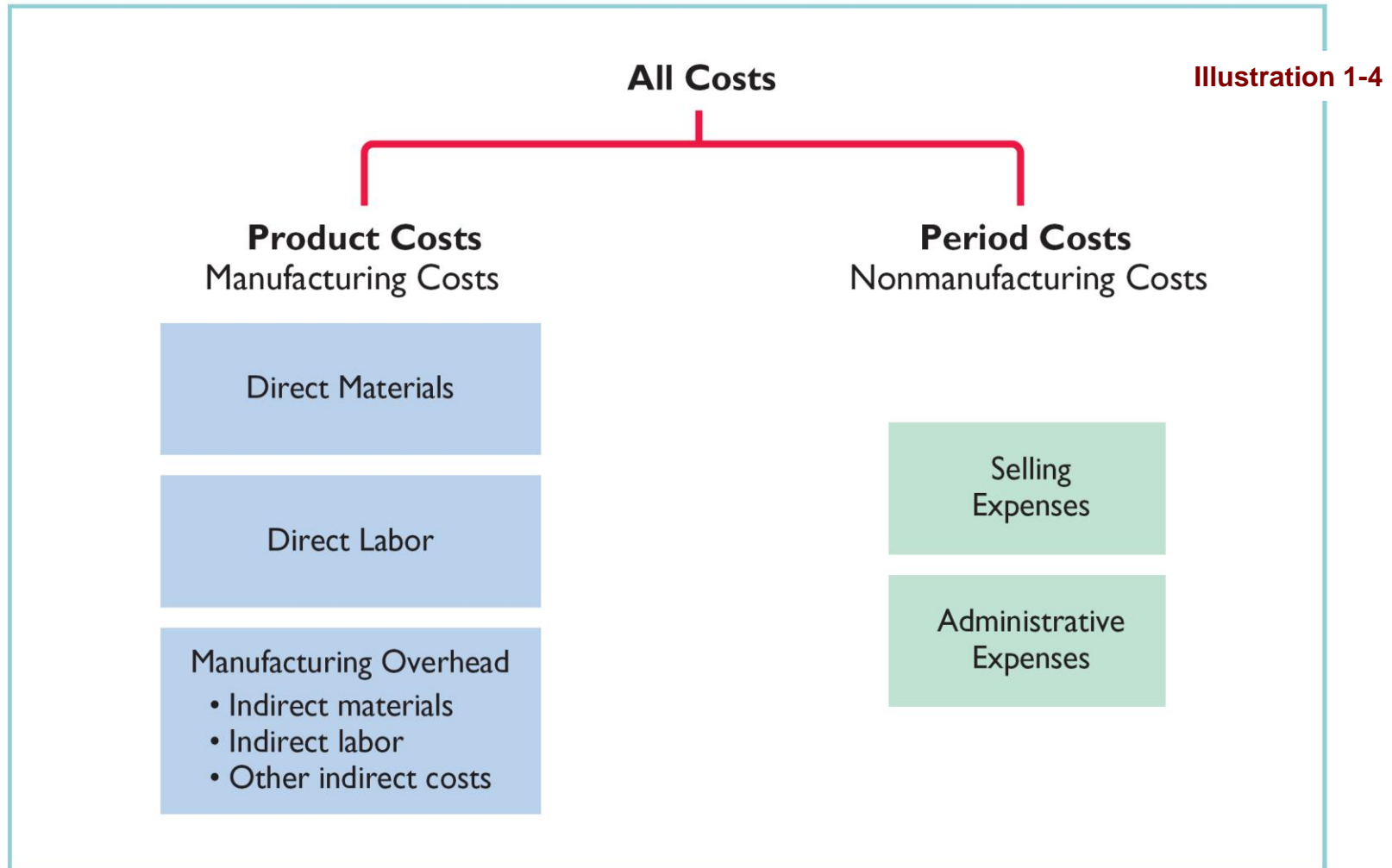
- Components: 
 - Direct materials
 - Direct labor
 - Manufacturing overhead
- Costs that are an integral part of producing the product.
- Recorded in "**inventory**" account.
- Not an expense (COGS) until the goods are sold.

Product Versus Period Costs

Period Costs

- Charged to expense as incurred.
- Non-manufacturing costs.
- Includes all selling and administrative expenses.

Product Versus Period Costs



Product Versus Period Costs

Do it!

A bicycle company has these costs: tires, salaries of employees who put tires on the wheels, factory building depreciation, wheel nuts, spokes, salary of factory manager, handlebars, and salaries of factory maintenance employees. Classify each cost as direct materials, direct labor, or overhead.

Direct Materials

- Tires
- Wheel nuts
- Spokes
- Handlebars

Direct Labor

- Salaries of employees who put tires on the wheels.

Overhead

- Factory depreciation
- Factory manager salary
- Factory maintenance employees salary

Manufacturing Costs in Financial Statements

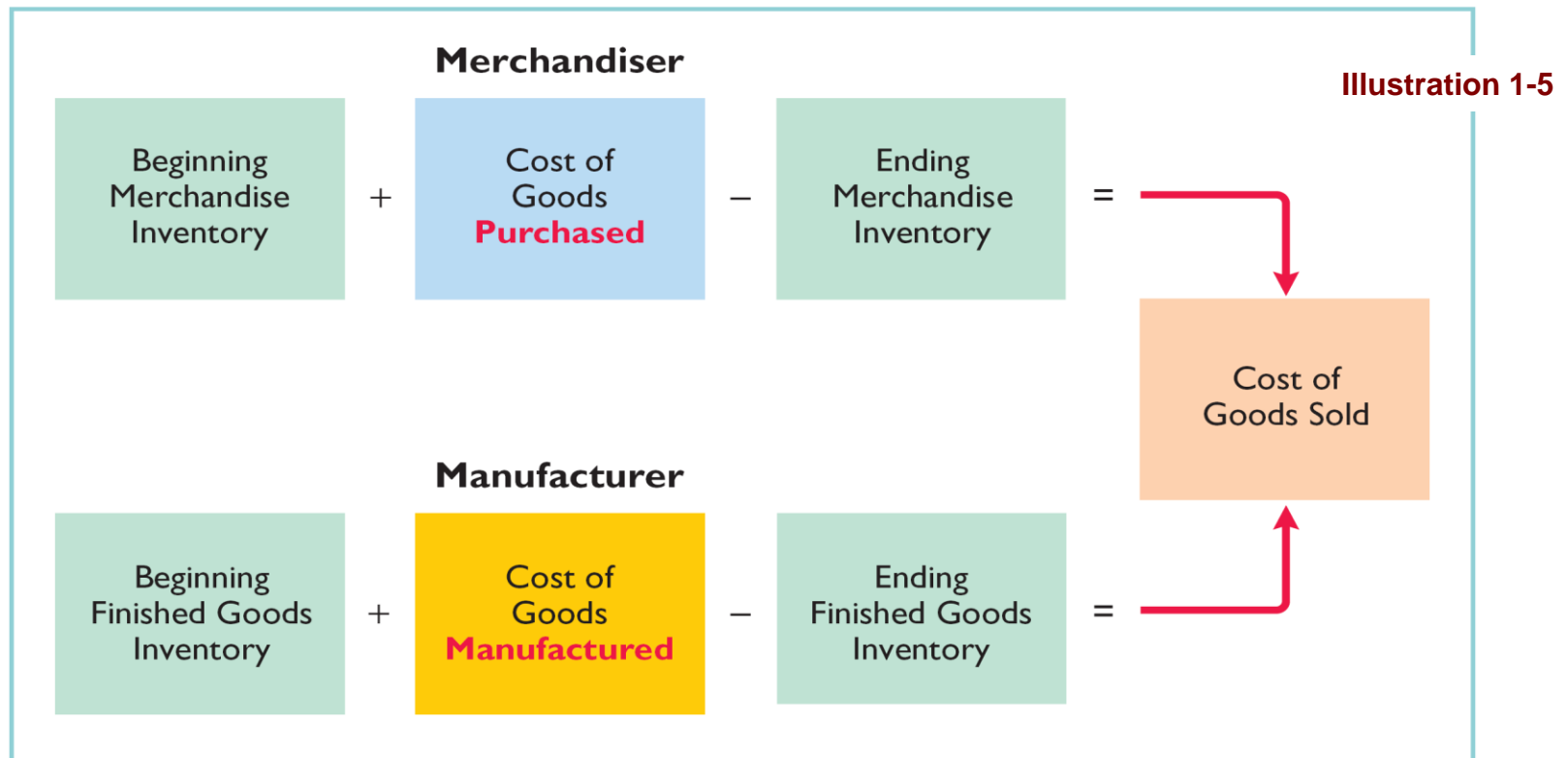
Manufacturing Costs

Under a **periodic inventory system**, the income statements of a merchandiser and a manufacturer differ in the **cost of goods sold** section.

“COGS”

Manufacturing Costs in Financial Statements

Cost of Goods Sold Components - (Periodic Inventory System)



Manufacturing Costs in Financial Statements

Cost of goods sold sections of merchandising and manufacturing income statements

Illustration 1-6

MERCHANDISING COMPANY Income Statement (partial) For the Year Ended December 31, 2011		MANUFACTURING COMPANY Income Statement (partial) For the Year Ended December 31, 2011	
Cost of goods sold		Cost of goods sold	
Merchandise inventory, January 1	\$ 70,000	Finished goods inventory, January 1	\$ 90,000
Cost of goods purchased	650,000	Cost of goods manufactured	
		(see Illustration 1-8)	370,000
Cost of goods available for sale	720,000	Cost of goods available for sale	460,000
Merchandise inventory, December 31	400,000	Finished goods inventory, December 31	80,000
Cost of goods sold	<u>\$ 320,000</u>	Cost of goods sold	<u>\$380,000</u>

Manufacturing Costs in Financial Statements

Review Question

For the year, Red Company has cost of goods manufactured of \$600,000, beginning finished goods inventory of \$200,000, and ending finished goods inventory of \$250,000. The cost of goods sold is

a. \$450,000.	Beg. Inventory	\$200,000
b. \$500,000.	+ COGs Manufactured	600,000
c. \$550,000.	Goods Available for Sale	<u>800,000</u>
d. \$600,000.	- End. Inventory	<u>250,000</u>
	Cost of Goods Sold	<u><u>\$550,000</u></u>

Manufacturing Costs in Financial Statements

Determining the Cost of Goods Manufactured

Total Work in Process - (1) cost of beginning work in process and (2) total manufacturing costs for the current period.

Total Manufacturing Costs - sum of direct material costs, direct labor costs, and manufacturing overhead in the current year.

Illustration 1-7



Manufacturing Costs in Financial Statements

Cost of Goods Manufactured Schedule

Illustration 1-8

Work in process, January 1		\$ 18,400
Direct materials		
Raw materials inventory, January 1	\$ 16,700	
Raw materials purchases	152,500	
Total raw materials available for use	169,200	
Less: Raw materials inventory, December 31	22,800	
Direct materials used		\$146,400
Direct labor		175,600
Manufacturing overhead		
Indirect labor	14,300	
Factory repairs	12,600	
Factory utilities	10,100	
Factory depreciation	9,440	
Factory insurance	8,360	
Total manufacturing overhead		54,800
Total manufacturing costs		376,800
Total cost of work in process		395,200
Less: Work in process, December 31		25,200
Cost of goods manufactured		\$370,000

Manufacturing Costs in Financial Statements

Do it!

The following information is available for Keystone Manufacturing Company.

		<u>March 1</u>	<u>March 31</u>
Raw material inventory		\$12,000	\$10,000
Work in process inventory		2,500	4,000
Materials purchased in March	\$ 90,000		
Direct labor in March	75,000		
Manufacturing overhead in March	220,000		

Prepare the cost of goods manufactured schedule for the month of March.

Manufacturing Costs in Financial Statements

KEYSTONE MANUFACTURING COMPANY

Cost of Goods Manufactured Schedule

For the Month Ended March 31

Work in process, March 1

Direct materials

Direct labor

Manufacturing overhead

Cost of goods manufactured

Manufacturing Costs in Financial Statements

Balance Sheet

Inventory accounts for a manufacturer

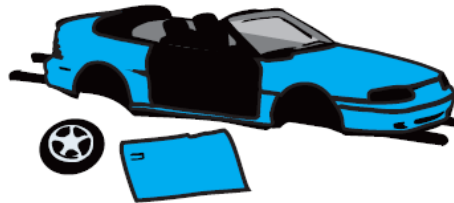
Illustration 1-9

**Raw Materials
Inventory**



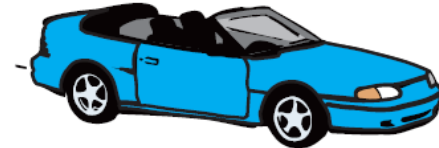
Shows the cost of raw materials on hand.

**Work in Process
Inventory**



Shows the cost applicable to units that have been started into production but are only partially completed.

**Finished Goods
Inventory**



Shows the cost of completed goods on hand.

The balance sheet for a **merchandising** company shows just **one category** of inventory.

Manufacturing Costs in Financial Statements

Balance Sheet

Current assets sections of merchandising and manufacturing balance sheets

Illustration 1-10

MERCHANDISING COMPANY Balance Sheet December 31, 2011		MANUFACTURING COMPANY Balance Sheet December 31, 2011	
Current assets		Current assets	
Cash	\$100,000	Cash	\$180,000
Receivables (net)	210,000	Receivables (net)	210,000
Merchandise inventory	400,000	Inventories	
Prepaid expenses	22,000	Finished goods	\$80,000
Total current assets	<u>\$732,000</u>	Work in process	25,200
		Raw materials	22,800
		Prepaid expenses	18,000
		Total current assets	<u>\$536,000</u>

Manufacturing Costs in Financial Statements

Review Question

A cost of goods manufactured schedule shows beginning and ending inventories for:

- a. Raw materials and work in process only
- b. Work in process only
- c. Raw materials only
- d. Raw materials, work in process, and finished goods

Manufacturing Costs in Financial Statements

Illustration: Suppose you started your own snowboard factory, KRC Boards. Here are some of the costs that your snowboard factory would incur. Assign the following costs:

Cost Item	Product Costs			Period Costs
	Direct Materials	Direct Labor	Manufacturing Overhead	
1. Material cost (\$30) per board				
2. Labor costs (\$40) per board				
3. Depreciation on factory equipment (\$25,000 per year)				

Illustration 1-11

Manufacturing Costs in Financial Statements

Illustration 1-11

Cost Item	Product Costs			Period Costs
	Direct Materials	Direct Labor	Manufacturing Overhead	
4. Property taxes on factory building (\$6,000 per year)				
5. Advertising costs (\$60,000 per year)				
6. Sales commissions (\$20 per board)				
7. Maintenance salaries (factory facilities) (\$45,000 per year)				
8. Salary of plant manager (\$70,000)				
9. Cost of shipping boards (\$18 per board)				

Manufacturing Costs in Financial Statements

If KRC Boards produces 10,000 snowboards the first year, what would be the total manufacturing costs?

Illustration 1-12

<u>Cost Number and Item</u>	<u>Manufacturing Cost</u>
Total manufacturing costs	

Manufacturing Costs in Financial Statements

Product Costing For Service Industries

- U.S. economy, in general, has shifted toward an **emphasis on providing services** rather than goods.
- **Over 50%** of U.S. workers are now employed by service companies.
- Trend is expected to continue in the future.
- Most of the techniques learned for manufacturing firms are applicable to service companies.

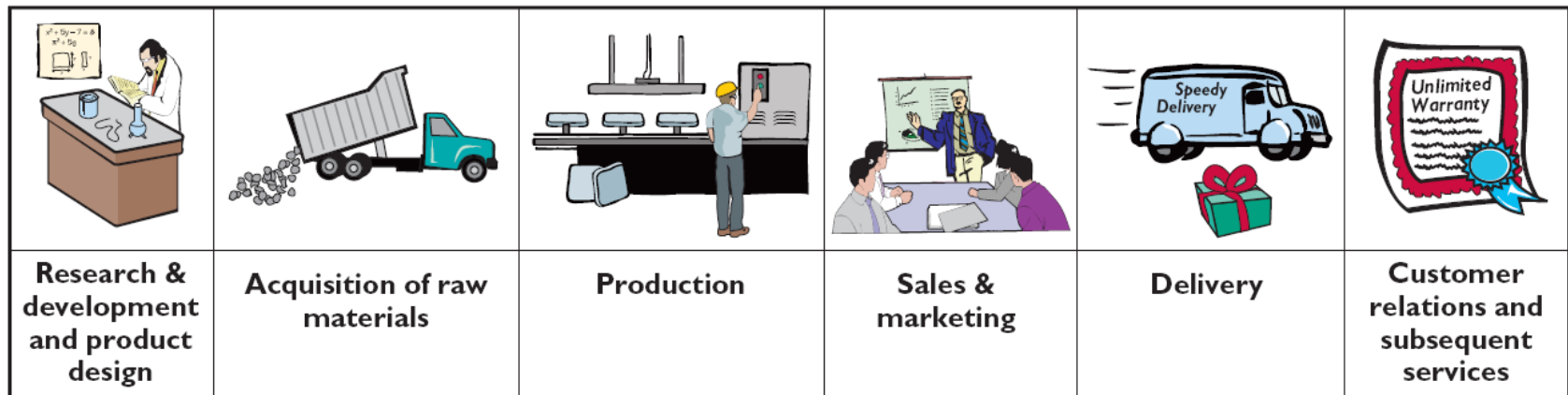
Managerial Accounting Today

The Value Chain

Refers to all activities associated with providing a product or service.

For a manufacturing firm these include the following:

Illustration 1-13



Managerial Accounting Today

Technological Change

- **Enterprise Resource Planning (ERP)** - software programs designed to manage all major business processes.
- **Computer-Integrated Manufacturing (CIM)** - manufacturing products with increased automation.

Just-In-Time Inventory Methods

- Inventory system in which goods are manufactured or purchased just in time for sale.

Managerial Accounting Today

Quality

- Increased emphasis on product quality because goods are produced only as needed.
- Total Quality Management (TQM) - a philosophy of zero defects.

Activity-Based Costing (ABC)

- Allocates overhead based on use of activities.
- Results in more accurate product costing and scrutiny of all activities in the value chain.

Managerial Accounting Today

Theory of Constraints

- Constraints ("bottlenecks") limit the company's potential profitability.
- A specific approach to identify and manage these constraints in order to achieve company goals.

Balanced Scorecard

- Evaluates operations in an integrated fashion.
- Uses both financial and non-financial measures.
- Links performance to overall company objectives.

Managerial Accounting Today

Review Question

Which of the following managerial accounting techniques attempts to allocate manufacturing overhead in a more meaningful manner?

- a. Just-in-time inventory.
- b. Total-quality management.
- c. Balanced scorecard.
- d. Activity-based costing.

Managerial Accounting Today

Do it!

Match the descriptions that follow with the corresponding terms.

1. _____ All activities associated with providing a product or service.
2. _____ A method of allocating overhead based on each product's use of activities in making the product.
3. _____ Systems implemented to reduce defects in finished products with the goal of achieving zero defects.

Terms:

- a. Activity-based costing
- b. Balanced scorecard
- c. Just-in-time (JIT) inventory
- d. Total quality management (TQM)
- e. Value chain

Managerial Accounting Today

Do it!

Match the descriptions that follow with the corresponding terms.

4. _____ A performance-measurement approach that uses both financial and nonfinancial measures, tied to company objectives, to evaluate a company's operations in an integrated fashion.

Terms:

- a. Activity-based costing
- b. Balanced scorecard
- c. Just-in-time (JIT) inventory
- d. Total quality management (TQM)
- e. Value chain

5. _____ Inventory system in which goods are manufactured or purchased just as they are needed for use.

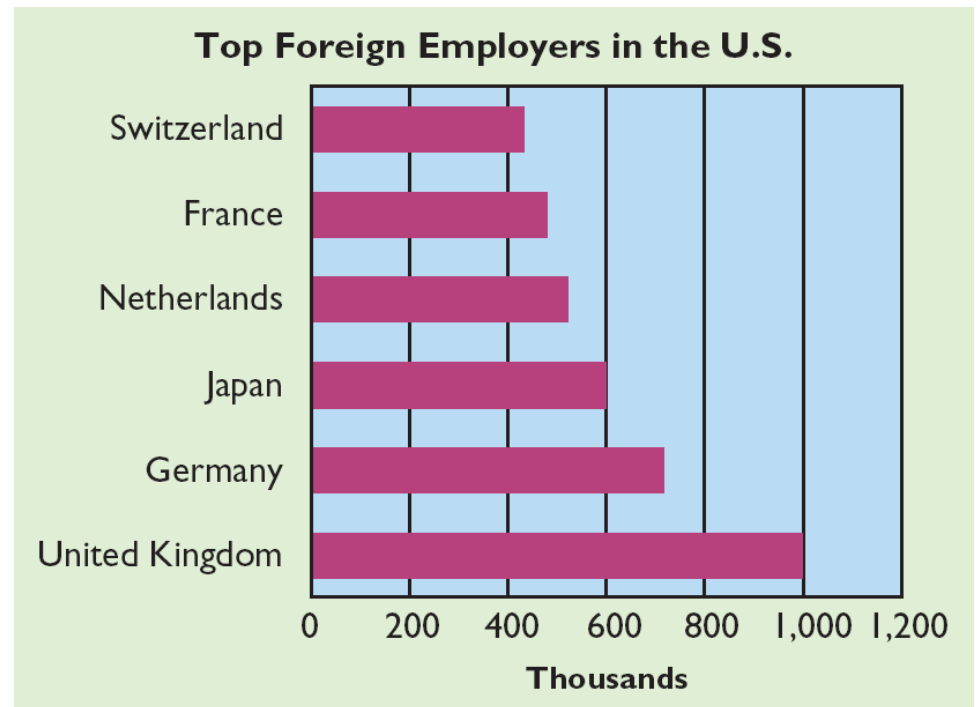
Outsourcing and Jobs

Some Facts

- ❖ IBM has expanded beyond information technology into providing advisory services related to outsourcing, which it believes will be a \$500 billion market.
- ❖ A U.S. professional association of certified public accountants requires that its members notify clients before they share confidential client information with an outside contractor as part of an outsourcing arrangement.

- ❖ During a recent two-year period Ford Motor Co. inspected the working conditions at about 160 of the more than 2,000 foreign-owned plants in low-cost countries that supply it with outsourced parts.
- ❖ The McKinsey Global Institute predicts that white-collar overseas outsourcing will increase at a rate of 30% to 40% over the next five years. By 2015, the consultancy group Forrester predicts roughly 3.3 million service jobs will have moved offshore.
- ❖ On the other hand, Hewlett-Packard has begun to “insource” (bring back in-house) many of the manufacturing operations that it previously outsourced.

Interestingly, foreign firms doing business in the United States also hire a lot of Americans. In a recent year, U.S. subsidiaries of foreign companies employed approximately 5.3 million Americans. In comparison, in that same year 134,000 Americans lost their jobs due to outsourcing.



What Do You Think?

Suppose you are the managing partner in a CPA firm with 30 full-time staff. Larger firms in your community have begun to outsource basic tax-return preparation work to India. Should you outsource your basic tax return work to India as well? You estimate that you would have to lay off six staff members if you outsource the work.

YES: The wages paid to Indian accountants are very low relative to U.S. wages. You will not be able to compete unless you outsource.

NO: Tax-return data is highly sensitive. Many customers will be upset to learn that their data is being emailed around the world.

The **accounting cycle** for a manufacturing company is the same as for a merchandising company when companies use a **periodic inventory system**.

- The journalizing and posting of transactions is the same.
- Preparation of a trial balance and the journalizing and posting of adjusting entries are the same.
- Some changes occur in using a worksheet and in preparing closing entries.

appendix

Accounting Cycle for a Manufacturing Company

OLSEN MANUFACTURING COMPANY Cost of Goods Manufactured Schedule For the Year Ended December 31, 2011

Illustration 1A-1

Work in process, January 1			\$ 18,400
Direct materials			
Raw materials inventory, January 1	\$ 16,700		
Raw materials purchases	<u>152,500</u>		
Total raw materials available for use	169,200		
Less: Raw materials inventory, December 31	<u>22,800</u>		
Direct materials used		\$146,400	
Direct labor		175,600	
Manufacturing overhead			
Indirect labor	14,300		
Factory repairs	12,600		
Factory utilities	10,100		
Factory depreciation	9,440		
Factory insurance	<u>8,360</u>		
Total manufacturing overhead		<u>54,800</u>	
Total manufacturing costs			<u>376,800</u>
Total cost of work in process			395,200
Less: Work in process, December 31			<u>25,200</u>
Cost of goods manufactured			<u><u>\$370,000</u></u>

To illustrate the changes in the worksheet, we use the cost of goods manufactured schedule for Olsen Manufacturing.

appendix

Accounting Cycle for a Manufacturing Company

Worksheet

OLSEN MANUFACTURING COMPANY Worksheet (Partial) For the Year Ended December 31, 2011

Illustration 1A-2

	Adjusted Trial Balance		Cost of Goods Manufactured		Income Statement		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	42,500						42,500	
Accounts Receivable (Net)	71,900						71,900	
Finished Goods Inventory	24,600				24,600	19,500	19,500	
Work in Process Inventory	18,400		18,400	25,200			25,200	
Raw Material Inventory	16,700		16,700	22,800			22,800	
Plant Assets	724,000						724,000	
Accumulated Depreciation		278,400						278,400
Notes Payable		100,000						100,000
Accounts Payable		40,000						40,000
Income Taxes Payable		5,000						5,000
Common Stock		200,000						200,000
Retained Earnings		205,100						205,100
Sales		680,000				680,000		
Raw Materials Purchases	152,500		152,500					
Direct Labor	175,600		175,600					
Indirect Labor	14,300		14,300					
Factory Repairs	12,600		12,600					
Factory Utilities	10,100		10,100					
Factory Depreciation	9,440		9,440					
Factory Insurance	8,360		8,360					
Selling Expenses	114,900				114,900			
Administrative Expenses	92,600				92,600			
Income Tax Expense	20,000				20,000			
Totals	1,508,500	1,508,500	418,000	48,000				
Cost of Goods Manufactured				370,000	370,000			
Totals			418,000	418,000	622,100	699,500	905,900	828,500
Net Income					77,400			77,400
Totals					699,500	699,500	905,900	905,900

Closing Entries

Companies can prepare the closing entries from the worksheet. First prepare the closing entries for the manufacturing accounts.

Dec. 31	Work in Process Inventory (Dec. 31)	25,200	
	Raw Materials Inventory (Dec. 31)	22,800	
	Manufacturing Summary		48,000
	(To record ending raw materials and work in process inventories)		

appendix

Accounting Cycle for a Manufacturing Company

Closing Entries

Dec. 31	Manufacturing Summary	418,000	
	Work in Process Inventory (Jan. 1)		18,400
	Raw Materials Inventory (Jan. 1)		16,700
	Raw Materials Purchases		152,500
	Direct Labor		175,600
	Indirect Labor		14,300
	Factory Repairs		12,600
	Factory Utilities		10,100
	Factory Depreciation		9,440
	Factory Insurance		8,360
	(To close beginning raw materials and work in process inventories and manufacturing cost accounts)		
31	Finished Goods Inventory (Dec. 31)	19,500	
	Sales	680,000	
	Income Summary		699,500
	(To record ending finished goods inventory and close sales account)		

appendix

Accounting Cycle for a Manufacturing Company

Closing Entries

31	Income Summary	622,100	
	Finished Goods Inventory (Jan. 1)		24,600
	Manufacturing Summary		370,000
	Selling Expenses		114,900
	Administrative Expenses		92,600
	Income Tax Expense		20,000
	(To close beginning finished goods inventory, manufacturing summary, and expense accounts)		
31	Income Summary	77,400	
	Retained Earnings		77,400
	(To close net income to retained earnings)		

Closing Entries

After posting, the summary accounts show the following.

Illustration 1A-3

Manufacturing Summary

Dec. 31	Close	418,000	Dec. 31	Close	48,000
			31	Close	370,000

Income Summary

Dec. 31	Close	622,100	Dec. 31	Close	699,500
31	Close	77,400			

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