Horngrens Accounting The Managerial Chapters 12th edition Miller Nobles Solutions Manual

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Chapter 18
Introduction to Managerial Accounting

Review Questions

1. What is the primary purpose of managerial accounting?

The primary purpose of managerial accounting is to provide information to help managers plan, direct, control, and make decisions.

2. List six differences between financial accounting and managerial accounting.

Financial accounting and managerial accounting differ on the following 6 dimensions: (1) primary users, (2) purpose of information, (3) focus and time dimension of the information, (4) rules and restrictions, (5) scope of information, and (6) behavioral.

3. Explain the difference between line positions and staff positions.

Line positions are directly involved in providing goods or services to customers. Staff positions support line positions.

4. Explain the differences between planning, directing, and controlling.

Planning means choosing goals and deciding how to achieve them. Directing involves running the day-to-day operations of a business. Controlling is the process of monitoring operations and keeping the company on track.

5. List the four IMA standards of ethical practice, and briefly describe each.

The four IMA standards of ethical practice and a description of each follow.

I. Competence.

- Maintain an appropriate level of professional expertise by continually developing knowledge and skills.
- Perform professional duties in accordance with relevant laws, regulations, and technical standards.
- Provide decision support information and recommendations that are accurate, clear, concise, and timely.
- Recognize and communicate professional limitations or other constraints that preclude responsible judgment or successful performance of an activity.

II. Confidentiality.

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

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III. Integrity.

- Mitigate actual conflicts of interest, regularly communicate with business associates to avoid apparent conflicts of interest. Advise all parties of any potential conflicts.
- Refrain from engaging in any conduct that would prejudice carrying out duties ethically.
- Abstain from engaging in or supporting any activity that might discredit the profession.

IV. Credibility.

- Communicate information fairly and objectively.
- Disclose all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, analyses, or recommendations.
- Disclose delays or deficiencies in information, timeliness, processing, or internal controls in conformance with organization policy and/or applicable law.

6. Describe a service company, and give an example.

Service companies sell time, skills, and knowledge. Examples of service companies include phone service companies, banks, cleaning service companies, accounting firms, law firms, medical physicians, and online auction services.

7. Describe a merchandising company, and give an example.

Merchandising companies resell products they buy from suppliers. Merchandisers keep an inventory of products, and managers are accountable for the purchasing, storage, and sale of the products. Examples of merchandising companies include toy stores, grocery stores, and clothing stores.

8. How do manufacturing companies differ from merchandising companies?

Merchandising companies resell products they previously bought from suppliers, whereas manufacturing companies use labor, equipment, supplies, and facilities to convert raw materials into new finished products. In contrast to merchandising companies, manufacturing companies have a broad range of production activities that require tracking costs on three kinds of inventory.

9. List the three inventory accounts used by manufacturing companies, and describe each.

The three inventory accounts used by manufacturing companies are Raw Materials Inventory, Work-in-Process Inventory, and Finished Goods Inventory.

Raw Materials Inventory includes materials used to manufacture a product. Work-in-Process Inventory includes goods that have been started in the manufacturing process but are not yet complete. Finished Goods Inventory includes completed goods that have not yet been sold.

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10. Explain the difference between a direct cost and an indirect cost.

A direct cost is a cost that can be easily and cost-effectively traced to a cost object (which is anything for which managers want a separate measurement of cost). An indirect cost is a cost that cannot be easily or cost-effectively traced to a cost object.

11. What are the three manufacturing costs for a manufacturing company? Describe each.

The three manufacturing costs for a manufacturing company are direct materials, direct labor, and manufacturing overhead. Direct materials are materials that become a physical part of a finished product and whose costs are easily traceable to the finished product. Direct labor is the labor cost of the employees who convert materials into finished products. Manufacturing overhead includes all manufacturing costs except direct materials and direct labor, such as indirect materials, indirect labor, factory depreciation, factory rent, and factory property taxes.

12. Give five examples of manufacturing overhead.

Examples of manufacturing overhead include costs of indirect materials, indirect labor, repair and maintenance in factory, factory utilities, factory rent, factory insurance, factory property taxes, manufacturing plant managers' salaries, and depreciation on manufacturing buildings and equipment.

13. What are prime costs? Conversion costs?

Prime costs are direct materials plus direct labor. Conversion costs are direct labor plus manufacturing overhead. Note that direct labor is classified as both a prime cost and a conversion cost.

14. What are product costs?

Product costs are the cost of purchasing or making a product. These costs are recorded as an asset and not expensed until the product is sold. Product costs include direct materials, direct labor, and manufacturing overhead.

15. How do period costs differ from product costs?

Period costs are non-manufacturing costs that are expensed in the same accounting period in which they are incurred, whereas product costs are recorded as an asset and not expensed until the accounting period in which the product is sold.

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16. How is cost of goods manufactured calculated?

Cost of Goods Manufactured is calculated as Beginning Work-in-Process Inventory + Total Manufacturing Costs Incurred during the Year – Ending Work-in-Process Inventory. Total Manufacturing Costs Incurred during the Year = Direct Materials Used + Direct Labor + Manufacturing Overhead.

17. How does a manufacturing company calculate cost of goods sold? How is this different from a merchandising company?

For a manufacturing company, the activity in the Finished Goods Inventory account provides the information for determining Cost of Goods Sold. A manufacturing company calculates Cost of Goods Sold as Beginning Finished Goods Inventory + Cost of Goods Manufactured – Ending Finished Good Inventory. In addition, a manufacturing company must track costs from Raw Materials Inventory and Work-in-Process Inventory in order to compute Cost of Goods Manufactured used in the previous equation.

For a merchandising company, the activity in the Merchandise Inventory account provides the information for determining Cost of Goods Sold. A merchandising company calculates Cost of Goods Sold as Beginning Merchandise Inventory + Purchases and Freight In – Ending Merchandise Inventory.

18. How does a manufacturing company calculate unit product cost?

A manufacturing company calculates unit product cost as Cost of Goods Manufactured / Total number of units produced.

19. How does a service company calculate unit cost per service?

A service company calculates unit cost per service as Total Costs / Total number of services provided.

20. How does a merchandising company calculate unit cost per item?

A merchandising company calculates unit cost per item as Total Cost of Goods Sold / Total number of items sold.

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Short Exercises

S18-1 Comparing managerial accounting and financial accounting

Learning Objective 1

For each of the following, indicate whether the statement relates to managerial accounting (MA) or financial accounting (FA):

a. Helps investors make investment decisions.

b. Provides detailed reports on parts of the company.

c. Helps in planning and controlling operations.

d. Reports must follow Generally Accepted Accounting Principles (GAAP).

e. Reports audited annually by independent certified public accountants.

SOLUTION

a. FA
b. MA
c. MA
d. FA
e. FA

S18-2 Identifying ethical standards

Learning Objective 1

The Institute of Management Accountants' Statement of Ethical Professional Practice requires managerial accountants to meet standards regarding competence, confidentiality, integrity, and credibility. Consider the following situations. Which standard(s) is(are) violated in each situation?

a. You tell your brother that your company will report earnings significantly above financial analysts' estimates.

b. You see others take home office supplies for personal use. As an intern, you do the same thing, assuming that this is a "perk."

c. At a company-paid conference on e-commerce, you skip the afternoon session and go sightseeing.

d. You failed to read the detailed specifications of a new accounting software package that you asked your company to purchase. After it is installed, you are surprised that it is incompatible with some of your company's older accounting software.

e. You do not provide top management with the detailed job descriptions they requested because you fear they may use this information to cut a position in your department.

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S18-2, cont.
SOLUTION

a. Confidentiality
b. Integrity
c. Competence (skipping the session); Integrity (company-paid conference)
d. Competence
e. Credibility; Integrity

S18-3 Distinguishing between direct and indirect costs

Learning Objective 2

Granger Cards is a manufacturer of greeting cards. Classify its costs by matching the costs to the terms.

1. Direct materials	**a.** Artists' wages
2. Direct labor	**b.** Wages of materials warehouse workers
3. Indirect materials	**c.** Paper
4. Indirect labor	**d.** Depreciation on manufacturing equipment
5. Other manufacturing overhead	**e.** Manufacturing plant manager's salary
	f. Property taxes on manufacturing plant
	g. Glue for envelopes

SOLUTION

a. 2
b. 4
c. 1
d. 5
e. 4
f. 5
g. 3

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S18-4 Computing manufacturing overhead

Learning Objective 2

Sunglasses Unlimited Company manufactures sunglasses. Following is a list of costs the company incurred during May. Use the list to calculate the total manufacturing overhead costs for the month.

Glue for frames	$ 250
Depreciation on company cars used by sales force	4,000
Plant depreciation	7,500
Interest Expense	1,500
Lenses	52,000
Company president's salary	24,500
Plant foreman's salary	3,500
Plant janitor's wages	1,300
Oil for manufacturing equipment	150

SOLUTION

Glue for frames	$ 250
Plant depreciation	7,500
Plant foreman's salary	3,500
Plant janitor's wages	1,300
Oil for manufacturing equipment	150
Total manufacturing overhead	$ 12,700

S18-5 Identifying product costs and period costs

Learning Objective 2

Classify each cost of a paper manufacturer as either a product cost or a period cost:

a. Salaries of scientists studying ways to speed forest growth.

b. Cost of computer software to track WIP Inventory.

c. Cost of electricity at the paper mill.

d. Salaries of the company's top executives.

e. Cost of chemicals to treat the paper.

f. Cost of TV ads.

g. Depreciation on the manufacturing plant.

h. Cost to purchase wood pulp.

i. Life insurance on the CEO.

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S18-5, cont.
SOLUTION

a. Period cost
b. Product cost
c. Product cost
d. Period cost
e. Product cost
f. Period cost
g. Product cost
h. Product cost
i. Period cost

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S18-6 Computing cost of goods sold, merchandising company

Learning Objective 3

Use the following information for The Windshield Helper, a retail merchandiser of auto windshields, to compute the cost of goods sold:

Web Site Maintenance	$ 7,900
Delivery Expense	400
Freight In	2,400
Purchases	47,000
Ending Merchandise Inventory	5,500
Revenues	63,000
Marketing Expenses	10,700
Beginning Merchandise Inventory	8,600

SOLUTION

Beginning merchandise inventory		$ 8,600
Purchases	$ 47,000	
Freight in	2,400	49,400
Cost of goods available for sale		58,000
Ending merchandise inventory		(5,500)
Cost of goods sold		$ 52,500

S18-7 Computing cost of goods sold and operating income, merchandising company

Learning Objective 3

Consider the following partially completed income statements for merchandising companies and compute the missing amounts:

	Smith, Inc.	Allen, Inc.
Net Sales Revenue	$ 101,000	$ *(d)*
Cost of Goods Sold:		
Beginning Merchandise Inventory	*(a)*	29,000
Purchases and Freight In	50,000	*(e)*
Cost of Goods Available for Sale	*(b)*	89,000
Ending Merchandise Inventory	(2,200)	(2,200)
Cost of Goods Sold	61,000	*(f)*
Gross Profit	40,000	114,000
Selling and Administrative Expenses	*(c)*	84,000
Operating Income	$ 12,000	$ *(g)*

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S18-7, cont.
SOLUTION

	Solutions:	Calculations:
(a)	$13,200	$63,200 [b, below] – $50,000
(b)	$63,200	$61,000 + $2,200
(c)	$28,000	$40,000 – $12,000
(d)	$200,800	$86,800 + 114,000
(e)	$60,000	$89,000 – $29,000
(f)	$86,800	$89,000 – $2,200
(g)	$30,000	$114,000 – $84,000

Order of calculations:
Smith, Inc.: (b), (a), (c)
Allen, Inc.: (e), (f), (d), and (g)

S18-8 Computing direct materials used

Learning Objective 3

Tuscany, Inc. has compiled the following data:

Purchases of Direct Materials	$ 6,300
Freight In	400
Property Taxes	800
Ending Direct Materials	1,300
Beginning Direct Materials	4,100

Compute the amount of direct materials used.

SOLUTION

Beginning Direct Materials		$ 4,100
Purchases of Direct Materials	$ 6,300	
Freight In	400	6,700
Direct Materials Available for Use		10,800
Ending Direct Materials		(1,300)
Direct Materials Used		$ 9,500

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S18-9 Computing cost of goods manufactured

Learning Objective 3

Use the following inventory data for Caddy Golf Company to compute the cost of goods manufactured for the year:

Direct Materials Used	$ 12,000
Manufacturing Overhead	21,000
Work-in-Process Inventory:	
Beginning Balance	1,000
Ending Balance	5,000
Direct Labor	9,000
Finished Goods Inventory:	
Beginning Balance	18,000
Ending Balance	4,000

SOLUTION

Beginning Work-in-Process Inventory		$ 1,000
Direct Materials Used	$ 12,000	
Direct Labor	9,000	
Manufacturing Overhead	21,000	
Total Manufacturing Costs Incurred during the Year		42,000
Total Manufacturing Costs to Account For		43,000
Ending Work-in-Process Inventory		(5,000)
Cost of Goods Manufactured		$ 38,000

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S18-10 Computing cost of goods sold, manufacturing company

Learning Objective 3

Use the following information to calculate the cost of goods sold for The Ellis Company for the month of June:

Finished Goods Inventory:	
Beginning Balance	$ 30,000
Ending Balance	10,000
Cost of Goods Manufactured	165,000

SOLUTION

Beginning Finished Goods Inventory	$ 30,000
Cost of Goods Manufactured	165,000
Cost of Goods Available for Sale	195,000
Ending Finished Goods Inventory	(10,000)
Cost of Goods Sold	$ 185,000

S18-11 Matching business trends terminology

Learning Objective 4

Match the term with the correct definition.

1. A philosophy designed to integrate all organizational areas in order to provide customers with superior products and services while meeting organizational objectives. Requires improving quality and eliminating defects and waste.
2. Use of the Internet for business functions such as sales and customer service. Enables companies to reach customers around the world.
3. Evaluating a company's performance by its economic, social, and environmental impact.
4. Software system that integrates all of a company's functions, departments, and data into a single system.
5. A system in which a company produces products just when they are needed to satisfy needs. Suppliers deliver materials when they are needed to begin production, and finished units are completed at the right time for delivery to customers.

a. ERP

b. JIT

c. E-commerce

d. TQM

e. Triple bottom line

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S18-11, cont.
SOLUTION

1. d.
2. c.
3. e.
4. a.
5. b.

S18-12 Calculating unit cost per service

Learning Objective 5

Marx and Tyler provides hair-cutting services in the local community. In February, the business cut the hair of 190 clients, earned $4,800 in revenues, and incurred the following operating costs:

Hair Supplies Expense	$ 950
Wages Expense	548
Utilities Expense	190
Depreciation Expense—Equipment	60

What was the cost of service to provide one haircut?

SOLUTION

Cost of one haircut = Total operating costs / Total number of haircuts

= [$950 + $548 + $190 + $60] / 190 haircuts

= $1,748 / 190 haircuts

= $9.20 per haircut

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Exercises

E18-13 Comparing managerial accounting and financial accounting

Learning Objective 1

Match the following terms to the appropriate statement. Some terms may be used more than once, and some terms may not be used at all.

Directing	Managerial
Creditors	Managers
Controlling	Planning
Financial	Stockholders

a. Accounting systems that must follow GAAP.

b. External parties for whom financial accounting reports are prepared.

c. The role managers play when they are monitoring day-to-day operations and keeping the company on track.

d. Internal decision makers.

e. Accounting system that provides information on a company's past performance.

f. Accounting system not restricted by GAAP.

g. The management function that involves choosing goals and deciding how to achieve them.

SOLUTION

a. Financial
b. Creditors and Stockholders
c. Controlling
d. Managers
e. Financial
f. Managerial
g. Planning

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E18-14 Making ethical decisions

Learning Objective 1

Sue Peters is the controller at Vroom, a car dealership. Dale Miller recently has been hired as the bookkeeper. Dale wanted to attend a class in Excel spreadsheets, so Sue temporarily took over Dale's duties, including overseeing a fund used for gas purchases before test drives. Sue found a shortage in the fund and confronted Dale when he returned to work. Dale admitted that he occasionally uses the fund to pay for his own gas. Sue estimated the shortage at $450.

Requirements

1. What should Sue Peters do?
2. Would you change your answer if Sue Peters was the one recently hired as controller and Dale Miller was a well-liked, longtime employee who indicated he always eventually repaid the fund?

SOLUTION

Students' responses will vary. Illustrative answers follow.

Requirement 1

A new employee who has engaged in this behavior is unlikely to become a valued and trusted employee. This type of behavior is unethical, and Sue Peters should consider beginning the process to terminate the employee. Any company policies with respect to discipline and termination should be followed.

As controller, Sue Peters probably hired Dale, and she is also responsible for the lack of controls that permitted a new employee to commit this theft. She will need to supervise Dale and subsequent bookkeepers more carefully.

Requirement 2

Being a new employee, Sue Peters may want to discuss the situation with her immediate supervisor or the company's president if appropriate. Unless Sue can obtain additional information, she may want to indicate to Dale that this behavior will not be tolerated in the future. Sue should establish better controls and closer supervision.

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E18-15 Classifying costs

Learning Objective 2

Wheels, Inc. manufactures wheels for bicycles, tricycles, and scooters. For each cost given below, determine if the cost is a product cost or a period cost. If the cost is a product cost, further determine if the cost is direct materials (DM), direct labor (DL), or manufacturing overhead (MOH) and then determine if the product cost is a prime cost, conversion cost, or both. If the cost is a period cost, further determine if the cost is a selling expense or administrative expense (Admin). *Cost (a) is answered as a guide.*

Cost	Product					Period	
	DM	**DL**	**MOH**	**Prime**	**Conversion**	**Selling**	**Admin.**
a. *Metal used for rims*	***X***			***X***			
b. Sales salaries							
c. Rent on factory							
d. Wages of assembly workers							
e. Salary of production supervisor							
f. Depreciation on office equipment							
g. Salary of CEO							
h. Delivery expense							

Use the following data for Exercises E18-16, E18-17, and E18-18.

Selected data for three companies are given below. All inventory amounts are ending balances and all amounts are in millions.

Company A		**Company B**		**Company C**	
Cash	$ 6	Wages Expense	$ 12	Administrative Expenses	$ 4
Net Sales Revenue	48	Equipment	32	Cash	25
Finished Goods Inventory	10	Accounts Receivable	8	Net Sales Revenue	75
Cost of Goods Sold	23	Service Revenue	65	Selling Expenses	8
Selling Expenses	4	Cash	34	Merchandise Inventory	12
Equipment	67	Rent Expense	12	Equipment	55
Work-in-Process Inventory	9			Accounts Receivable	19
Accounts Receivable	14			Cost of Goods Sold	25
Cost of Goods Manufactured	23				
Administrative Expenses	7				
Raw Materials Inventory	6				

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E18-15, cont.
SOLUTION

Cost	Product			Product		Period	
	DM	**DL**	**MOH**	**Prime**	**Conversion**	**Selling**	**Admin**
a. Metal used for rims	***X***			***X***			
b. Sales salaries						**X**	
c. Rent on factory			**X**		**X**		
d. Wages of assembly workers		**X**		**X**	**X**		
e. Salary of production supervisor			**X**		**X**		
f. Depreciation on office equipment							**X**
g. Salary of CEO							**X**
h. Delivery expense						**X**	

E18-16 Identifying differences between service, merchandising, and manufacturing companies

Learning Objective 3

Using the above data, determine the company type. Identify each company as a service company, merchandising company, or manufacturing company.

SOLUTION

Company A is a manufacturing company. Company B is a service company. Company C is a merchandising company.

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E18-17 Identifying differences between service, merchandising, and manufacturing companies

Learning Objective 3

Company B: $41

Using the data on the previous page, calculate operating income for each company.

SOLUTION

Company A (all amounts in millions):

Net Sales Revenue		$ 48
Cost of Goods Sold		23
Gross Profit		25
Selling and Administrative Expenses:		
Selling Expenses	$ 4	
Administrative Expenses	7	
Total Selling and Administrative Expenses		11
Operating Income		$ 14

Company B (all amounts in millions):

Service Revenue		$ 65
Expenses:		
Wages Expense	$ 12	
Rent Expense	12	
Total Expenses		24
Operating Income		$ 41

Company C (all amounts in millions):

Net Sales Revenue		$ 75
Cost of Goods Sold		25
Gross Profit		50
Selling and Administrative Expenses:		
Selling Expenses	$ 8	
Administrative Expenses	4	
Total Selling and Administrative Expenses		12
Operating Income		$ 38

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E18-18 Identifying differences between service, merchandising, and manufacturing companies

Learning Objective 3

Company C: $56

Using the data on the previous page, calculate total current assets for each company.

SOLUTION

Company A (all amounts in millions):

Cash	$ 6
Accounts Receivable	14
Raw Materials Inventory	6
Work-in-Process Inventory	9
Finished Goods Inventory	10
Total current assets	$ 45

Company B (all amounts in millions):

Cash	$ 34
Accounts Receivable	8
Total current assets	$ 42

Company C (all amounts in millions):

Cash	$ 25
Accounts Receivable	19
Merchandise Inventory	12
Total current assets	$ 56

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E18-19 Computing cost of goods manufactured

Learning Objective 3

Consider the following partially completed schedules of cost of goods manufactured. Compute the missing amounts.

	Banner, Inc.	Larry's Bakery	Sports Gear
Beginning Work-in-Process Inventory	$ *(a)*	$ 40,800	$ 2,200
Direct Materials Used	14,400	35,900	*(g)*
Direct Labor	10,300	20,100	1,900
Manufacturing Overhead	*(b)*	10,000	900
Total Manufacturing Costs Incurred during the Year	45,200	*(d)*	*(h)*
Total Manufacturing Costs to Account for	55,400	*(e)*	8,300
Ending Work-in-Process Inventory	*(c)*	(25,500)	(2,600)
Cost of Goods Manufactured	$ 50,500	$ *(f)*	$ *(i)*

SOLUTION

(a)

Total Manufacturing Costs to Account For	$ 55,400
Total Manufacturing Costs Incurred during the Year	(45,200)
Beginning Work-in-Process Inventory	$ 10,200

(b)

Total Manufacturing Costs Incurred during the Year	$ 45,200
Direct Materials Used	(14,400)
Direct Labor	(10,300)
Manufacturing Overhead	$ 20,500

(c)

Total Manufacturing Costs to Account For	$ 55,400
Cost of Goods Manufactured	(50,500)
Ending Work-in-Process Inventory	$ 4,900

(d)

Direct Materials Used	$ 35,900
Direct Labor	20,100
Manufacturing Overhead	10,000
Total Manufacturing Costs Incurred during the Year	$ 66,000

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E18-19, cont.

(e)

Beginning Work-in-Process Inventory	$ 40,800
Total Manufacturing Costs Incurred during the Year [d, above]	66,000
Total Manufacturing Costs to Account For	$ 106,800

(f)

Total Manufacturing Costs to Account For [e, above]	$ 106,800
Ending Work-in-Process Inventory	(25,500)
Cost of Goods Manufactured	$ 81,300

(g)

Total Manufacturing Costs Incurred during the Year [h, below]	$ 6,100
Direct Labor	(1,900)
Manufacturing Overhead	(900)
Direct Materials Used	$ 3,300

(h)

Total Manufacturing Costs to Account For	$ 8,300
Beginning Work-in-Process Inventory	(2,200)
Total Manufacturing Costs Incurred During the Year	$ 6,100

(i)

Total Manufacturing Costs to Account For	$ 8,300
Ending Work-in-Process Inventory	(2,600)
Cost of Goods Manufactured	$ 5,700

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E18-20 Preparing a schedule of cost of goods manufactured

Learning Objective 3

1. COGM: $444,000

Wilson Corp., a lamp manufacturer, provided the following information for the year ended December 31, 2018:

Balances:	**Beginning**	**Ending**
Direct Materials	$ 59,000	$ 23,000
Work-in-Process Inventory	109,000	62,000
Finished Goods Inventory	41,000	44,000
Other information:		
Depreciation, plant building and equipment		$ 16,000
Direct materials purchases		151,000
Insurance on plant		24,000
Sales salaries		47,000
Repairs and maintenance—plant		10,000
Indirect labor		39,000
Direct labor		121,000
Administrative expenses		60,000

Requirements

1. Use the information to prepare a schedule of cost of goods manufactured.
2. What is the unit product cost if Wilson manufactured 3,700 lamps for the year?

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E18-20, cont.
SOLUTION

Requirement 1

WILSON CORP.
Schedule of Cost of Goods Manufactured
Year Ended December 31, 2018

Beginning Work-in-Process Inventory			$ 109,000
Direct Materials Used:			
Beginning Direct Materials	$ 59,000		
Purchases of Direct Materials	151,000		
Direct Materials Available for Use	210,000		
Ending Direct Materials	(23,000)		
Direct Materials Used		$ 187,000	
Direct Labor		121,000	
Manufacturing Overhead:			
Depreciation, plant building and equipment	16,000		
Insurance on plant	24,000		
Repairs and maintenance—plant	10,000		
Indirect labor	39,000		
Total Manufacturing Overhead		89,000	
Total Manufacturing Costs Incurred During the Year			397,000
Total Manufacturing Costs to Account For			506,000
Ending Work-in-Process Inventory			(62,000)
Cost of Goods Manufactured			$ 444,000

Requirement 2

Unit product cost = Cost of goods manufactured / Total units produced

= $444,000 / 3,700 lamps

= $120 per lamp

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E18-21 Computing cost of goods manufactured and cost of goods sold

Learning Objective 3

COGM: $211,000

Use the following information for a manufacturer to compute cost of goods manufactured and cost of goods sold:

Balances:	**Beginning**	**Ending**
Direct Materials	$ 27,000	$ 28,000
Work-in-Process Inventory	40,000	32,000
Finished Goods Inventory	18,000	25,000
Other information:		
Purchases of direct materials		$ 73,000
Direct labor		88,000
Manufacturing overhead		43,000

SOLUTION

Beginning Work-in-Process Inventory			$ 40,000
Direct Materials Used:			
Beginning Direct Materials	$ 27,000		
Purchases of Direct Materials	73,000		
Direct Materials Available for Use	100,000		
Ending Direct Materials	(28,000)		
Direct Materials Used		$ 72,000	
Direct Labor		88,000	
Manufacturing Overhead		43,000	
Total Manufacturing Costs Incurred During the Year			203,000
Total Manufacturing Costs to Account For			243,000
Ending Work-in-Process Inventory			(32,000)
Cost of Goods Manufactured			$ 211,000

Beginning Finished Goods Inventory	$ 18,000	
Cost of Goods Manufactured	211,000	[above]
Cost of Goods Available for Sale	229,000	
Ending Finished Goods Inventory	(25,000)	
Cost of Goods Sold	$ 204,000	

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E18-22 Understanding today's business environment

Learning Objective 4

Match the following terms to the appropriate statement. Some terms may be used more than once, and some terms may not be used at all.

E-commerce	Just-in-time management (JIT)
Enterprise resource planning (ERP)	Total quality management (TQM)

a. A management system that focuses on maintaining lean inventories while producing products as needed by the customer.

b. A philosophy designed to integrate all organizational areas in order to provide customers with superior products and services while meeting organizational objectives.

c. Integrates all of a company's functions, departments, and data into a single system.

d. Adopted by firms to conduct business on the Internet.

SOLUTION

a. JIT

b. TQM

c. ERP

d. E-Commerce

E18-23 Calculating income and cost per service for a service company

Learning Objectives 3, 5

1. $9,304

Buddy Grooming provides grooming services for pets. In April, the company earned $16,300 in revenues and incurred the following operating costs to groom 660 dogs:

Wages Expense	$ 4,061
Grooming Supplies Expense	1,675
Building Rent Expense	900
Utilities Expense	305
Depreciation Expense—Equipment	55

Requirements

1. What is Buddy's operating income for April?

2. What is the cost of service to groom one dog?

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E18-22, cont.
SOLUTION

Requirement 1

Grooming Revenue		$ 16,300
Expenses:		
Wages Expense	$ 4,061	
Grooming Supplies Expense	1,675	
Building Rent Expense	900	
Utilities Expense	305	
Depreciation Expense—Equipment	55	
Total Expenses		6,996
Operating Income		$ 9,304

Requirement 2

Cost of Service to Groom One Dog = Total expenses / Total number of dogs groomed

= $6,996 / 660 dogs

= $10.60 per dog

E18-24 Calculating income and cost per unit for a merchandising company

Learning Objectives 3, 5

2. $12.42

Conway Brush Company sells standard hair brushes. The following information summarizes Conway's operating activities for 2018:

Selling and Administrative Expenses	$ 47,058
Purchases	85,800
Net Sales Revenue	151,800
Merchandise Inventory, January 1, 2018	7,920
Merchandise Inventory, December 31, 2018	11,748

Requirements

1. Calculate the operating income for 2018.
2. Conway sold 6,600 brushes in 2018. Compute the unit cost for one brush.

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SOLUTION

Requirement 1

Net Sales Revenue		$ 151,800
Cost of Goods Sold:		
Beginning Merchandise Inventory	$ 7,920	
Purchases	85,800	
Cost of Goods Available for Sale	93,720	
Ending Merchandise Inventory	(11,748)	
Cost of Goods Sold		81,972
Gross Profit		69,828
Selling and Administrative Expenses		47,058
Operating Income		$ 22,770

Requirement 2

Unit cost for one brush = Cost of goods sold / Total units sold

= $81,972 / 6,600 brushes

= $12.42 per brush

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Problems (Group A)

P18-25A Applying ethical standards

Learning Objective 1

Natalia Wallace is the new controller for Smart Software, Inc. which develops and sells education software. Shortly before the December 31 fiscal year-end, James Cauvet, the company president, asks Wallace how things look for the year-end numbers. He is not happy to learn that earnings growth may be below 13% for the first time in the company's five-year history. Cauvet explains that financial analysts have again predicted a 13% earnings growth for the company and that he does not intend to disappoint them. He suggests that Wallace talk to the assistant controller, who can explain how the previous controller dealt with such situations. The assistant controller suggests the following strategies:

a. Persuade suppliers to postpone billing $13,000 in invoices until January 1.

b. Record as sales $115,000 in certain software awaiting sale that is held in a public warehouse.

c. Delay the year-end closing a few days into January of the next year so that some of the next year's sales are included in this year's sales.

d. Reduce the estimated Bad Debts Expense from 5% of Sales Revenue to 3%, given the company's continued strong performance.

e. Postpone routine monthly maintenance expenditures from December to January.

Requirements

1. Which of these suggested strategies are inconsistent with IMA standards?

2. How might these inconsistencies affect the company's creditors and stockholders?

3. What should Wallace do if Cauvet insists that she follow all of these suggestions?

SOLUTION

Students' responses will vary. Illustrative answers follow.

Requirement 1

a. If the goods have been received, postponing recording of the purchases understates liabilities. This is unethical and inconsistent with the IMA standards even if the suppliers agree to delay billing.

b. The software has not been sold. Therefore, it would be inconsistent with the IMA standards to record it as sales.

c. Delaying year-end closing incorrectly records next year's sales in this year's sales. This is unethical and inconsistent with the IMA standards.

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P18-25A, cont.

d. The appropriate allowance for bad debts is a difficult judgment. The decision should not be driven by the desire to meet a profit goal. It should be based on the likelihood that the company will not collect the debts. We cannot determine this without more information. However, since the company emphasizes earnings growth, which can lead to sales to customers with weaker credit records, reducing the allowance seems questionable. It is not clear whether this strategy is inconsistent with the IMA standards.

e. If the maintenance is postponed, there is no transaction to record. This strategy is beyond the responsibility of the controller, so it does not violate IMA standards.

Requirement 2

The inconsistencies noted for Smart Software, Inc. particularly impact the financial statement information provided by financial accounting to external users, such as creditors and stockholders. They will be led to believe the operating performance (profitability) of the company is better than it really is. This misrepresentation may result in the investors holding the stock when they may have sold it with the correct information. Similarly, creditors may grant credit to the company with the false income information when they may not grant credit with the correct income information.

Requirement 3

The controller should resist attempts to implement a, b, and c and should gather more information about d. If the President ignores Wallace, then Wallace needs to consider if she wants to work for a company that engages in unethical behavior. Accountants should not be associated with any unethical behavior, and Wallace should resign.

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P18-26A Classifying period costs and product costs

Learning Objective 2

Lawlor, Inc. is the manufacturer of lawn care equipment. The company incurs the following costs while manufacturing weed trimmers:

- Shaft and handle of weed trimmer
- Motor of weed trimmer
- Factory labor for workers assembling weed trimmers
- Nylon thread used by the weed trimmer (not traced to the product)
- Glue to hold the housing together
- Plant janitorial wages
- Depreciation on factory equipment
- Rent on plant
- Sales commissions
- Administrative salaries
- Plant utilities
- Shipping costs to deliver finished weed trimmers to customers

Requirements

1. Describe the difference between period costs and product costs.
2. Classify Lawlor's costs as period costs or product costs. If the costs are product costs, further classify them as direct materials, direct labor, or manufacturing overhead.

SOLUTION

Requirement 1

Period costs are non-manufacturing costs that are expensed in the accounting period in which they are incurred.

Product costs are all costs of purchasing or making a product. These costs are recorded as an asset (inventory) on the balance sheet until the asset is sold. The cost is then transferred to an expense account (Cost of Goods Sold) on the income statement. Product costs include direct materials, direct labor, and manufacturing overhead.

On the income statement, Cost of Goods Sold (product cost) is subtracted from Sales Revenue to determine gross profit. The period costs are then subtracted to determine operating income.

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P18-26A, cont.
Requirement 2

Cost:	Period Cost	Product Cost		
		Direct Materials	Direct Labor	Manufacturing Overhead
Shaft and handle of weed trimmer		X		
Motor of weed trimmer		X		
Factory labor for workers assembling weed trimmers			X	
Nylon thread used by the weed trimmer (not traced to the product)				X
Glue to hold housing together				X
Plant janitorial wages				X
Depreciation on factory equipment				X
Rent on plant				X
Sales commissions	X			
Administrative salaries	X			
Plant utilities				X
Shipping costs to deliver finished weed trimmers to customers	X			

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P18-27A Calculating cost of goods sold for merchandising and manufacturing companies

Learning Objective 3

3. Company B: $217,800

Below are data for two companies:

	Company A	Company B
Beginning balances:		
Merchandise Inventory	$ 10,600	
Finished Goods Inventory		$ 15,000
Ending balances:		
Merchandise Inventory	13,100	
Finished Goods Inventory		11,700
Net Purchases	154,500	
Cost of Goods Manufactured		214,500

Requirements

1. Define the three business types: service, merchandising, and manufacturing.
2. Based on the data given for the two companies, determine the business type of each one.
3. Calculate the cost of goods sold for each company.

SOLUTION

Requirement 1

Service companies sell services rather than products. They sell time, skills, and knowledge. Merchandising companies resell products previously bought from suppliers. Manufacturing companies use labor, equipment, supplies, and facilities to convert raw materials into new finished products.

Requirement 2

Company A is a merchandising company. Company B is a manufacturing company. The company types can be determined by the account names in the ledger.

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P18-27A, cont.
Requirement 3

Company A:

Beginning Merchandise Inventory	$ 10,600
Purchases (net)	154,500
Cost of Goods Available for Sale	165,100
Ending Merchandise Inventory	(13,100)
Cost of Goods Sold	$ 152,000

Company B:

Beginning Finished Goods Inventory	$ 15,000
Cost of Goods Manufactured	214,500
Cost of Goods Available for Sale	229,500
Ending Finished Goods Inventory	(11,700)
Cost of Goods Sold	$ 217,800

P18-28A Preparing a schedule of cost of goods manufactured and an income statement for a manufacturing company

Learning Objective 3

2. Operating income: $23,200

Gourmet Bones manufactures its own brand of pet chew bones. At the end of December 2018, the accounting records showed the following:

Balances:	**Beginning**	**Ending**
Direct Materials	$ 13,500	$ 7,500
Work-in-Process Inventory	0	3,500
Finished Goods Inventory	0	5,200
Other information:		
Direct materials purchases		$ 36,000
Plant janitorial services		700
Sales salaries		6,000
Delivery costs		1,300
Net sales revenue		107,000
Utilities for plant		1,300
Rent on plant		17,000
Customer service hotline costs		1,200
Direct labor		23,000

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P18-28A, cont.

Requirements

1. Prepare a schedule of cost of goods manufactured for Gourmet Bones for the year ended December 31, 2018.
2. Prepare an income statement for Gourmet Bones for the year ended December 31, 2018.
3. How does the format of the income statement for Gourmet Bones differ from the income statement of a merchandiser?
4. Gourmet Bones manufactured 17,900 units of its product in 2018. Compute the company's unit product cost for the year, rounded to the nearest cent.

SOLUTION

Requirement 1

GOURMET BONES
Schedule of Cost of Goods Manufactured
Year Ended December 31, 2018

Beginning Work-in-Process Inventory			$ 0
Direct Materials Used:			
Beginning Direct Materials	$ 13,500		
Purchases of Direct Materials	36,000		
Direct Materials Available for Use	49,500		
Ending Direct Materials	(7,500)		
Direct Materials Used		$ 42,000	
Direct Labor		23,000	
Manufacturing Overhead:			
Plant janitorial services	700		
Utilities for plant	1,300		
Rent on plant	17,000		
Total Manufacturing Overhead		19,000	
Total Manufacturing Costs Incurred during the Year			84,000
Total Manufacturing Costs to Account For			84,000
Ending Work-in-Process Inventory			(3,500)
Cost of Goods Manufactured			$ 80,500

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P18-28A, cont.
Requirement 2

GOURMET BONES Income Statement Year Ended December 31, 2018		
Revenues:		
Net Sales Revenue		$ 107,000
Cost of Goods Sold:		
Beginning Finished Goods Inventory	$ 0	
Cost of Goods Manufactured*	80,500	
Cost of Goods Available for Sale	80,500	
Ending Finished Goods Inventory	(5,200)	
Cost of Goods Sold		75,300
Gross Profit		31,700
Selling and Administrative Expenses:		
Sales Salaries Expense	6,000	
Delivery Expense	1,300	
Customer Service Hotline Expense	1,200	
Total Selling and Administrative Expenses		8,500
Operating Income (Loss)		$ 23,200

* From the Schedule of Cost of Goods Manufactured in Requirement 1.

Requirement 3

For a manufacturing company, cost of goods sold on the income statement is based on cost of goods manufactured and the change in Finished Goods Inventory. For a merchandising company, cost of goods sold on the income statement is based on cost of merchandise purchased (including freight in) and the change in Merchandise Inventory.

Requirement 4

Unit product cost = Cost of goods manufactured / Total units produced

= $80,500 / 17,900 units

= $4.50 per unit (rounded to nearest cent)

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P18-29A Preparing a schedule of cost of goods manufactured and an income statement for a manufacturing company

Learning Objective 3

COGM: $182,000

Certain item descriptions and amounts are missing from the monthly schedule of cost of goods manufactured and income statement of Elly Manufacturing Company. Fill in the blanks with the missing words, and replace the Xs with the correct amounts.

ELLY MANUFACTURING COMPANY _____ June 30, 2018			
Beginning _____			$ 27,000
Direct _____:			
Beginning Direct Materials	$ X		
Purchases of Direct Materials	56,000		
_____	84,000		
Ending Direct Materials	(20,000)		
Direct _____		$ X	
Direct _____		X	
Manufacturing Overhead		44,000	
Total _____ Costs _____			180,000
Total _____ Costs _____			X
Ending _____			(25,000)
_____			$ X

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P18-29A, cont.

ELLY MANUFACTURING COMPANY _____ June 30, 2018		
Net Sales Revenue		$ X
Cost of Goods Sold:		
Beginning _____	$ 110,000	
_____	X	
Cost of Goods _____	X	
Ending _____	X	
Cost of Goods Sold		232,000
Gross Profit		258,000
_____ Expenses:		
Selling Expenses	98,000	
Administrative Expenses	X	
Total _____		160,000
_____ Income		$ X

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P18-29A, cont.
SOLUTION

ELLY MANUFACTURING COMPANY
Schedule of Cost of Goods Manufactured
Month Ended June 30, 2018

Beginning Work-in-Process Inventory			$ 27,000
Direct Materials Used:			
Beginning Direct Materials	$ **28,000**		
Purchases of Direct Materials	56,000		
Direct Materials Available for Use	84,000		
Ending Direct Materials	(20,000)		
Direct Materials Used		**64,000**	
Direct Labor		**72,000**	
Manufacturing Overhead		44,000	
Total Manufacturing Costs Incurred During the Month			180,000
Total Manufacturing Costs to Account For			**207,000**
Ending Work-in-Process Inventory			(25,000)
Cost of Goods Manufactured			$ **182,000**

Missing Amounts:

Beginning Direct Materials

Direct Materials Available for Use	$ 84,000
Purchases of Direct Materials	(56,000)
Beginning Direct Materials	$ 28,000

Direct Materials Used:

Direct Materials Available for Use	$ 84,000
Ending Direct Materials	(20,000)
Direct Materials Used	$ 64,000

Direct Labor:

Total Manufacturing Costs Incurred During the Month	$ 180,000
Manufacturing Overhead	(44,000)
Direct Materials Used [calculated above]	(64,000)
Direct Labor	$ 72,000

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P18-29A, cont.

Total Manufacturing Costs to Account For:

Beginning Work-in-Process Inventory	$ 27,000
Total Manufacturing Costs Incurred During the Month	180,000
Total Manufacturing Costs to Account For	$ 207,000

Cost of Goods Manufactured:

Total Manufacturing Costs to Account For [calculated above]	$ 207,000
Ending Work-in-Process Inventory	(25,000)
Cost of Goods Manufactured	$ 182,000

ELLY MANUFACTURING COMPANY
Income Statement
Month Ended June 30, 2018

Net Sales Revenue		$ **490,000**
Cost of Goods Sold:		
Beginning Finished Goods Inventory	$ 110,000	
Cost of Goods Manufactured	**182,000**	
Cost of Goods Available for Sale	**292,000**	
Ending Finished Goods Inventory	**(60,000)**	
Cost of Goods Sold		232,000
Gross Profit		258,000
Selling and Administrative Expenses:		
Selling Expenses	98,000	
Administrative Expenses	**62,000**	
Total Selling and Administrative Expenses		160,000
Operating Income		$ **98,000**

Missing Amounts:

Net Sales Revenue:

Cost of Goods Sold	$ 232,000
Gross Profit	258,000
Net Sales Revenue	$ 490,000

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P18-29A, cont.

Cost of Goods Manufactured:
[From the Schedule of Cost of Goods Manufactured]

Cost of Goods Available for Sale:

Beginning Finished Goods Inventory	$ 110,000
Cost of Goods Manufactured	182,000
Cost of Goods Available for Sale	$ 292,000

Ending Finished Goods Inventory:

Cost of Goods Available for Sale [calculated above]	$ 292,000
Cost of Goods Sold	(232,000)
Ending Finished Goods Inventory	$ 60,000

Administrative Expenses:

Total Selling and Administrative Expenses	$ 160,000
Selling Expenses	(98,000)
Administrative Expenses	$ 62,000

Operating Income:

Gross Profit	$ 258,000
Total Selling and Administrative Expenses	(160,000)
Operating Income	$ 98,000

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P18-30A Determining flow of costs through a manufacturer's inventory accounts

Learning Objective 3

3. $26,400,000

Root Shoe Company makes loafers. During the most recent year, Root incurred total manufacturing costs of $26,300,000. Of this amount, $2,000,000 was direct materials used and $19,800,000 was direct labor. Beginning balances for the year were Direct Materials, $700,000; Work-in-Process Inventory, $1,500,000; and Finished Goods Inventory, $400,000. At the end of the year, balances were Direct Materials, $800,000; Work-in-Process Inventory, $1,200,000; and Finished Goods Inventory, $600,000.

Requirements

Analyze the inventory accounts to determine:

1. Cost of direct materials purchased during the year.

2. Cost of goods manufactured for the year.

3. Cost of goods sold for the year.

SOLUTION

Requirement 1

Cost of direct materials purchased:

Direct Materials Used	=	Beginning Direct Materials	+	Purchases of Direct Materials	–	Ending Direct Materials

Solving for cost of direct materials purchased:

Purchases of Direct Materials	=	Direct Materials Used	+	Ending Direct Materials	–	Beginning Direct Materials
	=	$2,000,000	+	$800,000	–	$700,000
	=	$2,100,000				

Requirement 2

Cost of goods manufactured for the year:

Cost of Goods Manufactured	=	Beginning Work-in-Process Inventory	+	Total Manufacturing Costs Incurred	–	Ending Work-in-Process Inventory
	=	$1,500,000	+	$26,300,000	–	$1,200,000
	=	$26,600,000				

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Requirement 3

Cost of goods sold for the year:

Cost of Goods Sold	=	Beginning Finished Goods Inventory	+	Cost of Goods Manufactured	–	Ending Finished Goods Inventory
	=	$400,000	+	$26,600,000 [calculated in 2]	–	$600,000
	=	$26,400,000				

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P18-31A Preparing an income statement and calculating unit cost for a service company

Learning Objectives 3, 5

2. $37.72

The Windshield Doctors repair chips in car windshields. The company incurred the following operating costs for the month of March 2018:

Salaries and wages	$ 12,000
Windshield repair materials	4,600
Depreciation on truck	300
Depreciation on building and equipment	1,200
Supplies used	300
Utilities	460

The Windshield Doctors earned $23,000 in service revenues for the month of March by repairing 500 windshields. All costs shown are considered to be directly related to the repair service.

Requirements

1. Prepare an income statement for the month of March.
2. Compute the cost per unit of repairing one windshield.
3. The manager of Windshield Doctors must keep unit operating cost below $50 per windshield in order to get his bonus. Did he meet the goal?

SOLUTION

Requirement 1

THE WINDSHIELD DOCTORS
Income Statement
Month Ended March 31, 2018

Revenues:		
Net Service Revenue		$ 23,000
Expenses:		
Salaries and Wages Expense	$ 12,000	
Materials Expense	4,600	
Depreciation Expense—Truck	300	
Depreciation Expense—Building and Equipment	1,200	
Supplies Expense	300	
Utilities Expense	460	
Total Expenses		18,860
Operating Income		$ 4,140

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P18-31A, cont.
Requirement 2

Unit cost = Total expenses / Total windshields repaired

= $18,860 / 500 windshields

= $37.72 per windshield

Requirement 3

Yes. The actual unit cost per windshield of $37.72 is less than $50.

P18-32A Preparing an income statement and calculating unit cost for a merchandising company

Learning Objectives 3, 5

1. Operating income: $15,150

Clyde Conway owns Clyde's Pets, a small retail shop selling pet supplies. On December 31, 2018, the accounting records of Clyde's Pets showed the following:

Merchandise Inventory on December 31, 2018	$ 10,100
Merchandise Inventory on January 1, 2018	15,900
Net Sales Revenue	56,000
Utilities Expense for the shop	3,300
Rent for the shop	4,100
Sales Commissions	2,650
Purchases of Merchandise Inventory	25,000

Requirements

1. Prepare an income statement for Clyde's Pets for the year ended December 31, 2018.
2. Clyde's Pets sold 3,850 units. Determine the unit cost of the merchandise sold, rounded to the nearest cent.

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P18-32A, cont.
SOLUTION

Requirement 1

CLYDE'S PETS
Income Statement
Year Ended December 31, 2018

Revenues:		
Net Sales Revenue		$ 56,000
Cost of Goods Sold:		
Beginning Merchandise Inventory	$ 15,900	
Purchases of Merchandise	25,000	
Cost of Goods Available for Sale	40,900	
Ending Merchandise Inventory	(10,100)	
Cost of Goods Sold		30,800
Gross Profit		25,200
Selling and Administrative Expenses:		
Utilities Expense	3,300	
Rent Expense	4,100	
Sales Commission Expense	2,650	
Total Selling and Administrative Expenses		10,050
Operating Income		$ 15,150

Requirement 2

Unit cost = Cost of goods sold / Total units sold

= $30,800 / 3,850 units

= $8.00 per unit

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Problems (Group B)

P18-33B Applying ethical standards

Learning Objective 1

Ava Borzi is the new controller for Halo Software, Inc. which develops and sells education software. Shortly before the December 31 fiscal year-end, Jeremy Busch, the company president, asks Borzi how things look for the year-end numbers. He is not happy to learn that earnings growth may be below 9% for the first time in the company's five-year history. Busch explains that financial analysts have again predicted a 9% earnings growth for the company and that he does not intend to disappoint them. He suggests that Borzi talk to the assistant controller, who can explain how the previous controller dealt with such situations. The assistant controller suggests the following strategies:

a. Persuade suppliers to postpone billing $18,000 in invoices until January 1.

b. Record as sales $120,000 in certain software awaiting sale that is held in a public warehouse.

c. Delay the year-end closing a few days into January of the next year so that some of the next year's sales are included in this year's sales.

d. Reduce the estimated Bad Debts Expense from 3% of Sales Revenue to 2%, given the company's continued strong performance.

e. Postpone routine monthly maintenance expenditures from December to January.

Requirements

1. Which of these suggested strategies are inconsistent with IMA standards?

2. How might these inconsistencies affect the company's creditors and stockholders?

3. What should Borzi do if Busch insists that she follow all of these suggestions?

SOLUTION

Students' responses will vary. Illustrative answers follow.

Requirement 1

a. If the goods have been received, postponing recording of the purchases understates liabilities. This is unethical and inconsistent with the IMA standards even if the suppliers agree to delay billing.

b. The software has not been sold. Therefore, it would be inconsistent with the IMA standards to record it as sales.

c. Delaying year-end closing incorrectly records next year's sales in this year's sales. This is unethical and inconsistent with the IMA standards.

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P18-33B, cont.

d. The appropriate allowance for bad debts is a difficult judgment. The decision should not be driven by the desire to meet a profit goal. It should be based on the likelihood that the company will not collect the debts. We cannot determine this without more information. However, since the company emphasizes earnings growth, which can lead to sales to customers with weaker credit records, reducing the allowance seems questionable. It is not clear whether this strategy is inconsistent with the IMA standards.

e. If the maintenance is postponed, there is no transaction to record. This strategy is beyond the responsibility of the controller, so it does not violate IMA standards.

Requirement 2

The inconsistencies noted for Halo Software, Inc. particularly impact the financial statement information provided by financial accounting to external users, such as creditors and stockholders. They will be led to believe the operating performance (profitability) of the company is better than it really is. This misrepresentation may result in the investors holding the stock when they may have sold it with the correct information. Similarly, creditors may grant credit to the company with the false income information when they may not grant credit with the correct income information.

Requirement 3

The controller should resist attempts to implement a, b, and c and should gather more information about d. If the President ignores Borzi, then Borzi needs to consider if she wants to work for a company that engages in unethical behavior. Borzi should not be associated with unethical behavior and should resign.

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P18-34B Classifying period costs and product costs

Learning Objective 2

Langley, Inc. is the manufacturer of lawn care equipment. The company incurs the following costs while manufacturing edgers:

- Handle and shaft of edger
- Motor of edger
- Factory labor for workers assembling edgers
- Lubricant used on bearings in the edger (not traced to the product)
- Glue to hold the housing together
- Plant janitorial wages
- Depreciation on factory equipment
- Rent on plant
- Sales commissions
- Administrative salaries
- Plant utilities
- Shipping costs to deliver finished edgers to customers

Requirements

1. Describe the difference between period costs and product costs.
2. Classify Langley's costs as period costs or product costs. If the costs are product costs, further classify them as direct materials, direct labor, or manufacturing overhead.

SOLUTION

Requirement 1

Period costs are non-manufacturing costs that are expensed in the accounting period in which they are incurred.

Product costs are the costs of purchasing or making a product. These costs are recorded as an asset (inventory) on the balance sheet until the asset is sold. The cost is then transferred to an expense account (Cost of Goods Sold) on the income statement. Product costs include direct materials, direct labor, and manufacturing overhead.

On the income statement, Cost of Goods Sold (product cost) is subtracted from Sales Revenue to determine gross profit. The period costs are then subtracted from gross profit to determine operating income.

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P18-34B, cont.
Requirement 2

Cost:	Period Cost	Product Cost		
		Direct Materials	Direct Labor	Manufacturing Overhead
Handle and shaft of edger		X		
Motor of edger		X		
Factory labor for workers assembling edgers			X	
Lubricant used on bearings in the edger (not traced to the product)				X
Glue to hold housing together				X
Plant janitorial wages				X
Depreciation on factory equipment				X
Rent on plant				X
Sales commissions	X			
Administrative salaries	X			
Plant utilities				X
Shipping costs to deliver finished edgers to customers	X			

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P18-35B Calculating cost of goods sold for merchandising and manufacturing companies

Learning Objective 3

3. Company 2: $218,600

Below are data for two companies:

	Company 1	Company 2
Beginning balances:		
Merchandise Inventory	$ 11,600	
Finished Goods Inventory		$ 15,400
Ending balances:		
Merchandise Inventory	12,400	
Finished Goods Inventory		11,300
Net Purchases	152,500	
Cost of Goods Manufactured		214,500

Requirements

1. Define the three business types: service, merchandising, and manufacturing.
2. Based on the data given for the two companies, determine the business type of each one.
3. Calculate the cost of goods sold for each company.

SOLUTION

Requirement 1

Service companies sell services rather than products. They sell time, skills, and knowledge. Merchandising companies resell products previously bought from suppliers. Manufacturing companies use labor, equipment, supplies, and facilities to convert raw materials into new finished products.

Requirement 2

Company 1 is a merchandising company. Company 2 is a manufacturing company. The company type can be determined by the account names in the ledger.

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Requirement 3

Company 1:

Beginning Merchandise Inventory	$ 11,600
Purchases (net)	152,500
Cost of Goods Available for Sale	164,100
Ending Merchandise Inventory	(12,400)
Cost of Goods Sold	$ 151,700

Company 2:

Beginning Finished Goods Inventory	$ 15,400
Cost of Goods Manufactured	214,500
Cost of Goods Available for Sale	229,900
Ending Finished Goods Inventory	(11,300)
Cost of Goods Sold	$ 218,600

P18-36B Preparing a schedule of cost of goods manufactured and an income statement for a manufacturing company

Learning Objective 3

2. Operating income: $44,500

Chewy Bones manufactures its own brand of pet chew bones. At the end of December 2018, the accounting records showed the following:

Balances:	**Beginning**	**Ending**
Direct Materials	$ 13,400	$ 10,500
Work-in-Process Inventory	0	1,500
Finished Goods Inventory	0	5,400
Other information:		
Direct materials purchases		$ 39,000
Plant janitorial services		900
Sales salaries		5,100
Delivery costs		1,700
Net sales revenue		115,000
Utilities for plant		1,200
Rent on plant		9,000
Customer service hotline costs		1,600
Direct labor		16,000

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P18-36B, cont.

Requirements

1. Prepare a schedule of cost of goods manufactured for Chewy Bones for the year ended December 31, 2018.
2. Prepare an income statement for Chewy Bones for the year ended December 31, 2018.
3. How does the format of the income statement for Chewy Bones differ from the income statement of a merchandiser?
4. Chewy Bones manufactured 17,500 units of its product in 2018. Compute the company's unit product cost for the year, rounded to the nearest cent.

SOLUTION

Requirement 1

CHEWY BONES
Schedule of Cost of Goods Manufactured
Year Ended December 31, 2018

Beginning Work-in-Process Inventory			$ 0
Direct Materials Used:			
Beginning Direct Materials	$ 13,400		
Purchases of Direct Materials	39,000		
Direct Materials Available for Use	52,400		
Ending Direct Materials	(10,500)		
Direct Materials Used		$ 41,900	
Direct Labor		16,000	
Manufacturing Overhead:			
Plant janitorial services	900		
Utilities for plant	1,200		
Rent on plant	9,000		
Total Manufacturing Overhead		11,100	
Total Manufacturing Costs Incurred during the Year			69,000
Total Manufacturing Costs to Account For			69,000
Ending Work-in-Process Inventory			(1,500)
Cost of Goods Manufactured			$ 67,500

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P18-36B, cont.
Requirement 2

CHEWY BONES Income Statement Year Ended December 31, 2018		
Revenues:		
Net Sales Revenue		$ 115,000
Cost of Goods Sold:		
Beginning Finished Goods Inventory	$ 0	
Cost of Goods Manufactured*	67,500	
Cost of Goods Available for Sale	67,500	
Ending Finished Goods Inventory	(5,400)	
Cost of Goods Sold		62,100
Gross Profit		52,900
Selling and Administrative Expenses:		
Sales Salaries Expense	5,100	
Delivery Expense	1,700	
Customer Service Hotline Expense	1,600	
Total Selling and Administrative Expenses		8,400
Operating Income (Loss)		$ 44,500

* From the Schedule of Cost of Goods Manufactured in Requirement 1.

Requirement 3

For a manufacturing company, cost of goods sold on the income statement is based on cost of goods manufactured and the change in Finished Goods Inventory. For a merchandising company, cost of goods sold on the income statement is based on cost of merchandise purchased (including freight in) and the change in Merchandise Inventory.

Requirement 4

Unit cost = Cost of goods manufactured / Total units produced

= $67,500 / 17,500 units

= $3.86 per unit (rounded to the nearest cent)

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P18-37B Preparing a schedule of cost of goods manufactured and an income statement for a manufacturing company

Learning Objective 3

COGM: $174,000

Certain item descriptions and amounts are missing from the monthly schedule of cost of goods manufactured and income statement of Charlie Manufacturing Company. Fill in the blanks with the missing words, and replace the Xs with the correct amounts.

CHARLIE MANUFACTURING COMPANY _____ June 30, 2018			
Beginning _____			$ 26,000
Direct _____:			
Beginning Direct Materials	$ X		
Purchases of Direct Materials	51,000		
_____	81,000		
Ending Direct Materials	(26,000)		
Direct _____		$ X	
Direct _____		X	
Manufacturing Overhead		50,000	
Total _____ Costs _____			177,000
Total _____ Costs _____			X
Ending _____			(29,000)
_____			$ X

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P18-37B. cont.

CHARLIE MANUFACTURING COMPANY _____ June 30, 2018		
Net Sales Revenue		$ X
Cost of Goods Sold:		
Beginning _____	$ 118,000	
_____	X	
Cost of Goods _____	X	
Ending _____	X	
Cost of Goods Sold		232,000
Gross Profit		268,000
_____ Expenses:		
Selling Expenses	90,000	
Administrative Expenses	X	
Total _____		150,000
_____ Income		$ X

SOLUTION

CHARLIE MANUFACTURING COMPANY
Schedule of Cost of Goods Manufactured
Month Ended June 30, 2018

Beginning Work-in-Process Inventory			$ 26,000
Direct Materials Used:			
Beginning Direct Materials	$ **30,000**		
Purchases of Direct Materials	51,000		
Direct Materials Available for Use	81,000		
Ending Direct Materials	(26,000)		
Direct Materials Used		$ **55,000**	
Direct Labor		**72,000**	
Manufacturing Overhead		50,000	
Total Manufacturing Costs Incurred During the Month			177,000
Total Manufacturing Costs to Account For			**203,000**
Ending Work-in-Process Inventory			(29,000)
Cost of Goods Manufactured			$ **174,000**

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P18-37B, cont.

Missing Amounts:

Beginning Direct Materials:

Direct Materials Available for Use	$ 81,000
Purchases of Direct Materials	(51,000)
Beginning Direct Materials	$ 30,000

Direct Materials Used:

Direct Materials Available for Use	$ 81,000
Ending Direct Materials	(26,000)
Direct Materials Used	$ 55,000

Direct Labor:

Total Manufacturing Costs Incurred During the Month	$ 177,000
Manufacturing Overhead	(50,000)
Direct Materials Used [calculated above]	(55,000)
Direct Labor	$ 72,000

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P18-37B, cont.

Total Manufacturing Costs to Account For:

Beginning Work-in-Process Inventory	$ 26,000
Total Manufacturing Costs Incurred During the Month	177,000
Total Manufacturing Costs to Account For	$ 203,000

Cost of Goods Manufactured:

Total Manufacturing Costs to Account For [calculated above]	$ 203,000
Ending Work-in-Process Inventory	(29,000)
Cost of Goods Manufactured	$ 174,000

CHARLIE MANUFACTURING COMPANY
Income Statement
Month Ended June 30, 2018

Net Sales Revenue		$ **500,000**
Cost of Goods Sold:		
Beginning Finished Goods Inventory	$ 118,000	
Cost of Goods Manufactured	**174,000**	
Cost of Goods Available for Sale	**292,000**	
Ending Finished Goods Inventory	**(60,000)**	
Cost of Goods Sold		232,000
Gross Profit		268,000
Selling and Administrative Expenses:		
Selling Expenses	90,000	
Administrative Expenses	**60,000**	
Total Selling and Administrative Expenses		150,000
Operating Income		$ **118,000**

Missing Amounts:

Net Sales Revenue:

Cost of Goods Sold	$ 232,000
Gross Profit	268,000
Net Sales Revenue	$ 500,000

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P18-37B, cont.

Cost of Goods Manufactured:
[From the Schedule of Cost of Goods Manufactured]

Cost of Goods Available for Sale:

Beginning Finished Goods Inventory	$ 118,000
Cost of Goods Manufactured	174,000
Cost of Goods Available for Sale	$ 292,000

Ending Finished Goods Inventory:

Cost of Goods Available for Sale [calculated above]	$ 292,000
Cost of Goods Sold	(232,000)
Ending Finished Goods Inventory	$ 60,000

Administrative Expenses:

Total Selling and Administrative Expenses	$ 150,000
Selling Expenses	(90,000)
Administrative Expenses	$ 60,000

Operating Income:

Gross Profit	$ 268,000
Total Selling and Administrative Expenses	(150,000)
Operating Income	$ 118,000

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P18-38B Determining the flow of costs through a manufacturer's inventory accounts

Learning Objective 3

3. $21,420,000

True Fit Shoe Company makes loafers. During the most recent year, True Fit incurred total manufacturing costs of $21,900,000. Of this amount, $2,600,000 was direct materials used and $14,800,000 was direct labor. Beginning balances for the year were Direct Materials, $700,000; Work-in-Process Inventory, $1,500,000; and Finished Goods Inventory, $1,100,000. At the end of the year, balances were Direct Materials, $800,000; Work-in-Process Inventory, $2,000,000; and Finished Goods Inventory, $1,080,000.

Requirements

Analyze the inventory accounts to determine:

1. Cost of direct materials purchased during the year.
2. Cost of goods manufactured for the year.
3. Cost of goods sold for the year.

SOLUTION

Requirement 1

Cost of direct materials purchased during the year:

Direct Materials Used	=	Beginning Direct Materials	+	Purchases of Direct Materials	–	Ending Direct Materials

Solving for cost of direct materials purchased:

Purchases of Direct Materials	=	Direct Materials Used	+	Ending Direct Materials	–	Beginning Direct Materials
	=	$2,600,000	+	$800,000	–	$700,000
	=	$2,700,000				

Requirement 2

Cost of goods manufactured for the year:

Cost of Goods Manufactured	=	Beginning Work-in-Process Inventory	+	Total Manufacturing Costs Incurred	–	Ending Work-in-Process Inventory
	=	$1,500,000	+	$21,900,000	–	$2,000,000
	=	$21,400,000				

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P18-38B, cont.
Requirement 3

Cost of goods sold for the year:

Cost of Goods Sold	=	Beginning Finished Goods Inventory	+	Cost of Goods Manufactured	–	Ending Finished Goods Inventory
	=	$1,100,000	+	$21,400,000 [calculated in 2]	–	$1,080,000
	=	$21,420,000				

P18-39B Preparing an income statement and calculating unit cost for a service company

Learning Objectives 3, 5

2. $82.00

The Glass Doctors repair chips in car windshields. The company incurred the following operating costs for the month of July 2018:

Salaries and wages	$ 10,000
Windshield repair materials	4,100
Depreciation on truck	500
Depreciation on building and equipment	900
Supplies used	450
Utilities	4,550

The Glass Doctors earned $25,000 in service revenues for the month of July by repairing 250 windshields. All costs shown are considered to be directly related to the repair service.

Requirements

1. Prepare an income statement for the month of July.
2. Compute the cost per unit of repairing one windshield, rounded to the nearest cent.
3. The manager of The Glass Doctors must keep unit operating cost below $80 per windshield in order to get his bonus. Did he meet the goal?

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P18-39B, cont.
SOLUTION

Requirement 1

THE GLASS DOCTORS Income Statement Month Ended July 31, 2018		
Revenues:		
Net Service Revenue		$ 25,000
Expenses:		
Salaries and Wages Expense	$ 10,000	
Materials Expense	4,100	
Depreciation Expense—Truck	500	
Depreciation Expense—Building and Equipment	900	
Supplies Expense	450	
Utilities Expense	4,550	
Total Expenses		20,500
Operating Income		$ 4,500

Requirement 2

Unit cost = Total expenses / Total windshields repaired

= $20,500 / 250 windshields

= $82.00 per windshield

Requirement 3

No. The actual unit cost per windshield of $82.00 is greater than $80.

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P18-40B Preparing an income statement and calculating unit cost for a merchandising company

Learning Objectives 3, 5

1. Operating income: $15,450

Dillon Young owns Dillon's Pets, a small retail shop selling pet supplies. On December 31, 2018, the accounting records for Dillon's Pets showed the following:

Merchandise Inventory on December 31, 2018	$ 10,500
Merchandise Inventory on January 1, 2018	16,000
Net Sales Revenue	56,000
Utilities Expense for the shop	3,200
Rent for the shop	4,100
Sales Commissions	2,750
Purchases of Merchandise Inventory	25,000

Requirements

1. Prepare an income statement for Dillon's Pets for the year ended December 31, 2018.
2. Dillon's Pets sold 5,550 units. Determine the unit cost of the merchandise sold, rounded to the nearest cent.

SOLUTION

Requirement 1

DILLON'S PETS
Income Statement
Year Ended December 31, 2018

Revenues:		
Net Sales Revenue		$ 56,000
Cost of Goods Sold:		
Beginning Merchandise Inventory	$ 16,000	
Purchases of Merchandise	25,000	
Cost of Goods Available for Sale	41,000	
Ending Merchandise Inventory	(10,500)	
Cost of Goods Sold		30,500
Gross Profit		25,500
Selling and Administrative Expenses:		
Utilities Expense	3,200	
Rent Expense	4,100	
Sales Commission Expense	2,750	
Total Selling and Administrative Expenses		10,050
Operating Income		$ 15,450

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P18-40B, cont.
Requirement 2

Unit cost	=	Cost of goods sold / Total units sold
	=	$30,500 / 5,550 units
	=	$5.50 per unit (rounded to the nearest cent)

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Using Excel

P18-41 Using Excel to classify manufacturing costs and to determine the cost of manufactured products.

Download an Excel template for this problem online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

Fremont Troll House Cookies has been baking coconut cookies for 27 years. Classify manufacturing costs, and prepare schedules for the Cost of Goods Manufactured and the Cost of Goods Sold for the month ended March 31, 2018.

Requirements

1. Use Excel to classify the costs

a. Classify the costs as either period costs or product costs.

i. To classify the cost, click in the cell. A drop down arrow will appear to the right. Click the arrow and select either Product or Period.

b. Classify the product costs as direct materials, direct labor, or manufacturing overhead.

i. To identify the classification, click in the cell. A drop down arrow will appear to the right. Click the arrow. If it's a product cost, select direct materials, direct labor, or manufacturing overhead. If it's a period cost, select expense.

2. Complete the Schedule of Cost of Goods Manufactured. Use the blue shaded areas for inputs. Use the following amounts: direct materials used, $2,500; direct labor, $3,000; manufacturing overhead, $11,000; beginning Work-in-Process Inventory, $1,500; and ending Work-in-Process Inventory, $1,200.

a. Complete the heading

b. To select the correct report caption, click in the cell. A drop down arrow will appear to the right. Click the arrow and select the appropriate caption from the alphabetical list.

c. Indent the captions for Direct Materials Used, Direct Labor, and Manufacturing Overhead. Use the Increase Indent button on the Home tab in the Alignment section.



d. Complete the amounts to the right. Use the Excel function SUM to sum amounts on the schedule.

e. Format the cells requiring dollar signs.

f. Format underlines or double underlines as needed.

g. Boldface the total.

3. Using the results from Requirement 2, calculate the cost per unit for goods manufactured assuming 16,000 units were manufactured. Use the blue shaded areas for inputs. Use a formula to calculate the cost per unit.

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4. Complete the Cost of Goods Sold schedule. Beginning Finished Goods had 500 units that had a cost of $0.98 each. Ending Finished Goods Inventory had 700 units.

   a. Complete the heading.

   b. Using the results from Requirement 3, calculate cost of goods sold assuming FIFO inventory costing is used.

   c. To select the correct report caption, click in the cell. A drop down arrow will appear to the right. Click the arrow and select the appropriate caption from the alphabetical list.

   d. Complete the amounts to the right. Use the Excel function SUM to derive the Cost of Goods Sold.

   e. Format the cells requiring dollar signs.

   f. Format underlines or double underlines as needed.

   g. Boldface the total.

SOLUTION

The student templates for *Using Excel* are available online in MyAccountingLab in the Multimedia Library or at http://www.pearsonhighered.com/Horngren. The solution to *Using Excel* is located in MyAccountingLab in the Instructor Resource Center or at http://www.pearsonhighered.com/Horngren.

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Continuing Problem

P18-42

This is the first problem in a sequence of problems for Piedmont Computer Company, a manufacturer of personal computers and tablets. During its first month of manufacturing, Piedmont Computer Company incurred the following manufacturing costs:

Balances:	**Beginning**	**Ending**
Direct Materials	$ 10,500	$ 9,700
Work-in-Process Inventory	0	17,000
Finished Goods Inventory	0	31,000
Other information:		
Direct materials purchases		$ 16,000
Plant janitorial services		500
Sales salaries expense		10,000
Delivery expense		1,600
Sales revenue		1,100,000
Utilities for plant		16,000
Rent on plant		9,000
Customer service hotline costs		19,000
Direct labor		210,000

Prepare a schedule of cost of goods manufactured for Piedmont Computer Company for the month ended January 31, 2020.

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SOLUTION

PIEDMONT COMPUTER COMPANY
Schedule of Cost of Goods Manufactured
Month Ended January 31, 2020

Beginning Work-in-Process Inventory			$ 0
Direct Materials Used:			
Beginning Direct Materials	$ 10,500		
Purchases of Direct Materials	16,000		
Direct Materials Available for Use	26,500		
Ending Direct Materials	(9,700)		
Direct Materials Used		$ 16,800	
Direct Labor		210,000	
Manufacturing Overhead:			
Plant janitorial services	500		
Utilities for plant	16,000		
Rent on plant	9,000		
Total Manufacturing Overhead		25,500	
Total Manufacturing Costs Incurred during the Month			252,300
Total Manufacturing Costs to Account For			252,300
Ending Work-in-Process Inventory			(17,000)
Cost of Goods Manufactured			$ 235,300

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Critical Thinking

Tying It All Together Case 18–1

Before you begin this assignment, review the Tying It All Together feature in the chapter.

Winnebago Industries, Inc. 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 29, 2015, balance sheet, Winnebago reported inventory of approximately $112 million. Of this amount, approximately $12 million, about 11%, was Finished Goods Inventory (Notes to Consolidated Financial Statements, Note 3). Suppose Winnebago motor homes have an average sales price of $96,000 and cost of goods sold is 89% of sales. Thor Industries, Inc., a major competitor, has an average cost of goods sold of 86% of sales. For year ending August 29, 2015, Winnebago sold 9,097 motor homes (Form 10-K, Item 1 Business).

Requirements

1. Why would the Finished Goods Inventory be such a relatively small portion of total inventory?
2. What is the average cost of goods sold (in dollars) for a Winnebago motor home? What is the average gross profit?
3. If Winnebago could reduce production costs so that the average cost of goods sold is equal to their competitor's average cost of goods sold, how much more profit would Winnebago earn on each motor home sold?
4. Based on 2015 sales, how much would operating income increase if the company reduced the average cost of goods sold to equal their competitor's average cost of goods sold?
5. How could managers at Winnebago use managerial accounting to reduce costs and increase profits?

SOLUTION

Requirement 1

Winnebago's finished goods inventory is such a relatively small portion of total inventory because Winnebago manufactures the RVs and then sells them to dealerships for resale to consumers. The company does not own or operate dealerships. Therefore, Winnebago has a relatively small portion of Finished Goods Inventory. As soon as RVs are complete, Winnebago will want to sell them to the dealerships. The majority of Winnebago's inventory is in Raw Materials Inventory that will be used in the manufacturing process and Work–in–Process Inventory of the RVs started but not yet completed.

Requirement 2

Average cost of goods sold = Average sales price × Cost of goods sold % = $96,000 × 89% = $85,440.
Average gross profit = Average sales price – Average cost of goods sold = $96,000 – $85,440 = $10,560.

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Requirement 3
Average cost of goods sold = Average sales price × Cost of goods sold % = $96,000 × 86% = $82,560. Average gross profit = Average sales price – Average cost of goods sold = $96,000 – $82,560 = $13,440. Profits would increase by $2,880 ($13,440 – $10,560) per motor home sold.

Requirement 4
Total increase in operating income = Average increase in profits per motor home × Number of motor homes = $2,880 per motor home × 9,097 motor homes = $26,199,360.

Requirement 5
Managerial accounting provides detailed information on all costs incurred by the company. Managers can use the information provided to analyze different types of costs, such as product costs and period costs, to determine where actual costs exceeded expected costs and then consider options to reduce those costs.

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Decision Case 18-1

Power Switch, Inc. designs and manufactures switches used in telecommunications. Serious flooding throughout North Carolina affected Power Switch's facilities. Inventory was completely ruined, and the company's computer system, including all accounting records, was destroyed.

Before the disaster recovery specialists clean the buildings, Stephen Plum, the company controller, is anxious to salvage whatever records he can to support an insurance claim for the destroyed inventory. He is standing in what is left of the accounting department with Paul Lopez, the cost accountant.

"I didn't know mud could smell so bad," Paul says. "What should I be looking for?"

"Don't worry about beginning inventory numbers," responds Stephen, "we'll get them from last year's annual report. We need first-quarter cost data."

"I was working on the first-quarter results just before the storm hit," Paul says. "Look, my report is still in my desk drawer. All I can make out is that for the first quarter, direct material purchases were $476,000 and direct labor, manufacturing overhead, and total manufacturing costs to account for were $505,000, $245,000, and $1,425,000, respectively. Wait! Cost of goods available for sale was $1,340,000."

"Great," says Stephen. "I remember that sales for the period were approximately $1,700,000. Given our gross profit of 30%, that's all you should need."

Paul is not sure about that but decides to see what he can do with this information. The beginning inventory numbers were:

- Direct Materials, $113,000
- Work-in-Process, $229,000
- Finished Goods, $154,000

Requirements

1. Prepare a schedule showing each inventory account and the increases and decreases to each account. Use it to determine the ending inventories of Direct Materials, Work-in-Process, and Finished Goods.
2. Itemize a list of the cost of inventory lost.

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SOLUTION

Requirement 1

Shown in the schedule, below, the ending inventories are: Direct Materials, $143,000; Work-in-Process Inventory, $239,000; and Finished Goods Inventory, $150,000.

POWERSWITCH, INC.
Flow of Costs Schedule
For the 1st Quarter

Raw Materials Inventory**		Work-in-Process Inventory		Finished Goods Inventory	
Beginning DM	$ 113,000 *	Beginning WIP Inventory	$ 229,000 *	Beginning FG Inventory	$ 154,000 *
+ Purchases of DM	476,000 *	+ Direct Materials Used	446,000 [e]	+ Cost of Goods Manufactured	1,186,000 [c]
		+ Direct Labor	505,000 *		
		+ Manufacturing Overhead	245,000 *		
= Direct Materials Available for Use	589,000	= Total Manufacturing Costs to Account For	1,425,000 *	= Cost of Goods Available for Sale	1,340,000 *
− Ending DM	143,000 [f]	− Ending WIP Inventory	239,000 [d]	− Ending FG Inventory	150,000 [b]
= Direct Materials Used	$ 446,000 [e]	= Cost of Goods Manufactured	$ 1,186,000 [c]	= Cost of Goods Sold	$ 1,190,000 [a]

* Denotes amounts given in the case.
**Direct materials portion only

Calculations for amounts denoted with a superscript letters are provided on the next two pages.

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Decision Case 18-1, cont.

Calculations:

[a] Cost of Goods Sold:

Sales	×	(1 – Gross Profit %)	=	Cost of Goods Sold
$1,700,000	×	(1 – 30%)	=	$1,190,000
$1,700,000	×	70%	=	$1,190,000

[b] Ending Finished Goods Inventory:

Cost of Goods Available for Sale	–	Ending Finished Goods Inventory	=	Cost of Goods Sold
$1,340,000	–	Ending Finished Goods Inventory	=	$1,190,000
Therefore:		Ending Finished Goods Inventory	=	$150,000

[c] Cost of Goods Manufactured:

Beginning Finished Goods Inventory	+	Cost of Goods Manufactured	=	Cost of Goods Available for Sale
$154,000	+	Cost of Goods Manufactured	=	$1,340,000
Therefore:		Cost of Goods Manufactured	=	$1,186,000

[d] Ending Work-in-Process Inventory:

Total Manufacturing Costs to Account For	–	Ending Work-in-Process Inventory	=	Cost of Goods Manufactured
$1,425,000	–	Ending Work-in-Process Inventory	=	$1,186,000
Therefore:		Ending Work-in-Process Inventory	=	$ 239,000

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Decision Case 18-1, cont.

[e] Direct Materials Used:

Beginning Work-in-Process Inventory	+	Direct Materials Used	+	Direct Labor	+	Manufacturing Overhead	=	Total Manufacturing Costs to Account For
$229,000	+	Direct Materials Used	+	$505,000	+	$245,000	=	$1,425,000
Therefore:		Direct Materials Used					=	$ 446,000

[f] Ending Direct Materials:

Direct Materials Available for Use	–	Ending Direct Materials	=	Direct Materials Used
$589,000	–	Ending Direct Materials	=	$446,000
Therefore:		Ending Direct Materials	=	$143,000

Requirement 2

Inventory lost in the flood:

Direct Materials	$143,000
Work-in-Process Inventory	239,000
Finished Goods Inventory	150,000
Total Inventory	$532,000

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Ethical Issue 18-1

Becky Knauer recently resigned from her position as controller for Shamalay Automotive, a small, struggling foreign car dealer in Upper Saddle River, New Jersey. Becky has just started a new job as controller for Mueller Imports, a much larger dealer for the same car manufacturer. Demand for this particular make of car is exploding, and the manufacturer cannot produce enough to satisfy demand. The manufacturer's regional sales managers are each given a certain number of cars. Each sales manager then decides how to divide the cars among the independently owned dealerships in the region. Because of high demand for these cars, dealerships all want to receive as many cars as they can from the regional sales manager.

Becky's former employer, Shamalay Automotive, receives only about 25 cars each month. Consequently, Shamalay is not very profitable.

Becky is surprised to learn that her new employer, Mueller Imports, receives more than 200 cars each month. Becky soon gets another surprise. Every couple of months, a local jeweler bills the dealer $5,000 for "miscellaneous services." Franz Mueller, the owner of the dealership, personally approves payment of these invoices, noting that each invoice is a "selling expense." From casual conversations with a salesperson, Becky learns that Mueller frequently gives Rolex watches to the manufacturer's regional sales manager and other sales executives. Before talking to anyone about this, Becky decides to work through her ethical dilemma. Put yourself in Becky's place.

Requirements

1. What is the ethical issue?
2. What are your options?
3. What are the possible consequences?
4. What should you do?

SOLUTION

Students' responses will vary. Illustrative answers follow.

a. The ethical issue facing Becky is deciding what to do about the owner's gifts to the regional sales managers. Although small "courtesy" gifts are accepted practice in the world of sales, the regular basis and the high value of these items (especially jewelry) suggest that the owner is bribing the sales managers and other sales executives to receive a large allocation of cars.

b. The options include:
(1) Do nothing,
(2) Discuss the matter with the owner,
(3) Resign if the owner will not stop the practice, or
(4) Inform the manufacturer.

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c. The possible consequences include:

1. If Becky does nothing, her job and those of the other employees may remain secure for the time being. However, as controller she could be held accountable for laundering a bribe if the scheme became public. A lawsuit brought by other dealers who did not receive a fair share of available cars could name her as an involved party. If Becky is a CPA, she could also lose her CPA license.

   There are also potential tax consequences to consider. Since the jewelry expenditures are being recorded as selling expenses, it is likely that this amount is being deducted on the company's tax return. The IRS limits deductions of gifts to $25 per person per year. Since a Rolex watch far exceeds the cost of $25, Becky's failure to disclose the true nature of the expense may make her liable for underreporting the company's tax liability.

2. If Becky discusses the matter with the owner, she might find out that there is another side to the story and in fact there is no wrongdoing or ethical dilemma. However, this seems unlikely given the facts. It also seems unlikely that the owner will end this practice since it enhances the dealership's profits. However, Becky may have some influence on Mueller if she explains the dangers of continuing the bribes. Mueller could be sued by other dealers, or the manufacturer could cancel his dealership. Such outcomes would affect all the dealership's employees, not just Mueller. If Mueller refuses to change his ways, then Becky is in an even more difficult position because she now has direct knowledge of the bribery.

3. By resigning, Becky loses her job but protects her integrity and avoids being involved in a subsequent action against the dealership if the bribery becomes known.

4. Perhaps an even more difficult question is whether Becky should inform the manufacturer about the bribery. If Becky has not already resigned, Mueller probably would fire her for taking this action.

d. Accountants should never become party to, or appear to be involved in, an unethical (and possibly illegal) situation such as this. This is especially true for persons with fiduciary responsibilities like a controller. Becky should discuss her concerns with the owner. If Mueller is indeed bribing the sales representatives and refuses to stop this practice, Becky should inform the manufacturer, or she should resign.

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Communication Activity 18-1

In 100 words or fewer, explain the difference between product costs and period costs. In your explanation, explain the inventory accounts of a manufacturer.

SOLUTION

Period costs are operating costs that are expensed in the same accounting period in which they are incurred, whereas product costs are recorded as an asset and not expensed until the accounting period in which the product is sold. Period costs are all costs not considered product costs.

Manufacturing companies track costs on three kinds of inventory. Raw Materials Inventory includes materials used to manufacture a product. Work-in-Process Inventory includes goods that have been started in the manufacturing process but are not yet complete. Finished Goods Inventory includes completed goods that have not yet been sold.

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Solutions

Chapter 18

Try It! Solutions

1. FA
2. MA
3. MA
4. MA
5. FA
6. Product, direct labor, prime and conversion
7. Period
8. Product, manufacturing overhead, conversion
9. Product, direct materials, prime
10. Product, manufacturing overhead, conversion
11. Period

12.

ABC Manufacturing Company
Schedule of Cost of Goods Manufactured
Year Ended December 31, 2019
(in millions)

Beginning Work-in-Process Inventory			$ 12
Direct Materials Used:			
Beginning Direct Materials	$ 5		
Purchases of Direct Materials (including Freight In)	25		
Direct Materials Available for Use	30		
Ending Direct Materials	(7)		
Direct Materials Used		$ 23	
Direct Labor		36	
Manufacturing Overhead		17	
Total Manufacturing Costs Incurred during the Year			76
Total Manufacturing Costs to Account For			88
Ending Work-in-Process Inventory			(16)
Cost of Goods Manufactured			**$ 72**

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ABC Manufacturing Company Schedule of Cost of Goods Sold Year Ended December 31, 2019 (in millions)	
Beginning Finished Goods Inventory	$ 8
Cost of Goods Manufactured	72
Cost of Goods Available for Sale	80
Ending Finished Goods Inventory	(6)
Cost of Goods Sold	**$ 74**

13. d
14. e
15. a
16. c
17. b
18.

Total costs	/	Total number of services provided	=	Unit cost per service
$2,340	/	45 offices	=	$52 per office

Chapter 19

Try It! Solutions

1. Process costing
2. Job order costing
3. Job order costing
4. Process costing
5. Job order costing

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Chapter 18

Introduction to Managerial Accounting

Chapter Overview

The chapter introduces students to managerial accounting as distinguished from financial accounting. Students learn about the information that managers—the decision makers inside the business—must know and use in order to effectively plan and control the business. The differences between financial and managerial accounting are delineated. The role of the manager as well as managerial accounting functions are emphasized. The chapter continues with a discussion of the professional ethical standards for management accountants: competence, confidentiality, integrity, and credibility.

Cost classification categories are explained, including direct/indirect costs, product/period costs, and types of manufacturing product costs (direct materials, direct labor, and manufacturing overhead), which can be alternatively categorized as prime costs (direct materials and direct labor) or conversion costs (direct labor and manufacturing overhead). Service companies, merchandising companies, and manufacturing companies are discussed, and a balance sheet and income statement examples are provided for each. The calculation of cost of goods manufactured is presented, and a schedule example is provided. Exhibits help students visualize the flow of costs through a manufacturing company's accounting system to the income statement. A discussion of today's business environment points out that recent trends include a shift toward a service economy, competing in the global marketplace, timed-based competition, advanced information systems, e-commerce, just-in-time management, the total quality movement, and integrated economic, social, and environmental reporting. The chapter concludes with a discussion on how to calculate cost per unit for a merchandising business and cost per service for a service business.

An Ethics feature provides an ethical dilemma that can be used for discussion purposes. A Tying It All Together feature provides a look into the balance sheet and income statement of Winnebago Industries, Inc. The Review section includes Things You Should Know, which highlights the information students should have acquired from the chapter. A Check Your Understanding Problem reviews product/period cost categorization and calculation of cost of goods manufactured, cost of goods sold, and cost per unit. A list of Key Terms is provided. A Quick Check gives students a chance to assess their knowledge of the chapter learning objectives.

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Chapter 18: Learning Objectives

LO 1. Define managerial accounting and understand how it is used

LO 2. Classify costs used in managerial accounting

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

LO 4. Describe business trends affecting managerial accounting

LO 5. Describe how managerial accounting is used in service and merchandising companies

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Chapter 18: Teaching Outline with Lecture Notes

LO 1. Define managerial accounting and understand how it is used

- Exhibit 18-1: Financial Accounting Versus Managerial Accounting

a) Managers' role in the organization

- Exhibit 18-2: Organizational Chart for Smart Touch Learning (Partial)

b) Managerial accounting functions

- Exhibit 18-3: Pathways Vision Model

c) Ethical standards of managers

- Exhibit 18-4: IMA Statement of Ethical Professional Practice (Excerpt)

Lecture Notes: Students are not as familiar with managerial accounting as they are financial accounting. Emphasize the key difference: Managerial accounting is focused on internal users of financial information for decision making, while financial accounting is focused on external users for financial reporting. Managers throughout the organization rely on managerial accounting to help plan, direct, control, and make decisions about the business. The Pathways Vision Model provides a visual way for students to more clearly understand the role of managerial accounting in making good decisions.

The Institute of Management Accountants (IMA) has developed ethical standards requiring managerial accountants to maintain their professional competence, preserve the confidentiality of the information they handle, and act with integrity and credibility.

Suggested In-Class Exercise: E18-13

LO 2. Classify costs used in managerial accounting

a) Manufacturing companies

b) Direct and indirect costs

c) Manufacturing costs

- Exhibit 18-5: Manufacturing Costs

d) Prime and conversion costs

- Exhibit 18-6: Prime and Conversion Costs

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e) Product and period costs

- Exhibit 18-7: Period Versus Product Costs
- Exhibit 18-8: Period and Product Costs for Smart Touch Learning

Lecture Notes: Point out the distinction between direct and indirect manufacturing costs. Direct costs are added to WIP, whereas indirect costs are usually collected in one or more Manufacturing Overhead accounts and then applied to WIP using a predetermined overhead rate. Therefore, when materials are used, you must know whether they are indirect or direct. When labor is incurred, you must know whether it is direct or indirect. The recording of labor in an asset account (WIP) may need additional explanation. Students might want to expense labor because it was expensed in previous chapters. Remind students that manufacturing companies add all product costs to inventory, and they are expensed (COGS) when inventory is sold.

Distinguish between product costs and period costs. GAAP requires that all manufacturing costs be treated as costs of making the product, which means these manufacturing costs (raw materials, manufacturing labor, and manufacturing overhead) are "attached" to the product. All nonmanufacturing costs go directly to the income statement in the period in which they occur. Consider an oversimplified company that has a factory in your local community and corporate offices in New York City (or some other major urban center). Everything that goes on at the factory in your local community is a manufacturing cost that becomes attached to the product by accumulating those costs in WIP. Everything that goes on in the corporate offices is a period cost that is charged directly to the income statement in the period in which it occurs. While this is an oversimplification (for example, sales offices or research labs can be located in a factory setting), it serves to fix the distinction in students' minds.

Overhead includes all manufacturing costs other than direct materials and direct labor. Therefore, students must know whether a cost is manufacturing or nonmanufacturing. For example, "depreciation" will no longer suffice. Is it manufacturing or nonmanufacturing? As discussed for labor above, students may want to expense all indirect costs, such as depreciation, insurance, etc., because they were expensed in previous chapters. Remind students that manufacturing companies add all product costs to inventory—first to WIP, which is transferred to FG, and then as COGS when inventory is sold.

Suggested In-Class Exercise: E18-15

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

a) Balance sheet

- Exhibit 18-9: Balance Sheet Comparison

b) Income statement

- Exhibit 18-10: Income Statement Comparison

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c) Product costs flow through a manufacturing company

- Exhibit 18-11: Product Costs Flow Through a Manufacturing Company

d) Calculating cost of goods manufactured

i. Step 1: Calculate direct materials used.

ii. Step 2: Calculate total manufacturing costs incurred during the year.

iii. Step 3: Calculate cost of goods manufactured.

- Exhibit 18-12: Schedule of Costs of Goods Manufactured

e) Calculating cost of goods sold

- Exhibit 18-13: Income Statement—Manufacturing Company

f) Flow of costs through the inventory accounts

- Exhibit 18-14: Flow of Costs Through Smart Touch Learning's Inventory Accounts

g) Using the schedule of cost of goods manufactured to calculate unit product cost

Lecture Notes: Emphasize that management accounting concepts apply to all types of companies, not just manufacturing companies. Much attention is focused on manufacturing businesses because they are more complex and less familiar. Nonetheless, the product costing concepts discussed in relation to manufacturing can be applied to service costing and activity costing in the other types of companies.

Students will probably be able to relate to service companies and merchandising companies (such as auto repair shops and grocery stores) more easily than they can relate to manufacturing companies. Service companies and merchandising companies have already been discussed in the textbook. It may be helpful to ask students to provide examples of each type of company, especially merchandising and manufacturing, to assess their knowledge of the differences. Ask if anyone has toured a factory when it is operating.

When introducing inventory accounts, remind students how the Merchandise Inventory account works. Merchandise is purchased (increase Merchandise Inventory with a debit). Then when the inventory is sold, take it out of Merchandise Inventory and off the balance sheet (decrease Merchandise Inventory with a credit) and charge it to the income statement as the expense Cost of Goods Sold (increase the expense with a debit). If more merchandise is purchased than sold, the difference remains in Merchandise Inventory as the ending balance and is reported as an asset on the balance sheet. It then becomes next period's beginning inventory. Emphasize the basic generic inventory relationship:

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

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Manufacturers have three inventory accounts: Raw Materials Inventory (RM), Work-in-Process Inventory (WIP), and Finished Goods Inventory (FG). All three are assets on the balance sheet. Inventory is removed from FG and from the balance sheet when sold and then charged to the income statement as the expense Cost of Goods Sold (COGS). The WIP account is an accumulation account that collects product costs as they are added in the production process—direct materials, direct labor, and manufacturing overhead. Explain that WIP represents the product as it is being assembled on the factory floor. After the product comes off the production line and is boxed up and moved to the finished product warehouse, the related dollars are taken out of the WIP account and moved to the FG account.

Demonstrate that inventory accounts all function in the same way as the generic inventory account previously discussed:

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

Point out that the increases in WIP represent the accumulation of direct materials, direct labor, and manufacturing overhead costs that become attached to the product being assembled.

Suggested In-Class Exercises: E18-16, E18-17, and E18-18

LO 4. Describe business trends affecting managerial accounting

a) Shift toward a service economy

b) Global competition

c) Time-based competition

d) Total quality management

- Exhibit 18-15: Value Chain

e) The triple bottom line

Suggested In-Class Exercise: E18-22

LO 5. Describe how managerial accounting is used in service and merchandising companies

a) Calculating cost per service

b) Calculating cost per item

Suggested In-Class Exercises: E18-23 and E18-24

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Chapter 18: Handout for Student Notes

LO 1. Why is managerial accounting important?

- Manager's role in the organization
- Managerial accounting functions
- Ethical standards of managers

LO 2. How are costs classified?

- Manufacturing companies
- Direct and indirect costs
- Manufacturing costs
- Prime and conversion costs
- Product and period costs

LO 3. How do manufacturing companies prepare financial statements?

- Balance sheet
- Income statement

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- Product costs flow through a manufacturing company
- Calculating cost of goods manufactured
- Calculating cost of goods sold
- Flow of costs through the inventory accounts
- Using the schedule of costs of goods manufactured to calculate unit product cost

LO 4. What are business trends that are affecting managerial accounting?

- Shift toward a service economy
- Global competition
- Time-based competition
- Total quality management
- The triple bottom line

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LO 5. How is managerial accounting used in service and merchandising companies?

- Calculating cost per service

- Calculating cost per item

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Chapter 18: Student Chapter Summary

LO 1. Define managerial accounting and understand how it is used

Financial accounting prepares reports for external users, such as investors, creditors, and government agencies. Managerial accounting provides information for managers to use in decision making. Managers are accountable to many different stakeholders. Today's business environment requires managers to use many tools to be successful. The IMA Standards of Ethical Professional Practice include competence, confidentiality, integrity, and credibility.

LO 2. Classify costs used in managerial accounting

Product costs are all costs incurred in the manufacture of final products. The three categories of product costs are direct materials, direct labor, and manufacturing overhead. Product costs are first recorded as inventory and are not expensed until the product is sold. Period costs are all costs not considered product costs. Period costs are expensed in the accounting period incurred. Direct costs can be easily traced directly to a cost object, whereas indirect costs cannot. Prime costs are direct materials and direct labor. Conversion costs are direct labor and manufacturing overhead.

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

Manufacturers have three inventory accounts: Raw Materials Inventory (RM), Work-in-Process Inventory (WIP), and Finished Goods Inventory (FG). All three are assets on the balance sheet. Inventory costs are removed from FG and from the balance sheet when the product is sold and then charged to the income statement as the expense Cost of Goods Sold (COGS). The WIP account is an accumulation account that collects product costs as they are added in the production process—direct materials, direct labor, and manufacturing overhead. WIP represents the cost of the product as it is being assembled on the factory floor. After the product comes off the production line and is boxed up and moved to the finished product warehouse, the related dollars are taken out of the WIP account and moved to the FG account.

Calculating cost of goods manufactured and cost of goods sold requires knowledge of how product costs flow through a manufacturing company. Cost of goods manufactured is calculated in three steps:

Step 1: Calculate direct materials used.

Step 2: Calculate total manufacturing costs incurred during the year.

Step 3: Calculate cost of goods manufactured.

Cost of goods sold represents the cost of the Finished Goods Inventory that has been sold. All inventory accounts function in the same way:

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

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LO 4. Describe business trends affecting managerial accounting

The shift toward a service economy, global competition, time-based competition, Total Quality Management (TQM), and the triple bottom line are business trends affecting managerial accounting today. Managers in the service industry need to understand the cost of providing services, supporting customers, and planning for future customer and service needs. Companies are moving operations to other countries to be closer to new markets or partnering with foreign companies to meet local needs. Companies have also developed the time-saving responses to keep up with the pace of business in the instant messaging age, such as advanced information systems, e-commerce, and just-in-time management. TQM is a philosophy of continuous improvement of products and processes leading to fewer defects and higher customer satisfaction. Companies are also recognizing that they have multiple responsibilities—economic, social, and environmental—and that generating profits for owners and investors is only one aspect of being a socially responsible organization.

LO 5. Describe how managerial accounting is used in service and merchandising companies

Managerial accounting isn't just for manufacturing companies. Service companies and merchandising companies also use managerial accounting.

- Unit cost per service = Total costs / Total number of services provided
- Unit cost per item = Total cost of goods sold / Total number of items sold

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Chapter 18: Assignment Grid and Other Materials

	LO 1	LO 2	LO 3	LO 4	LO 5
S18-1	X				
S18-2	X				
S18-3		X			
S18-4		X			
S18-5		X			
S18-6			X		
S18-7			X		
S18-8			X		
S18-9			X		
S18-10			X		
S18-11				X	
S18-12					X
E18-13	X				
E18-14	X				
E18-15		X			
E18-16			X		
E18-17			X		
E18-18			X		
E18-19			X		
E18-20			X		
E18-21			X		
E18-22				X	
E18-23			X		X
E18-24			X		X
P18-25A, P18-33B	X				
P18-26A, P18-34B		X			
P18-27A, P18-35B			X		
P18-28A, P18-36B			X		
P18-29A, P18-37B			X		
P18-30A, P18-38B			X		
P18-31A, P18-39B			X		X
P18-32A, P18-40B			X		X

S – Short Exercises (*Easy*)
E – Exercises (*Moderate*)
P – Problems (*Difficult*)

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Other End-of-Chapter Materials:

Using Excel P18-41
Continuing Problem P18-42
Tying It All Together Case 18-1
Decision Case 18-1
Ethical Issue 18-1
Communication Activity 18-1

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CHAPTER 18
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. Which is *not* a characteristic of managerial accounting information?
    A. Provides information that is useful to internal decision makers
    B. Provides detailed information about individual parts of the company
    C. Not required to follow GAAP
    D. Focuses on past results

2. Which of the following is a software system used to integrate company functions, departments, and data?
    A. Total Quality Management
    B. Enterprise Value Chain
    C. Enterprise Resource Planning
    D. Just-in-Time Management

3. Which of the following characteristics of today's business environment is most closely associated with the philosophy of continuous improvement?
    A. Global competition
    B. Total Quality Management
    C. Time-based competition
    D. E-commerce

4. Which of the following accounts is used by a manufacturing company but not by a service company?
    A. Cost of Goods Sold
    B. Salaries Payable
    C. Supplies Expense
    D. Retained Earnings

5. Goods available for sale that are *not* part of Cost of Goods Sold are included in
    A. Work-in-Process Inventory beginning balance.
    B. Work-in-Process Inventory ending balance.
    C. Finished Goods Inventory beginning balance.
    D. Finished Goods Inventory ending balance.

6. Which of the following is a direct cost of manufacturing a sport boat?
    A. Salary of the engineer who rearranges the boat factory layout
    B. Depreciation on equipment used to manufacture the boat
    C. Cost of a boat engine
    D. Cost of a boat customer hotline

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7. Which of the following is *not* a product cost?
    A. Advertising expense
    B. Plant manager's salary
    C. Insurance on plant and equipment
    D. Depreciation on quality control equipment

Questions 8 and 9 use the data in the following table, which has been provided by a bakery:

Beginning Direct Materials	$ 6,000
Ending Direct Materials	9,000
Beginning Work-in-Process Inventory	12,000
Ending Work-in-Process Inventory	17,000
Beginning Finished Goods Inventory	3,000
Ending Finished Goods Inventory	5,000
Manufacturing Overhead	21,000
Direct labor	30,000
Direct materials used in production	95,000

8. What is cost of direct materials purchased?
    A. $ 3,000
    B. $ 92,000
    C. $ 98,000
    D. $110,000

9. What is the cost of goods manufactured?
    A. $125,000
    B. $141,000
    C. $146,000
    D. $151,000

10. A management accountant who communicates information fairly and objectively is practicing the ethical standard of
    A. integrity.
    B. confidentiality.
    C. competence.
    D. credibility.

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Answer Key to Ten-Minute Quiz:

1. D

2. C

3. B

4. A

5. D

6. C

7. A

8. C

Beginning Direct Materials	$ 6,000
Purchases of Direct Materials	98,000
Direct Materials Available for Use	104,000
Ending Direct Materials	(9,000)
Direct Materials Used	$ 95,000

Direct Materials Available for Use = Direct Materials Used + Ending Direct Materials
= $95,000 + $9,000 = $104,000
Purchases of Direct Materials = Direct Materials Available for Use – Beginning Direct Materials
= $104,000 − $6,000 = $98,000

9. B

Beginning Work-in-Process Inventory		$ 12,000
Direct Materials Used	$ 95,000	
Direct Labor	30,000	
Manufacturing Overhead	21,000	
Total Manufacturing Costs Incurred during the Period		146,000
Total Manufacturing Costs to Account For		158,000
Ending Work-in-Process Inventory		-17,000
Cost of Goods Manufactured		$ 141,000

10. D

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Extra Critical Thinking Questions

Decision Case 18-2
The IMA's Statement of Ethical Professional Practice can be applied to more than just managerial accounting. It is also relevant to college students.

Explain at least one situation that shows how each IMA standard in Exhibit 18-4 is relevant to your experiences as a student. For example, the ethical standard of competence would suggest not cutting classes!

Decision Case 18-2: Solution

Students' responses will vary. Illustrative answers follow:

- *Competence*. Students have a responsibility to build their professional competence by attending classes, conscientiously completing homework, and studying for exams.
- *Confidentiality*. When friends or family members share intimate information or highly personal information, you should respect the trust they have placed in you and keep that information confidential, as is appropriate for the situation.
- *Integrity*. Students have a responsibility to act with integrity and not to cheat. Students also should help ensure the integrity of the process. For example, students should inform the instructor if they suspect other students have a copy of an upcoming exam.
- *Credibility*. Be honest and straightforward when communicating with others. Do not lie or deliberately mislead others.

Fraud Case 18-1

Juan Gomez was the fastest-rising star of a small CPA firm in West Palm Beach, Florida. Most of his clients traveled in stratospheric circles of wealth, and Juan knew that fitting in with this crowd was essential to his career. Although he made good money, it wasn't enough to live that kind of lifestyle. Meanwhile, Juan had become friends with one of his clients, Tony Russo. Knowing Russo's books inside and out and being on close terms with him, Juan asked Tony for a personal loan. Juan was sure he'd be able to pay it back when he got his next bonus, but things stretched out, and additional loans were made. Two years later, Tony's company hit some losses, and the numbers were looking grim. Tony reminded Juan that it would not look good for his career if his CPA firm knew Juan had borrowed from a client, and so Juan changed a few numbers and signed off on clean financials for Tony's firm. This went on for three years, until one morning when Juan got a call. Russo had died; his sons had gone through the books, and the whole scheme came out. Juan did some prison time and lost his license, but he was repentant and made an instructional video for accounting students to warn them of the temptations they may encounter in the real world of business.

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Requirements

1. Although the central character of this story worked in public accounting, please refer to the IMA Statement of Ethical Professional Practice in Exhibit 18-4 and discuss which of those issues are reflected in this case.
2. Could Juan have removed himself from his situation? How?

Fraud Case 18-1: Solution

Students' responses will vary. Illustrative answers follow.

Requirement 1

This case reflects a clear conflict of interest in that Juan Gomez, as a public accountant, was supposed to be independent of his client but was, in fact, financially involved. This is a clear violation of *integrity*. It also involves the issue of *credibility*, in that Juan "cooked the books" for his client and thus sanctioned the publication of false financial information.

Requirement 2

Juan would first have to pay back the loan he took from his client. Then he would have to remove himself from the engagement with this client, admit his actions, and possibly resign from his firm because the falsified financial information would become apparent to whomever followed Juan on the engagement. These actions might, or might not, shield Juan from criminal or civil prosecution. The bottom line is that once Juan took the money, his career was in irreversible jeopardy.

Team Project 18-1

Search the Internet for a nearby company that has a Web site. Arrange an interview for your team with a managerial accountant, a controller, or another accounting/finance officer of the company.

Requirements

Before your team conducts the interview, answer the following questions:

1. Is this a service, merchandising, or manufacturing company? What is its primary product or service?
2. Is the primary purpose of the company's Web site to provide information about the company and its products, to sell online, or to provide financial information for investors?
3. Are parts of the company's Web site restricted so that you need password authorization to enter? What appears to be the purpose of limiting access?
4. Does the Web site provide an e-mail link for contacting the company?

At the interview, begin by clarifying your team's answers to Questions 1 through 4 and ask the following additional questions:

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5. If the company sells over the Internet, what benefits has the company derived? Did the company perform a cost/benefit analysis before deciding to begin Web sales?
   Or
   If the company does not sell over the Internet, why not? Has the company performed a cost/benefit analysis and decided not to sell over the Web?
6. What is the biggest cost of operating the Web site?
7. Does the company make any purchases over the Internet? What percentage?
8. How has e-commerce affected the company's managerial accounting system? Have the managerial accountant's responsibilities become more or less complex? More or less interesting?
9. Does the company use Web-based accounting applications, such as accounts receivable or accounts payable?
10. Does the company use an ERP system? If so, do managers view the system as a success? What have been the benefits? The costs?

Your team should summarize your findings in a short paper. Provide any exhibits that enhance your explanation of key items. Provide proper references and a works cited page.

Team Project 18-1: Solution

Students' responses will vary. However, following are some observations.

The person interviewed could be identified through a connection of one of the students, a connection made by the instructor, or a connection through the school.

Requiring students to answer the first four questions before the interview will help ensure that they are prepared for the interview. It is important that students be prepared so they can make a favorable impression on the interviewee (for the school and future employment!) and so they do not waste the interviewee's time. If the company is of any reasonable size, students should be able to gather information from the library or the Internet.

While it would be unusual for a company not to have a Web site, the role of its Web site in the company's business plan can vary significantly. The site may simply provide information about the company and/or its products and, for a manufacturer, a dealer locator. Other Web sites are designed to sell products. Certain Web pages may be designed for sales to the general public, while other parts of the site may require a password and offer sales to specific customers on prearranged terms. The Web site might not give a full indication of the extent to which a company relies on the Internet. For example, a company may rely on the Internet for purchasing, budgeting, or communicating within the firm.

Increasing dependence on the Internet has implications for management accounting. A full-featured Web site may cost millions of dollars, so the CFO will likely be involved in the investment decision and in monitoring and evaluating the success of this investment. Management accountants will collect and analyze new types of data, such as the number of unique customers at the company's Web site and the length of time each customer spends at the site.

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Accounting applications also may follow the underlying transactions to the Web. For example, when a company moves business-to-business sales to the Web, it also may adopt Internet-based receivables management software to reduce billing costs and speed up collection. The company also may install an ERP system to further integrate and speed up its transaction processing.

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1. What is the primary purpose of managerial accounting?

The primary purpose of managerial accounting is to provide information to help managers plan and control operations.

2. List six differences between financial accounting and managerial accounting.

Financial accounting and managerial accounting differ on the following 6 dimensions: (1) primary users, (2) purpose of information, (3) focus and time dimension of the information, (4) rules and restrictions, (5) scope of information, and (6) behavioral.

3. Explain the difference between line positions and staff positions.

Line positions are directly involved in providing goods or services to customers. Staff positions support line positions.

4. Explain the difference between planning, directing, and controlling.

Planning means choosing goals and deciding how to achieve them,.
Directing involves running the day-to-day operations of a business.
Controlling is the process of monitoring operations and keeping the company on track.

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5. List the four IMA standards of ethical practice and briefly describe each.

The four IMA standards of ethical practice and a description of each follow.
I. Competence.
• Maintain an appropriate level of professional expertise.
• Perform professional duties in accordance with relevant laws, regulations, and technical standards.
• Provide decision support information and recommendations that are accurate, clear, concise, and timely.
• Recognize and communicate professional limitations or other constraints that preclude responsible judgment or successful performance of an activity.
II. Confidentiality.
• Keep information confidential except when disclosure is authorized or legally required.
• Inform all relevant parties regarding appropriate use of confidential information. Monitor subordinates' activities to ensure compliance.
• Refrain from using confidential information for unethical or illegal advantage.
III. Integrity.
• Mitigate actual conflicts of interest, regularly communicate with business associates to avoid apparent conflicts of interest. Advise all parties of any potential conflicts.
• Refrain from engaging in any conduct that would prejudice carrying out duties ethically.
• Abstain from engaging in or supporting any activity that might discredit the profession.
IV. Credibility.
• Communicate information fairly and objectively.
• Disclose all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, analyses, or recommendations.
• Disclose delays or deficiencies in information, timeliness, processing, or internal controls in conformance with organization policy and/or applicable law.

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6. Describe a service company and give an example.

Service companies sell time, skills, and knowledge. They seek to provide services that are high quality with reasonable prices and timely delivery. Examples of service companies include phone service companies, banks, cleaning service companies, accounting firms, law firms, medical physicians, and online auction services.

7. Describe a merchandising company and give an example.

Merchandising companies resell products they buy from suppliers. Merchandisers keep an inventory of products, and managers are accountable for the purchasing, storage, and sale of the products. Examples of merchandising companies include toy stores, grocery stores, and clothing stores.

8. How do manufacturing companies differ from merchandising companies?

Merchandising companies resell products they previously bought from suppliers, whereas manufacturing companies use labor, equipment, supplies, and facilities to convert raw materials into new finished products. In contrast to merchandising companies, manufacturing companies have a broad range of production activities that require tracking costs on three kinds of inventory.

9. List the three inventory accounts used by manufacturing companies and describe each.

The three inventory accounts used by manufacturing companies are Raw Materials Inventory, Work-in-Process Inventory, and Finished Goods Inventory.

Raw Materials Inventory includes materials used to manufacture a product. Work-in-Process Inventory includes goods that have been started in the manufacturing process but are not yet complete. Finished Goods Inventory includes completed goods that have not yet been sold.

10. Explain the difference between a direct cost and an indirect cost.

A direct cost is a cost that can be easily and cost-effectively traced to a cost object (which is anything for which managers want a separate measurement of cost). An indirect cost is a cost that cannot be easily or cost-effectively traced to a cost object.

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11 What are the three manufacturing costs for a manufacturing company? Describe each.

The three manufacturing costs for a manufacturing company are direct materials, direct labor, and manufacturing overhead. Direct materials are materials that become a physical part of a finished product and whose costs are easily traceable to the finished product. Direct labor is the labor cost of the employees who convert materials into finished products. Manufacturing overhead includes all manufacturing costs except direct materials and direct labor, such as indirect materials, indirect labor, factory depreciation, factory rent, and factory property taxes.

12. Give five examples of manufacturing overhead.

Examples of manufacturing overhead include costs of indirect materials, indirect labor, repair and maintenance, utilities, rent, insurance, property taxes, manufacturing plant managers' salaries, and depreciation on manufacturing buildings and equipment.

13. What are prime costs? Conversion costs?

Prime costs are direct materials plus direct labor. Conversion costs are direct labor plus manufacturing overhead. Note that direct labor is classified as both a prime cost and a conversion cost.

14. What are product costs?

Product costs are all costs of a product that GAAP requires companies to treat as an asset for external financial reporting. These costs are recorded as an asset and not expensed until the product is sold. Product costs include direct materials, direct labor, and manufacturing overhead.

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15. How do period costs differ from product costs?

Period costs are non-manufacturing costs that are expensed in the same accounting period in which they are incurred, whereas product costs are recorded as an asset and not expensed until the accounting period in which the product is sold.

16 How is cost of goods manufactured calculated?

Cost of Goods Manufactured is calculated as Beginning Work-in-Process Inventory + Direct Materials Used + Direct Labor + Manufacturing Overhead – Ending Work-in-Process Inventory.

17 How does a manufacturing company calculate unit product cost? How is this different from a merchandising company?

For a manufacturing company, the activity in the Finished Goods Inventory account provides the information for determining Cost of Goods Sold. A manufacturing company calculates Cost of Goods Sold as Beginning Finished Goods Inventory + Cost of Goods Manufactured – Ending Finished Good Inventory. In addition, a manufacturing company must track costs from Raw Materials Inventory and Work-in-Process Inventory in order to compute Cost of Goods Manufactured used in the previous equation.

For a merchandising company, the activity in the Merchandise Inventory account provides the information for determining Cost of Goods Sold. A merchandising company calculates Cost of Goods Sold as Beginning Merchandise Inventory + Purchases and Freight In – Ending Merchandise Inventory.

18 How does a manufacturing company calculate unit cost per item?

A manufacturing company calculates unit product cost as Cost of Goods Manufactured / Total number of units produced.

19 How does a service company calculate unit cost per service?

A service company calculates unit cost per service as Total Costs / Total number of services provided.

20. How does a merchandising company calculate unit cost per item?

A merchandising company calculates unit cost per item as Total Cost of Goods Sold / Total number of items sold.

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S18-1

Indicate whether the statement relates to managerial accounting (MA) or financial accounting (FA):

Solution:

a.	FA
b.	MA
c.	MA
d.	FA
e.	FA

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S18-2

Which standard(s) are violated in each situation?

Solution:

a.	Confidentiality
b.	Integrity
c.	Competence (skipping the session); Integrity (company-paid conference)
d.	Competence
e.	Credibility; Integrity

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S18-3

Granger Cards is a manufacturer of greeting cards. Classify its costs by matching the costs to the terms.

Solution:

a.	2
b.	4
c.	1
d.	5
e.	4
f.	5
g.	3

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S18-4

Calculate the total manufacturing overhead costs for the month.

Solution:

Glue for frames	$	250
Plant depreciation		7,500
Plant foreman's salary		3,500
Plant janitor's wages		1,300
Oil for manufacturing equipment		150
Total manufacturing overhead	$	12,700

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S18-5

Classify each cost of a paper manufacturer as either product cost or period cost:

Solution:

a.	Period cost
b.	Product cost
c.	Product cost
d.	Period cost
e.	Product cost
f.	Period cost
g.	Product cost
h.	Product cost
i.	Period cost

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S18-6

Compute cost of goods sold.

Solution:

Beginning inventory		$ 8,600
Purchases	$ 47,000	
Freight in	2,400	49,400
Cost of goods available for sale		58,000
Ending inventory		(5,500)
Cost of goods sold		$ 52,500

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S18-7

Consider the following partially completed income statements for merchandising companies and compute the missing amounts:

Solution:

	Solutions:	Calculations:
(a)	$13,200	$63,200 [b, below] – $50,000
(b)	$63,200	$61,000 + $2,200
(c)	$28,000	$40,000 – $12,000
(d)	$200,800	$86,800 + 114,000
(e)	$60,000	$89,000 – $29,000
(f)	$86,800	$89,000 – $2,200
(g)	$30,000	$114,000 – $84,000
Order of calculations:		
Smith, Inc.: (b), (a), (c)		
Allen, Inc.: (e), (f), (d), and (g)		

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S18-8

Compute the amount of direct materials used.

Solution:

Beginning Raw Materials Inventory		$ 4,100
Purchases of Raw Materials	$ 6,300	
Freight In	400	6,700
Raw Materials Available for Use		10,800
Ending Raw Materials Inventory		(1,300)
Direct Materials Used		$ 9,500

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S18-9

Compute the cost of goods manufactured for the year.

Solution:

Beginning Work-in-Process Inventory		$ 1,000
Direct Materials Used	$ 12,000	
Direct Labor	9,000	
Manufacturing Overhead	21,000	
Total Manufacturing Costs Incurred during the Year		42,000
Total Manufacturing Costs to Account For		43,000
Ending Work-in-Process Inventory		(5,000)
Cost of Goods Manufactured		$ 38,000

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S18-10

Calculate the cost of goods sold for The Ellis Company for the month of June.

Solution:

Beginning Finished Goods Inventory	$ 30,000
Cost of Goods Manufactured	165,000
Cost of Goods Available for Sale	195,000
Ending Finished Goods Inventory	(10,000)
Cost of Goods Sold	$ 185,000

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S18-11

Match the term with the correct definition.

Solution:

1.	d.
2.	c.
3.	e.
4	a.
5	b.

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S18-12

What was the cost of service to provide one haircut?

Solution:

Cost of one haircut	= Total operating costs / Total number of haircuts
	= [$950 + $548 + $190 + $60] / 190 haircuts
	= $1,748 / 190 haircuts
	= $9.20 per haircut

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E18-13

Match the following terms to the appropriate statement. Some terms may be used more than once and some terms may not be used at all.

Solution:

a.	Financial
b.	Creditors and Stockholders
c.	Controlling
d.	Managers
e.	Financial
f.	Managerial
g.	Planning

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E18-14

Requirements

1. What should Sue Peters do?

2. Would you change your answer if Sue Peters was the one recently hired as controller and Dale Miller was a well-liked, longtime employee who indicated he always eventually repaid the fund?

Solution:

Students' responses will vary. Illustrative answers follow.

Requirement 1

A new employee who has engaged in this behavior is unlikely to become
a valued and trusted employee. This type of behavior is unethical.
As controller, Sue Peters probably hired Dale, and she is also responsible
for the lack of controls that permitted a new employee to commit this theft.
She will need to supervise the next bookkeeper more carefully.

Requirement 2

Being a new employee, Sue Peters may want to discuss the situation with
the company's presi-dent. Unless Sue can obtain additional information,
she may want to indicate to Dale that this behavior will not be tolerated in
the future. Sue should establish better controls and closer su-pervision.

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E18-15

Wheels, Inc. manufactures wheels for bicycles, tricycles, and scooters. For each cost given below, determine if the cost is a product cost or a period cost. If the cost is a product cost, further determine if the cost is direct materials (DM), direct labor (DL), or manufacturing overhead (MOH) and then determine if the product cost is a prime cost, conversion cost, or both. If the cost is a period cost, further determine if the cost is a selling expense or administrative expense (Admin). Cost (a) is

Solution:

Cost	Product					Period	
	DM	DL	MOH	Prime	Conversion	Selling	Admin.
a. Metal used for rims	X			X			
b. Sales salaries						X	
c. Rent on factory			X		X		
d. Wages of assembly							
workers		X		X	X		
e. Salary of production							
supervisor			X		X		
f. Depreciation on							
office equipment							X
g. Salary of CEO							X
h. Delivery expense						X	

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E18-16

Determine the company type. Identify each company as a service company, merchandising company, or manufacturing company.

Solution:

Company A is a manufacturing company. Company B is a service company.
Company C is a merchandising company.

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E18-17

Calculate operating income for each company.

Solution:

Company A (all amounts in millions):		
Sales Revenue		$ 48
Cost of Goods Sold		23
Gross Profit		25
Operating Expenses:		
Selling Expenses	$ 4	
Administrative Expenses	7	
Total Operating Expenses		11
Operating Income		$ 14

Company B (all amounts in millions):		
Service Revenue		$ 65
Expenses:		
Wages Expense	$ 12	
Rent Expense	12	
Total Expenses		24
Operating Income		$ 41

Company C (all amounts in millions):		
Sales Revenue		$ 75
Cost of Goods Sold		25
Gross Profit		50
Operating Expenses:		
Selling Expenses	$ 8	
Administrative Expenses	4	
Total Operating Expenses		12
Operating Income		$ 38

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E18-18

Calculate total current assets for each company.

Solution:

Company A (all amounts in millions):	
Cash	$6
Accounts Receivable	14
Raw Materials Inventory	6
Work-in-Process Inventory	9
Finished Goods Inventory	10
Total current assets	$ 45

Company B (all amounts in millions):	
Cash	$ 34
Accounts Receivable	8
Total current assets	$ 42

Company C (all amounts in millions):	
Cash	$ 25
Accounts Receivable	19
Merchandise Inventory	12
Total current assets	$ 56

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E18-19

Consider the following partially completed schedules of cost of goods manufactured. Compute the missing amounts.

Solution:

(a)	
Total Manufacturing Costs to Account For	$ 55,400
Total Manufacturing Costs Incurred during the Year	$ (4,200)
Beginning Work-in-Process Inventory	$ 10,200
(b)	
Total Manufacturing Costs Incurred during the Year	$ 45,200
Direct Materials Used	$ (14,400)
Direct Labor	$ (10,300)
Manufacturing Overhead	$ 20,200
(c)	
Total Manufacturing Costs to Account For	$ 55,400
Cost of Goods Manufactured	$ (50,500)
Ending Work-in-Process Inventory	$ 4,900
(d)	
Direct Materials Used	$ 35,900
Direct Labor	$ 20,100
Manufacturing Overhead	$ 10,000
Total Manufacturing Costs Incurred during the Year	$ 66,000
(e)	
Beginning Work-in-Process Inventory	$ 40,800
Total Manufacturing Costs Incurred during the Year [d, above]	$ 66,000
Total Manufacturing Costs to Account For	$ 106,800
(f)	
Total Manufacturing Costs to Account For [e, above]	$ 106,800
Ending Work-in-Process Inventory	$ (25,500)
Cost of Goods Manufactured	$ 81,300

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(g)		
Total Manufacturing Costs Incurred during the Year [h, below]	$	6,100
Direct Labor	$	(1,900)
Manufacturing Overhead	$	(900)
Direct Materials Used	$	3,300
(h)		
Total Manufacturing Costs to Account For	$	8,300
Beginning Work-in-Process Inventory	$	(2,200)
Total Manufacturing Costs Incurred During the Year	$	6,100
(i)		
Total Manufacturing Costs to Account For	$	8,300
Ending Work-in-Process Inventory	$	(2,600)
Cost of Goods Manufactured	$	5,700

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E18-20

Requirements

1. Use the information to prepare a schedule of cost of goods manufactured.

2. What is the unit product cost if Wilson manufactured 3,700 lamps for the year?

Solution:

Requirement 1

WILSON CORP. Schedule of Cost of Goods Manufactured Year Ended December 31, 2018			
Beginning Work-in-Process Inventory			$ 109,000
Direct Materials Used:			
Beginning Raw Materials Inventory	$59,000		
Purchases of Raw Materials	151,000		
Raw Materials Available for Use	210,000		
Ending Raw Materials Inventory	(23,000)		
Direct Materials Used		$ 187,000	
Direct Labor		121,000	
Manufacturing Overhead:			
Depreciation, plant building and equipment	16,000		
Insurance on plant	24,000		
Repairs and maintenance—plant	10,000		
Indirect labor	39,000		
Total Manufacturing Overhead		89,000	
Total Manufacturing Costs Incurred During the Yr.			397,000
Total Manufacturing Costs to Account For			506,000
Ending Work-in-Process Inventory			(62,000)
Cost of Goods Manufactured			$ 444,000

Requirement 2

Unit product cost	=	Cost of goods manufactured / Total units produced
	=	$444,000 / 3,700 lamps
	=	$120 per lamp

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E18-21

Compute cost of goods manufactured and cost of goods sold.

Solution:

Beginning Work-in-Process Inventory			$ 40,000
Direct Materials Used:			
Beginning Raw Materials Inventory	$27,000		
Purchases of Raw Materials	73,000		
Raw Materials Available for Use	100,000		
Ending Raw Materials Inventory	(28,000)		
Direct Materials Used		$ 72,000	
Direct Labor		88,000	
Manufacturing Overhead		43,000	
Total Manufacturing Costs Incurred During the Year			203,000
Total Manufacturing Costs to Account For			243,000
Ending Work-in-Process Inventory			(32,000)
Cost of Goods Manufactured			$ 211,000

Beginning Finished Goods Inventory	$ 18,000	
Cost of Goods Manufactured	211,000	[above]
Cost of Goods Available for Sale	229,000	
Ending Finished Goods Inventory	(25,000)	
Cost of Goods Sold	$ 204,000	

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E18-22

Match the following terms to the appropriate statement. Some terms may be used more than once and some terms may not be used at all.

Solution:

a.	JIT
b.	TQM
c.	ERP
d.	E-Commerce

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E18-23

Requirements

1. What is Buddy's net income for April?

2. What is the cost of service to groom one dog?

Solution:

Requirement 1

Grooming Revenue		$ 16,300
Expenses:		
Wages Expense	$4,061	
Grooming Supplies Expense	1,675	
Building Rent Expense	900	
Utilities Expense	305	
Depreciation Expense—Equipment	55	
Total Expenses		6,996
Net Income		$ 9,304

Requirement 2

Cost of Service to	=	Total expenses / Total number of dogs groomed
Groom One Dog		
	=	$6,996 / 660 dogs
	=	$10.60 per dog

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E18-24

Requirements

1. Calculate the operating income for 2018.

2. Conway sold 6,600 brushes in 2018. Compute the unit cost for one brush.

Solution:

Requirement 1

Sales Revenue		$ 151,800
Cost of Goods Sold:		
Beginning Merchandise Inventory	$7,920	
Purchases	85,800	
Cost of Goods Available for Sale	93,720	
Ending Merchandise Inventory	(11,748)	
Cost of Goods Sold		81,972
Gross Profit		69,828
Selling and Administrative Expenses		47,058
Operating Income		$ 22,770

Requirement 2

Unit cost for one brush	=	Cost of goods sold / Total units sold
	=	$81,972 / 6,600 brushes
	=	$12.42 per brush

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P18-25A

Requirements

1. Which of these suggested strategies are inconsistent with IMA standards?

2. How might these inconsistencies affect the company's creditors and stakeholders

3. What should Wallace do if Cauvet insists that she follow all of these

Solution:

Students' responses will vary. Illustrative answers follow.

Requirement 1

a. If the goods have been received, postponing recording of the purchase understates liabilities. This is unethical and inconsistent with the IMA standards even if the supplier agrees to delay billing.
b. The software has not been sold. Therefore, it would be inconsistent with the IMA standards to record it as sales.
c. Delaying year-end closing incorrectly records next year's sales in this year's sales. This is unethical and inconsistent with the IMA standards.
d. The appropriate allowance for bad debts is a difficult judgment. The decision should not be driven by the desire to meet a profit goal. It should be based on the likelihood that the company will not collect the debts. We cannot determine this without more information. However, since the company emphasizes earnings growth, which can lead to sales to customers with weaker credit records, reducing the allowance seems questionable. It is not clear whether this strategy is inconsistent with the IMA standards.
e. If the maintenance is postponed, there is no transaction to record. This strategy is beyond the responsibility of the controller, so it does not violate IMA standards.

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Requirement 2

The inconsistencies noted for Smart Software, Inc. particularly impact the financial statement information provided by financial accounting to external users, such as creditors and stockholders. They will be led to believe the operating performance (profitability) of the company company is better than it really is. This misrepresentation may result in the investors holding the stock when they may have sold it with the correct information. Similarly, creditors may grant credit to the company with the false income information when they may not grant credit with the correct income information.

Requirement 3

The controller should resist attempts to implement a, b, and c and should gather more information about d. If the President ignores Wallace, then Wallace needs to consider if she wants to work for a company that engages in unethical behavior. Accountants should not be associated with any unethical behavior, and Wallace should resign.

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P18-26A

Requirements

1. Describe the difference between period costs and product costs.

2. Classify Lawlor's costs as period costs or product costs. If the costs are product costs, further classify them as direct materials, direct labor, or manufacturing overhead.

Solution:

Requirement 1

Period costs are operating costs that are expensed in the accounting period in which they are incurred.

Product costs are all costs of a product that GAAP requires companies to treat as an asset for external financial reporting. These costs are recorded as an asset (inventory) on the balance sheet until the asset is sold. The cost is then transferred to an expense account (Cost of Goods Sold) on the income statement. Product costs include direct materials, direct labor, and manufacturing overhead.

On the income statement, Cost of Goods Sold (product cost) is subtracted from Sales Revenue to determine gross profit. The period costs are then subtracted to determine operating income.

Requirement 2

Cost	Period Cost	Product Cost		
		Direct Material	Direct Labor	Manufacturing Overhead
Shaft and handle of weed trimmer		X		
Motor of weed trimmer		X		
Factory labor for workers assembling weed trimmer			X	
Nylon thread used by the weed trimmer (not traced to the product)				X
Glue to hold the housing together				X
Plant janitorial wages				X
Depreciation on factory equipment				X
Rent on plant				X
Sales commissions	X			
Administrative salaries	X			
Plant utilities				X
Shipping costs to deliver finished weed trimmers to customers	X			

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P18-27A

Requirements

1. Define the three business types: service, merchandising, and manufacturing.

2. Based on the data given for the two companies, determine the business type of each one.

3. Calculate the cost of goods sold for each company.

Solution:

Requirement 1

Service companies sell services rather than products. They sell time, skills, and knowledge. Merchandising companies resell products previously bought from suppliers. Manufacturing companies use labor, equipment, supplies, and facilities to convert raw materials into new finished products.

Requirement 2

Company A is a merchandising company. Company B is a manufacturing company.The com-pany types can be determined by the account names in the ledger.

Requirement 3

Company A:	
Beginning Merchandise Inventory	$ 10,600
Purchases	154,500
Cost of Goods Available for Sale	165,100
Ending Merchandise Inventory	(13,100)
Cost of Goods Sold	$ 152,000

Company B:	
Beginning Finished Goods Inventory	$ 15,000
Cost of Goods Manufactured	214,500
Cost of Goods Available for Sale	229,500
Ending Finished Goods Inventory	(11,700)
Cost of Goods Sold	$ 217,800

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P18-28A

Requirements

1. Prepare a schedule of cost of goods manufactured for Gourmet Bones for the year ended December 31, 2018.

2. Prepare an income statement for Gourmet Bones for the year ended December 31, 2018.

3. How does the format of the income statement for Gourmet Bones differ from the income statement of a merchandiser?

4. Gourmet Bones manufactured 17,900 units of its product in 2018. Compute the company's unit product cost for the year, rounded to the nearest cent.

Solution:

Requirement 1

Gourmet Bones Schedule of Cost of Goods Manufactured Year Ended December 31, 2018			
Beginning Work-in-Process Inventory			$ 0
Direct Materials Used:			
Beginning Raw Materials Inventory	$ 13,500		
Purchases of Raw Materials	36,000		
Raw Materials Available for Use	49,500		
Ending Raw Materials Inventory	(7,500)		
Direct Materials Used		$ 42,000	
Direct Labor		23,000	
Manufacturing Overhead:			
Plant janitorial services	700		
Utilities for plant	1,300		
Rent on plant	17,000		
Total Manufacturing Overhead		19,000	
Total Manufacturing Costs Incurred during the Year			84,000
Total Manufacturing Costs to Account For			84,000
Ending Work-in-Process Inventory			(3,500)
Cost of Goods Manufactured			$ 80,500

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Requirement 2

Gourmet Bones Income Statement Year Ended December 31, 2018		
Revenues:		
Sales Revenue		$ 107,000
Cost of Goods Sold:		
Beginning Finished Goods Inventory	$ 0	
Cost of Goods Manufactured*	80,500	
Cost of Goods Available for Sale	80,500	
Ending Finished Goods Inventory	(5,200)	
Cost of Goods Sold		75,300
Gross Profit		31,700
Expenses:		
Sales Salaries Expense	6,000	
Delivery Expense	1,300	
Customer Service Hotline Expense	1,200	
Total Expenses		8,500
Net Income (Loss)		$ 23,200
* From the Schedule of Cost of Goods Manufactured in Requirement 1.		

Requirement 3

For a manufacturing company, cost of goods sold on the income statement
is based on cost of goods manufactured and the change in Finished Goods
Inventory. For a merchandising company, cost of goods sold on the income
statement is based on cost of merchandise purchased (including freight in)
and the change in Merchandise Inventory.

Requirement 4

Unit product cost	= Cost of goods manufactured / Total units produced
	= $80,500 / 17,900 units
	= $4.50 per unit (rounded to nearest cent)

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P18-29A

Certain item descriptions and amounts are missing from the monthly schedule of cost of goods manufactured and income statement of Elly Manufacturing Company. Fill in the blanks with the missing words and replace the Xs with the correct amounts.

Solution:

Elly Manufacturing Company **Schedule of Cost of Goods Manufactured** **Month Ended June 30, 2018**			
Beginning Work-in-Process Inventory			$ 27,000
Direct Materials Used:			
Beginning Raw Materials Inventory	**$ 28,000**		
Purchases of Raw Materials	56,000		
Raw Materials Available for Use	84,000		
Ending Raw Materials Inventory	(20,000)		
Direct Materials Used		**$ 64,000**	
Direct Labor		**72,000**	
Manufacturing Overhead		44,000	
Total Manufacturing Costs Incurred During the Month			180,000
Total Manufacturing Costs to Account For			**207,000**
Ending Work-in-Process Inventory			(25,000)
Cost of Goods Manufactured			**$ 182,000**

Missing Amounts:		
Beginning Raw Materials Inventory:		
Raw Materials Available for Use	$ 84,000	
Purchases of Raw Materials	(56,000)	
Beginning Raw Materials Inventory	$ 28,000	
Direct Materials Used:		
Raw Materials Available for Use	$ 84,000	
Ending Raw Materials Inventory	(20,000)	
Direct Materials Used	$ 64,000	
Direct Labor:		
Total Manufacturing Costs Incurred During the Month	$ 180,000	
Manufacturing Overhead	(44,000)	
Direct Materials Used [calculated above]	(64,000)	
Direct Labor	$ 72,000	
Total Manufacturing Costs to Account For:		
Beginning Work-in-Process Inventory	$ 27,000	
Total Manufacturing Costs Incurred During the Month	180,000	
Total Manufacturing Costs to Account For	$ 207,000	
Cost of Goods Manufactured:		
Total Manufacturing Costs to Account For [calculated above	$ 207,000	
Ending Work-in-Process Inventory	(25,000)	
Cost of Goods Manufactured	$ 182,000	

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Elly Manufacturing Company Income statement Month Ended June 30, 2018		
Sales Revenue		**$ 490,000**
Cost of Goods Sold:		
Beginning Finished Goods Inventory	$ 110,000	
Cost of Goods Manufactured	**182,000**	
Cost of Goods Available for Sale	**292,000**	
Ending Finished Goods Inventory	**(60,000)**	
Cost of Goods Sold		232,000
Gross Profit		258,000
Selling and Administrative Expenses:		
Selling Expenses	98,000	
Administrative Expenses	**62,000**	
Total Selling and Administrative Expenses		160,000
Operating Income		**$ 98,000**

Missing Amounts:	
Sales Revenue:	
Cost of Goods Sold	$ 232,000
Gross Profit	258,000
Sales Revenue	$ 490,000
Cost of Goods Manufactured:	
[From the Schedule of Cost of Goods Manufactured]	
Cost of Goods Available for Sale:	
Beginning Finished Goods Inventory	$ 110,000
Cost of Goods Manufactured	182,000
Cost of Goods Available for Sale	$ 292,000
Ending Finished Goods Inventory:	
Cost of Goods Available for Sale [calculated above]	$ 292,000
Cost of Goods Sold	(232,000)
Ending Finished Goods Inventory	$ 60,000
Administrative Expenses:	
Total Operating Expenses	$ 160,000
Selling Expenses	(98,000)
Administrative Expenses	$ 62,000
Operating Income:	
Gross Profit	$ 258,000
Total Selling and Administrative Expenses	(160,000)
Operating Income	$ 98,000

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P18-30A

Requirements

Analyze the inventory accounts to determine:

1. Cost of direct materials purchased during the year.
2. Cost of goods manufactured for the year.
3. Cost of goods sold for the year.

Solution:

Requirement 1

Cost of raw materials purchased:

Direct Materials Used	=	Beginning Raw Materials Inventory	+	Cost of Raw Materials Purchased	–	Ending Raw Materials Inventory

Solving for cost of raw materials purchased:

Cost of Raw Materials Purchased	=	Direct Materials Used	+	Ending Raw Materials Inventory	–	Beginning Raw Materials Inventory
	=	$ 2,000,000	+	$ 800,000	–	$ 700,000
	=	$ 2,100,000				

Requirement 2

Cost of goods manufactured for the year:

Cost of Goods Manufactured	=	Beginning Work-in-Process Inventory	+	Total Manufacturing Costs Incurred	–	Ending Work-in-Process Inventory
	=	$ 1,500,000	+	$ 26,300,000	–	$ 1,200,000
	=	$ 26,600,000				

Requirement 3

Cost of goods sold for the year:

Cost of Goods Sold	=	Beginning Finished Goods Inventory	+	Cost of Goods Manufactured	–	Ending Finished Goods Inventory
	=	$ 400,000	+	$ 26,600,000 [calculated in 2]	–	$ 600,000
	=	$ 26,400,000				

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P18-31A

Requirements

1. Prepare an income statement for the month of March.

2. Compute the per unit cost of repairing one windshield.

3. The manager of Windshield Doctors must keep unit operating cost below $50 per windshield in order to get his bonus. Did he meet the goal?

Solution:

Requirement 1

WINDSHIELD DOCTORS Income Statement Month Ended March 31, 2018		
Revenues:		
Sales Revenue		$ 23,000
Expenses:		
Salaries and Wages Expense	$ 12,000	
Materials Expense	4,600	
Depreciation Expense—Truck	300	
Depreciation Expense—Building and Equipment	1,200	
Supplies Expense	300	
Utilities Expense	460	
Total Expenses		18,860
Net Income		$ 4,140

Requirement 2

Per unit cost	= Total expenses / Total windshields repaired
	= $18,860 / 500 windshields
	= $37.72 per windshield

Requirement 3

Yes. The actual unit cost per windshield of $37.72 is less than $50.

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P18-32A

Requirements

1. Prepare an income statement for Clyde's Pets for the year ended December 31, 2018.

2. Clyde's Pets sold 3,850 units. Determine the unit cost of the merchandise sold, rounded to the nearest cent.

Solution:

Requirement 1

Clyde's Pets Income Statement Year Ended December 31, 2018		
Revenues:		
Sales Revenue		$ 56,000
Cost of Goods Sold:		
Beginning Merchandise Inventory	$ 15,900	
Purchases of Merchandise	25,000	
Cost of Goods Available for Sale	40,900	
Ending Merchandise Inventory	(10,100)	
Cost of Goods Sold		30,800
Gross Profit		25,200
Expenses:		
Utilities Expense	3,300	
Rent Expense	4,100	
Sales Commission Expense	2,650	
Total Expenses		10,050
Net Income		$ 15,150

Requirement 2

Unit cost	= Cost of goods sold / Total units sold
	= $30,800 / 3,850 units
	= $8.00 per unit (rounded to nearest cent)

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P18-33B

Requirements

1. Which of these suggested strategies are inconsistent with IMA standards?

2. How might these inconsistencies affect the company's creditors and stakeholders'

3. What should Borzi do if Busch insists that she follow all of these suggestions?

Solution:

Students' responses will vary. Illustrative answers follow.

Requirement 1

a. If the goods have been received, postponing recording of the purchase understates liabilities. This is unethical and inconsistent with the IMA standards even if the supplier agrees to delay billing.
b. The software has not been sold. Therefore, it would be inconsistent with the IMA standards to record it as sales.
c. Delaying year-end closing incorrectly records next year's sales in this year's sales. This is unethical and inconsistent with the IMA standards.
d. The appropriate allowance for bad debts is a difficult judgment. The decision should not be driven by the desire to meet a profit goal. It should be based on the likelihood that the company will not collect the debts. We cannot determine this without more information. However, since the company emphasizes earnings growth, which can lead to sales to customers with weaker credit records, reducing the allowance seems questionable. It is not clear whether this strategy is inconsistent with the IMA standards.
e. If the maintenance is postponed, there is no transaction to record. This strategy is beyond the responsibility of the controller, so it does not violate IMA standards.

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Requirement 2

The inconsistencies noted for Smart Software, Inc. particularly impact the financial statement information provided by financial accounting to external users, such as creditors and stockholders. They will be led to believe the operating performance (profitability) of the company company is better than it really is. This misrepresentation may result in the investors holding the stock when they may have sold it with the correct information. Similarly, creditors may grant credit to the company with the false income information when they may not grant credit with the correct income information.

Requirement 3

The controller should resist attempts to implement a, b, and c and should gather more information about d. If the President ignores Borzi, then Borzi needs to consider if she wants to work for a company that engages in unethical behavior. Borzi should not be associated with unethical behavior and should resign.

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P18-34B

Requirements

1. Describe the difference between period costs and product costs.

2. Classify Langley's costs as period costs or product costs. If the costs are product costs, further classify them as direct materials, direct labor, or manufacturing overhead.

Solution:

Requirement 1

Period costs are operating costs that are expensed in the accounting period in which they are incurred.

Product costs are all costs of a product that GAAP requires companies to treat as an asset for external financial reporting. These costs are recorded as an asset (inventory) on the balance sheet until the asset is sold. The cost is then transferred to an expense account (Cost of Goods Sold) on the income statement. Product costs include direct materials, direct labor, and manufacturing overhead.

On the income statement, Cost of Goods Sold (product cost) is subtracted from Sales Revenue to determine gross profit. The period costs are then subtracted from gross profit to determine operating income.

Requirement 2

Cost	Period Cost	Product Cost		
		Direct Materials	Direct Labor	Manufacturing Overhead
Handle and shaft of edger		X		
Motor of edger		X		
Factory labor for workers assembling edgers			X	
Lubricant used on bearings in the edger (not traced to the product)				X
Glue to hold housing together				X
Plant janitorial wages				X
Depreciation on factory equipment				X
Rent on plant				X
Sales commissions	X			
Administrative salaries	X			
Plant utilities				X
Shipping costs to deliver finished edgers to customers	X			

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P18-35B

Requirements

1. Define the three business types: service, merchandising, and manufacturing.

2. Based on the data given for the two companies, determine the business type of each one.

3. Calculate the cost of goods sold for each company.

Solution:

Requirement 1

Service companies sell services rather than products. They sell time, skills, and knowledge. Merchandising companies resell products previously bought from suppliers. Manufacturing companies use labor, equipment, supplies, and facilities to convert raw materials into new finished products.

Requirement 2

Company 1 is a merchandising company. Company 2 is a manufacturing company. The company type can be determined by the account names in the ledger.

Requirement 3

Company 1:	
Beginning Merchandise Inventory	$ 11,600
Purchases	152,500
Cost of Goods Available for Sale	164,100
Ending Merchandise Inventory	(12,400)
Cost of Goods Sold	$ 151,700

Company 2:	
Beginning Finished Goods Inventory	$ 15,400
Cost of Goods Manufactured	214,500
Cost of Goods Available for Sale	229,900
Ending Finished Goods Inventory	(11,300)
Cost of Goods Sold	$ 218,600

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P18-36B

Requirements

1. Prepare a schedule of cost of goods manufactured for Chewy Bones for the year ended December 31, 2018.

2. Prepare an income statement for Chewy Bones for the year ended December 31, 2018.

3. How does the format of the income statement for Chewy Bones differ from the income statement of a merchandiser?

4. Chewy Bones manufactured 17,500 units of its product in 2018. Compute the company's unit product cost for the year, rounded to the nearest cent.

Solution:

Requirement 1

Chewy Bones Schedule of Cost of Goods Manufactured Year Ended December 31, 2018			
Beginning Work-in-Process Inventory			$ 0
Direct Materials Used:			
Beginning Raw Materials Inventory	$ 13,400		
Purchases of Raw Materials	39,000		
Raw Materials Available for Use	52,400		
Ending Raw Materials Inventory	(10,500)		
Direct Materials Used		$ 41,900	
Direct Labor		16,000	
Manufacturing Overhead:			
Plant janitorial services	900		
Utilities for plant	1,200		
Rent on plant	9,000		
Total Manufacturing Overhead		11,100	
Total Manufacturing Costs Incurred during the Year			69,000
Total Manufacturing Costs to Account For			69,000
Ending Work-in-Process Inventory			(1,500)
Cost of Goods Manufactured			$ 67,500

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Requirement 2

Chewy Bones Income Statement Year Ended December 31, 2018		
Revenues:		
Sales Revenue		$ 115,000
Cost of Goods Sold:		
Beginning Finished Goods Inventory	$ 0	
Cost of Goods Manufactured*	67,500	
Cost of Goods Available for Sale	67,500	
Ending Finished Goods Inventory	(5,400)	
Cost of Goods Sold		62,100
Gross Profit		52,900
Expenses:		
Sales Salaries Expense	5,100	
Delivery Expense	1,700	
Customer Service Hotline Expense	1,600	
Total Expenses		8,400
Net Income (Loss)		$ 44,500
* From the Schedule of Cost of Goods Manufactured in Requirement 1.		

Requirement 3

For a manufacturing company, cost of goods sold on the income statement is based on cost of goods manufactured and the change in Finished Goods Inventory. For a merchandising company, cost of goods sold on the income statement is based on cost of merchandise purchased (including freight in) and the change in Merchandise Inventory.

Requirement 4

Unit product cost	= Cost of goods manufactured / Total units produced
	= $67,500 / 17,500 units
	= $3.86 per unit (rounded to the nearest cent)

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P18-37B

Certain item descriptions and amounts are missing from the monthly schedule of cost of goods manufactured and income statement of Charlie Manufacturing Company. Fill in the blanks with the missing words and replace the Xs with the correct amounts.

Solution:

Requirement 1

Charlie Manufacturing Company Schedule of Cost of Goods Manufactured Month Ended June 30, 2018			
Beginning Work-in-Process Inventory			$ 26,000
Direct Materials Used:			
Beginning Raw Materials Inventory	**$ 30,000**		
Purchases of Raw Materials	51,000		
Raw Materials Available for Use	81,000		
Ending Raw Materials Inventory	(26,000)		
Direct Materials Used		**$ 55,000**	
Direct Labor		**72,000**	
Manufacturing Overhead		50,000	
Total Manufacturing Costs Incurred During the Month			177,000
Total Manufacturing Costs to Account For			**203,000**
Ending Work-in-Process Inventory			(29,000)
Cost of Goods Manufactured			**$ 174,000**

Missing Amounts:	
Beginning Raw Materials Inventory:	
Raw Materials Available for Use	$ 81,000
Purchases of Raw Materials	(51,000)
Beginning Raw Materials Inventory	$ 30,000
Direct Materials Used:	
Raw Materials Available for Use	$ 81,000
Ending Raw Materials Inventory	(26,000)
Direct Materials Used	$ 55,000
Direct Labor:	
Total Manufacturing Costs Incurred During the Month	$ 177,000
Manufacturing Overhead	(50,000)
Direct Materials Used [calculated above]	(55,000)
Direct Labor	$ 72,000
Total Manufacturing Costs to Account For:	
Beginning Work-in-Process Inventory	$ 26,000
Total Manufacturing Costs Incurred During the Month	177,000
Total Manufacturing Costs to Account For	$ 203,000
Cost of Goods Manufactured:	
Total Manufacturing Costs to Account For [calculated above]	$ 203,000
Ending Work-in-Process Inventory	(29,000)
Cost of Goods Manufactured	$ 174,000

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Requirement 2

Charlie Manufacturing Company Income Statement Month Ended June 30, 2018		
Sales Revenue		**$ 500,000**
Cost of Goods Sold:		
Beginning Finished Goods Inventory	$ 118,000	
Cost of Goods Manufactured	**174,000**	
Cost of Goods Available for Sale	**292,000**	
Ending Finished Goods Inventory	**(60,000)**	
Cost of Goods Sold		232,000
Gross Profit		268,000
Selling and Administrative Expenses:		
Selling Expenses	90,000	
Administrative Expenses	**60,000**	
Total Selling and Administrative Expenses		150,000
Operating Income		**$ 118,000**

Missing Amounts:	
Sales Revenue:	
Cost of Goods Sold	$ 232,000
Gross Profit	268,000
Sales Revenue	$ 500,000
Cost of Goods Manufactured:	
[From the Schedule of Cost of Goods Manufactured]	
Cost of Goods Available for Sale:	
Beginning Finished Goods Inventory	$ 118,000
Cost of Goods Manufactured	174,000
Cost of Goods Available for Sale	$ 292,000
Ending Finished Goods Inventory:	
Cost of Goods Available for Sale [calculated above]	$ 292,000
Cost of Goods Sold	(232,000)
Ending Finished Goods Inventory	$ 60,000
Administrative Expenses:	
Total Operating Expenses	$ 150,000
Selling Expenses	(90,000)
Administrative Expenses	$ 60,000
Operating Income:	
Gross Profit	$ 268,000
Total Selling and Administrative Expenses	(150,000)
Operating Income	$ 118,000

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P18-38B

Requirements

Analyze the inventory accounts to determine:

1. Cost of direct materials purchased during the year.

2. Cost of goods manufactured for the year.

3. Cost of goods sold for the year.

Solution:

Requirement 1

Cost of raw materials purchased during the year:								
Direct Materials Used	=	Beginning Raw Materials Inventory	+	Cost of Raw Materials Purchased	–	Ending Raw Materials Inventory		
Solving for cost of raw materials purchased:								
Cost of Raw Materials Purchased	=	Direct Materials Used	+	Ending Raw Materials Inventory	–	Beginning Raw Materials Inventory		
	=	$ 2,600,000	+	$ 800,000	–	$ 700,000		
	=	$ 2,700,000						

Requirement 2

Cost of goods manufactured for the year:								
Cost of Goods Manufactured	=	Beginning Work-in-Process Inventory	+	Total Manufacturing Costs Incurred	–	Ending Work-in-Process Inventory		
	=	$ 1,500,000	+	$ 21,900,000	–	$ 2,000,000		
	=	$ 21,400,000						

Requirement 3

Cost of goods sold for the year:								
Cost of Goods Sold	=	Beginning Finished Goods Inventory	+	Cost of Goods Manufactured	–	Ending Finished Goods Inventory		
	=	$ 1,100,000	+	$ 21,400,000 [calculated in 2]	–	$ 1,080,000		
	=	$ 21,420,000						

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P18-39B

Requirements

1. Prepare an income statement for the month of July.

2. Compute the per unit cost of repairing one windshield.

3. The manager of The Glass Doctors must keep unit operating cost below $80 per windshield in order to get his bonus. Did he meet the goal?

Solution:

Requirement 1

THE GLASS DOCTORS Income Statement Month Ended July 31, 2018		
Revenues:		
Sales Revenue		$ 25,000
Expenses:		
Salaries and Wages Expense	$ 10,000	
Materials Expense	4,100	
Depreciation Expense—Truck	500	
Depreciation Expense—Building and Equipment	900	
Supplies Expense	450	
Utilities Expense	4,550	
Total Expenses		20,500
Net Income		$ 4,500

Requirement 2

Per unit cost	= Total expenses / Total windshields repaired
	= $20,500 / 250 windshields
	= $82.00 per windshield

Requirement 3

No. The actual unit cost per windshield of $82.00 is greater than $80.

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P18-40B

Requirements

1. Prepare an income statement for Dillon's Pets for the year ended December 31, 2018.

2. Clyde's Pets sold 5,500 units. Determine the unit cost of the merchandise sold, rounded to the nearest cent.

Solution:

Requirement 1

Dillons's Pets Income Statement Year Ended December 31, 2018		
Revenues:		
Sales Revenue		$ 56,000
Cost of Goods Sold:		
Beginning Merchandise Inventory	$ 16,000	
Purchases of Merchandise	25,000	
Cost of Goods Available for Sale	41,000	
Ending Merchandise Inventory	(10,500)	
Cost of Goods Sold		30,500
Gross Profit		25,500
Expenses:		
Utilities Expense	3,200	
Rent Expense	4,100	
Sales Commission Expense	2,750	
Total Expenses		10,050
Net Income		$ 15,450

Requirement 2

Unit cost	= Cost of goods sold / Total units sold
	= $30,500 / 5,550 units
	= $5.50 per unit (rounded to the nearest cent)

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P18-41

Using Excel

Solution:

The student templates for Using Excel are available online in MyAccountingLab
in the Multimedia Library or at http://www.pearsonhighered.com/Horngren.
The solution to Using Excel is located in MyAccountingLab in the Instructor
Resource Center or at http://www.pearsonhighered.com/Horngren.

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P18-42

Prepare a schedule of cost of goods manufactured for Piedmont Computer Company for the month ended

Solution:

Piedmont Computer Company Schedule of Cost of Goods Manufactured Month Ended January 31, 2020			
Beginning Work-in-Process Inventory			$ 0
Direct Materials Used:			
Beginning Raw Materials Inventory	$ 10,500		
Purchases of Raw Materials	16,000		
Raw Materials Available for Use	26,500		
Ending Raw Materials Inventory	(9,700)		
Direct Materials Used		$ 16,800	
Direct Labor		210,000	
Manufacturing Overhead:			
Plant janitorial services	500		
Utilities for plant	16,000		
Rent on plant	9,000		
Total Manufacturing Overhead		25,500	
Total Manufacturing Costs Incurred during the Year			252,300
Total Manufacturing Costs to Account For			252,300
Ending Work-in-Process Inventory			(17,000)
Cost of Goods Manufactured			$ 235,300

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Tying It All Together Case 18-1

Requirements

1. Why would the Finished Goods Inventory be such a relatively small portion of total inventory?
2. What is the average cost of goods sold (in dollars) for a Winnebago motor home? What is t
3. If Winnebago could reduce production costs so that the average cost of goods sold is equal to their competitor's average cost of goods sold, how much more profit would Winnebago earn on each motor home sold?
4. Based on 2015 sales, how much would operating income increase if the company reduced the average cost of goods sold to equal their competitor's average cost of goods sold?
5. How could managers at Winnebago use managerial accounting to reduce costs and increase profits?

Solution:

Requirement 1

Winnebago's finished goods inventory is such a relatively small portion of total inventory because Winnebago manufactures the RVs and then sells them to dealerships for resale to consumers. The company does not own or operate dealerships. Therefore, Winnebago has a relatively small portion of Finished Goods Inventory. As soon as RVs are complete, Winnebago will want to sell them to the dealerships. The majority of Winnebago's inventory is in Raw Materials Inventory that will be used in the manufacturing process and Work–in–Process Inventory of the RVs started but not yet completed.

Requirement 2

Average cost of goods sold = Average sales price × Cost of goods sold % = $96,000 × 89% = $85,440.
Average gross profit = Average sales price – Average cost of goods sold = $96,000 – $85,440 = $10,560

Requirement 3

Average cost of goods sold = Average sales price × Cost of goods sold % = $96,000 × 86% = $82,560.
Average gross profit = Average sales price – Average cost of goods sold = $96,000 – $82,560 = $13,440. Profits would increase by $2,880 ($13,440 – $10,560) per motor home sold.

Requirement 4

Total increase in operating income = Average increase in profits per motor home × Number of motor homes = $2,880 per motor home × 9,097 motor homes = $26,199,360.

Requirement 5

Managerial accounting provides detailed information on all costs incurred by the company. Managers can use the information provided to analyze different types of costs, such as product costs and period costs, to determine where actual costs exceeded expected costs and then consider options to reduce those costs.

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Decision Case 18-1

Requirements

Analyze the inventory accounts to determine:

1. Prepare a schedule showing each inventory account and the increases and decreases to each account. Use it to determine the ending inventories of Raw Materials, Work-in-Process, and Finished Goods.

2. Itemize a list of the cost of inventory lost.

Solution:

Requirement 1

Shown in the schedule, below, the ending inventories are: Raw Materials Inventory, $143,000; Work-in-Process Inventory, $239,000; and Finished Goods Inventory, $150,000.

POWER SWITCH, INC.
Flow of Costs Schedule

Raw Materials Inventory		Work-in-Process Inventory		Finished Goods Inventory	
Beginning Inventory	$ 113,000 *	Beginning Inventory	$ 229,000 *	Beginning Inventory	$ 154,000 *
+ Purchases	476,000 *	+ Direct Mat. Used	446,000 [e]	+ Cost of Goods Manufactured	1,186,000 [c]
		+ Direct Labor	505,000 *		
		+ Manufacturing Overhead	245,000 *		
= Raw Mat. Available for Use	589,000	= Total Manufacturing Costs to Account For	1,425,000 *	= Cost of Goods Available for Sale	1,340,000 *
− End. Inventory	143,000 [f]	− Ending Inventory	239,000 [d]	− Ending Inventory	150,000 [b]
= Direct Materials Used	$ 446,000 [e]	= Cost of Goods Manufactured	$ 1,186,000 [c]	= Cost of Goods Sold	$ 1,190,000 [a]

* Denotes amounts given in the case.
Calculations for amounts denoted with a superscript letters are provided below.

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Calculations:

[a] Cost of Goods Sold:				
Sales	×	(1 – Gross Profit %)	=	Cost of Goods Sold
$1,700,000	×	(1 – 30%)	=	$1,190,000
$1,700,000	×	70%	=	$1,190,000
[b] Ending Finished Goods Inventory:				
Cost of Goods Available for Sale	–	Ending Finished Goods Inventory	=	Cost of Goods Sold
$1,340,000	–	Ending Finished Goods Inventory	=	$1,190,000
Therefore:		Ending Finished Goods Inventory	=	$150,000
[c] Cost of Goods Manufactured:				
Beginning Finished Goods Inventory	+	Cost of Goods Manufactured	=	Available for Sale
$154,000	+	Cost of Goods Manufactured	=	$1,340,000
Therefore:		Cost of Goods Manufactured	=	$1,186,000
[d] Ending Work-in-Process Inventory:				
Total Manufacturing Costs to Account For	–	Ending Work-in-Process Inventory	=	Cost of Goods
$1,425,000	–	Ending Work-in-Process Inventory	=	$1,186,000
Therefore:		Ending Work-in-Process Inventory	=	$239,000
[e] Direct Materials Used:				
Beginning Work-in-Process Inventory	+	Direct Materials Used + Direct Labor + Manufacturing Overheads	=	Cost of Goods
$229,000	+	Direct Materials Used + $505,000 $245,000	=	$1,425,000
Therefore:		Direct Materials Used	=	$446,000
[f] Ending Raw Materials Inventory:				
Raw Materials Available for Use	–	Ending Raw Materials Inventory	=	Direct Materials Used
$589,000	–	Ending Raw Materials Inventory	=	$446,000
Therefore:		Ending Raw Materials Inventory	=	$143,000

Requirement 2

Inventory lost in the flood:		
Raw Materials Inventory	$	143,000
Work-in-Process Inventory		239,000
Finished Goods Inventory		150,000
Total Inventory	$	532,000

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Ethical Issue 18-1

Requirements

1. What is the ethical issue?
2. What are your options?
3. What are the possible consequences?
4. What should you do?

Solution:

Students' responses will vary. Illustrative answers follow.

a. The ethical issue facing Becky is deciding what to do about the gifts to the sales managers. Although small "courtesy" gifts are accepted practice in the world of sales, the regular basis and the high value of these items (especially jewelry) suggest that the owner is bribing the sales managers and other sales executives to receive a large allocation of cars.

b. The options include:
   (1) Do nothing,
   (2) Discuss the matter with the owner,
   (3) Resign if the owner will not stop the practice, or
   (4) Inform the manufacturer.

c. The possible consequences include:
   (1) If Becky does nothing, her job and those of the other employees may remain secure for the time being. However, as controller she could be held accountable for laundering a bribe if the scheme became public. A lawsuit brought by other dealers who did not receive a fair share of available cars could name her as an involved party. If Becky is a CPA, she could also lose her CPA license.

   (2) If Becky discusses the matter with the owner, she might find out that there is another side to the story and in fact there is no wrongdoing or ethical dilemma. However, this seems unlikely given the facts. It also seems unlikely that the owner will end this practice since it enhances the dealership's profits. However, Becky may have some influence on Mueller if she explains the dangers of continuing the bribes. Mueller could be sued by other dealers, or the manufacturer could cancel his dealership. Such outcomes would affect all the dealership's employees, not just Mueller. If Mueller refuses to change his ways, then Becky is in an even more difficult position because she now has direct knowledge of the bribery.

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(3) By resigning, Becky loses her job but protects her integrity and avoids being involved in a subsequent action against the dealership if the bribery becomes known.

(4) Perhaps an even more difficult question is whether Becky should inform the manufacturer about the bribery. If Becky has not already resigned, Mueller probably would fire her for taking this action.

d. Accountants should never become party to, or appear to be involved in, an unethical (and possibly illegal) situation such as this. This is especially true for persons with fiduciary responsibilities like a controller. Becky should discuss her concerns with the owner. If Mueller is indeed bribing the sales representatives and refuses to stop this practice, Becky should inform the manufacturer, or she should resign.

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Communication Activity 18-1

In 100 words or fewer, explain the difference between product costs and period costs.In your explanation, explain the inventory accounts of a manufacturer.

Solution:

Period costs are operating costs that are expensed in the same accounting period in which they are incurred, whereas product costs are recorded as an asset and not expensed until the accounting period in which the product is sold. Period costs are all costs not considered product costs.

Manufacturing companies track costs on three kinds of inventory. Raw Materials Inventory includes materials used to manufacture a product. Work-in-Process Inventory includes goods that have been started in the manufacturing process but are not yet complete. Finished Goods Inventory includes completed goods that have not yet been sold.

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Chapter 18

Introduction to Managerial Accounting

Directed Reading Guide

LO1. Why is managerial accounting important?

a) Identify as a focus of Managerial (M) or Financial (F) accounting:

i) Primarily for internal users __**M**__

ii) Primarily for external users ___**F**___

iii) Follows GAAP rules ___**F**___

iv) Summary reports of the entire company ___**F**___

v) Concerned about how reports will affect employee behavior ___**M**___

b) Managers need information for?

i) **Planning**

ii) **Strategic Planning**

iii) **Operational Planning**

iv) **Directing**

v) **Controlling**

In MyAccountingLab, complete Try It! 18-1 and S18-1 and S18-2.

LO2. How are costs classified?

a) Manufacturing (product) costs categories are:

i) **Direct Materials**

ii) Direct Labor

iii) **Manufacturing Overhead**

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b) ___**Prime costs**____ combines direct materials and direct labor.

c) ____**Conversion Costs**___ combines direct labor and manufacturing overhead.

d) Selling and administrative expenses are referred to as ___**Period Costs**____**.**

In MyAccountingLab, complete Try It! 18-2 and S18-3 through S18-5.

LO3. How do manufacturing companies prepare financial statement?

a) Identify if the item is part of the Cost of Goods Manufactured (COGM) or the Cost of Goods Sold (COGS):

i) Beginning Finished Goods Inventory ___**COGS**___

ii) Direct Materials Used ___**COGM**___

iii) Direct Labor ___**COGM**___

iv) Beginning Work-in-Process Inventory ___**COGM**___

b) If beginning Finished Good Inventory is $2,000, ending Finished Goods Inventory is $3,000, and Cost of Goods Manufactured is $10,000, what is Cost of Gods Sold?

$2,000 + $10,000 - $3,000 = $9,000

In MyAccountingLab, complete Try It! 18-3 and S18-6 through S18-10.

LO4. What are business trends that are affecting managerial accounting?

a) Which business trend to you think is affecting managerial accounting the most in today's business's and why? **Student answers will vary.**

b) Pick an activity in the value chain and describe how it can add value to a product (you may pick a product to use as part of your example). **Student answers will vary.**

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In MyAccountingLab, complete Try It! 18-11.

LO5. How is managerial accounting used in service and merchandising companies?

a) ABC Company has incurred costs of $4,000 and provided service to 1,000 customers, what is the cost per service?

$4,000 / 1,000 = $4 per service

b) ABC Company sold 300 bottles of water that costs $150 to purchase, what is the cost per water bottle?

$150 / 300 bottles = .50 per bottle

In MyAccountingLab, complete Try It! 18-12.

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Chapter 18

Introduction to Managerial Accounting

Directed Reading Guide

LO1. Why is managerial accounting important?

a) Identify as a focus of Managerial (M) or Financial (F) accounting:

i) Primarily for internal users _____

ii) Primarily for external users _____

iii) Follows GAAP rules _____

iv) Summary reports of the entire company _____

v) Concerned about how reports will affect employee behavior _____

b) Managers need information for?

i)

ii)

iii)

iv)

v)

In MyAccountingLab, complete Try It! 18-1 and S18-1 and S18-2.

LO2. How are costs classified?

a) Manufacturing (product) costs categories are:

i)

ii)

iii)

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b) _____ combines direct materials and direct labor.

c) _____ combines direct labor and manufacturing overhead.

d) Selling and administrative expenses are referred to as _____.

In MyAccountingLab, complete Try It! 18-2 and S18-3 through S18-5.

LO3. How do manufacturing companies prepare financial statement?

a) Identify if the item is part of the Cost of Goods Manufactured (COGM) or the Cost of Goods Sold (COGS):

i) Beginning Finished Goods Inventory _____

ii) Direct Materials Used _____

iii) Direct Labor _____

iv) Beginning Work-in-Process Inventory _____

b) If beginning Finished Good Inventory is $2,000, ending Finished Goods Inventory is $3,000, and Cost of Goods Manufactured is $10,000, what is Cost of Gods Sold?

In MyAccountingLab, complete Try It! 18-3 and S18-6 through S18-10.

LO4. What are business trends that are affecting managerial accounting?

a) Which business trend to you think is affecting managerial accounting the most in today's business's and why?

b) Pick an activity in the value chain and describe how it can add value to a product (you may pick a product to use as part of your example).

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In MyAccountingLab, complete Try It! 18-11.

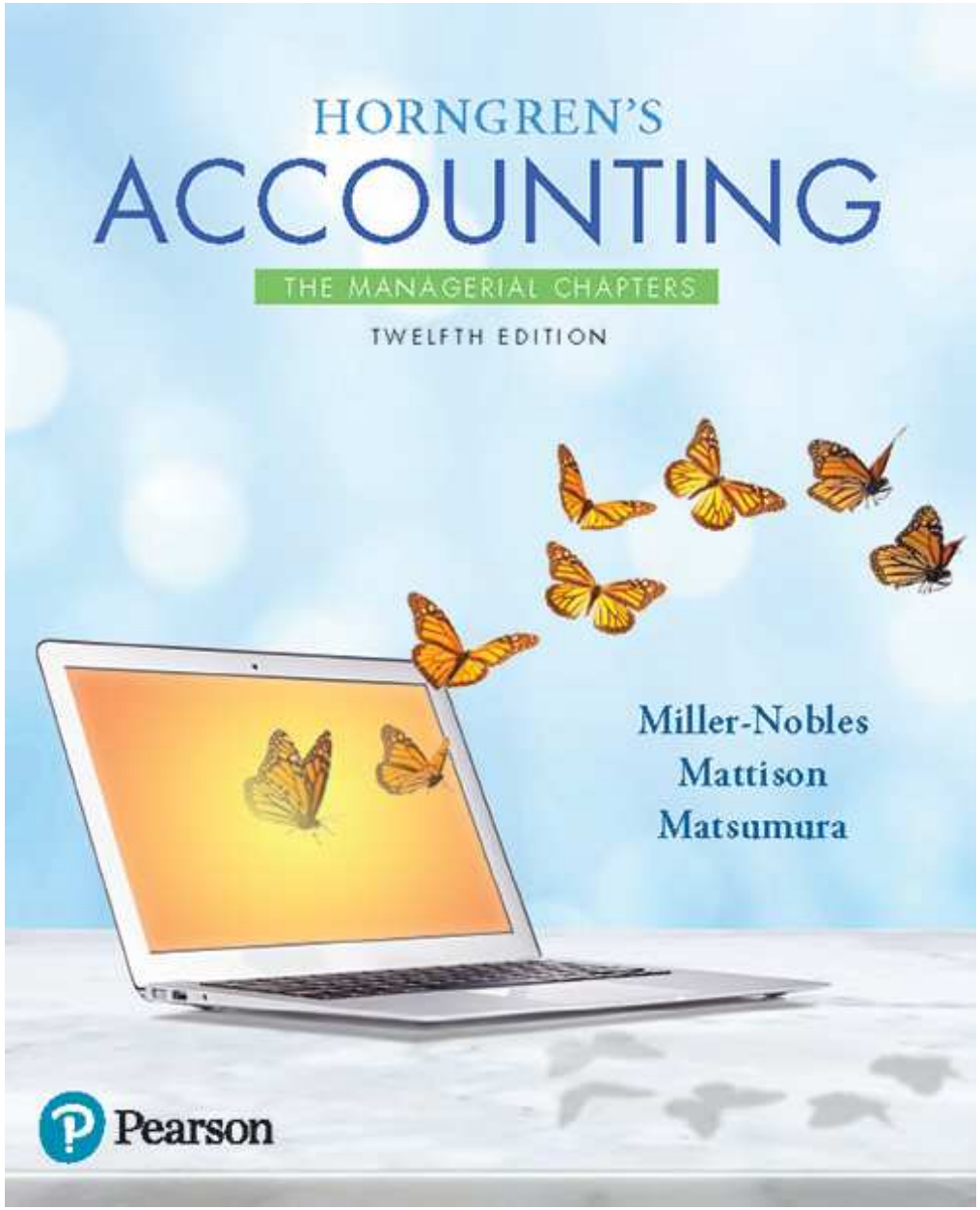
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In MyAccountingLab, complete Try It! 18-12.

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Chapter 18
Introduction to Managerial Accounting

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Chapter 18 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

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Chapter 18 Learning Objectives



4. Describe business trends affecting managerial accounting
5. Describe how managerial accounting is used in service and merchandising companies

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Learning Objective 1



Define managerial accounting and understand how it is used

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WHY IS MANAGERIAL ACCOUNTING IMPORTANT?

- Managerial accounting focuses on providing information for internal decision makers.
  - It helps managers make decisions needed to be successful.
- Financial accounting focuses on providing information for external decision makers.
  - Managers use financial accounting to report monetary transactions and prepare financial statements.

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WHY IS MANAGERIAL ACCOUNTING IMPORTANT?

Exhibit 18-1 | **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: 2017 actual performance reported in 2018	Relevant information and focus on the future Example: 2018 budget prepared in 2017
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

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Managers' Role in the Organization

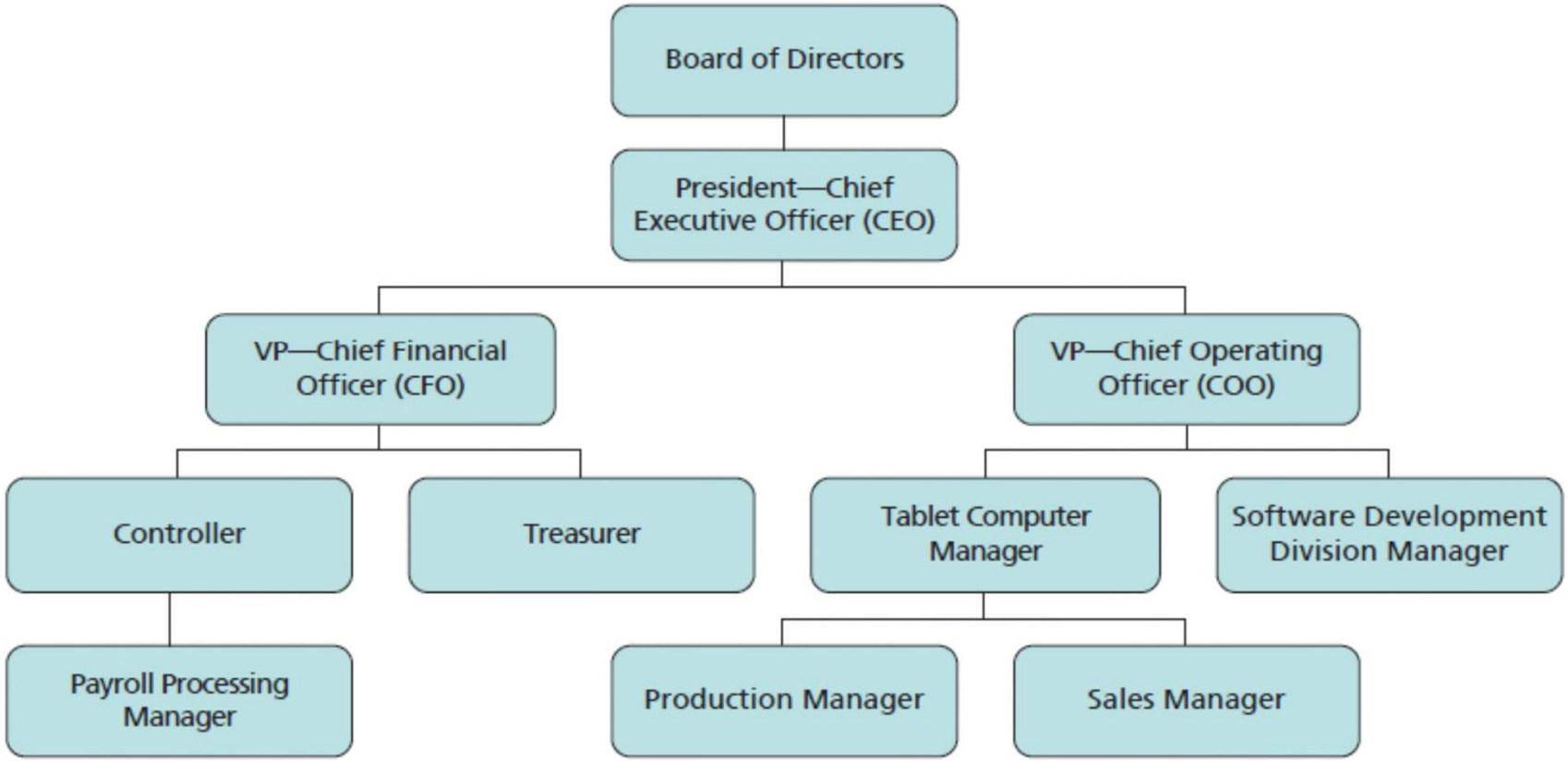
- Managers occur in all different parts of a company's structure.
- Most companies structure their organization along departments or divisions.
- A company's organizational chart helps show the relationship between departments and divisions and the managers who are responsible for each section.

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Managers' Role in the Organization

Exhibit 18-2 | **Organizational Chart for Smart Touch Learning (Partial)**



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Managers' Role in the Organization

- The board of directors is elected by the stockholders and is responsible for developing the strategic goals of the corporation.
- The chief executive officer (CEO) has ultimate responsibility for implementing the company's short- and long-term plans.
- 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.
  - Staff positions support the line positions.

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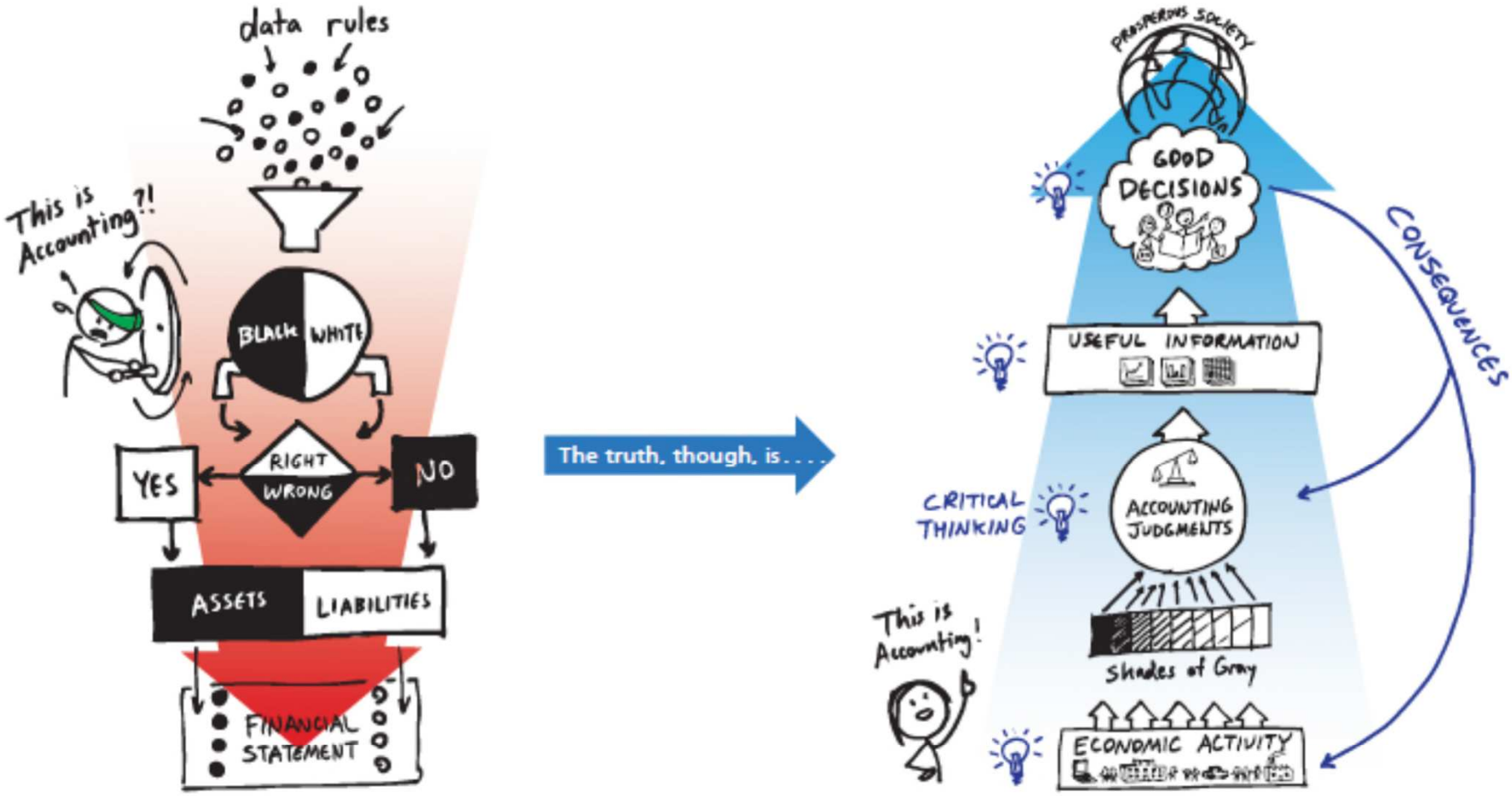
Managerial Accounting Functions

- Planning means 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 involves running the day-to-day operations of a business.
- Controlling is the process of monitoring day-to-day operations and keeping the company on track.

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Exhibit 18-3 | 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.

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Ethical Standards of Managers

- The Institute of Management Accountants (IMA) has developed standards that managerial accountants are expected to uphold when faced with ethical challenges.
  - Maintain their professional competence.
  - Preserve the confidentiality of the information they handle.
  - Act with integrity and credibility.

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Ethical Standards of Managers

- 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:
  - An immediate supervisor
  - An objective adviser
  - An attorney

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Exhibit 18-4 | IMA Statement of Ethical Professional Practice (Excerpt)

Management accountants have a commitment to ethical professional practice which includes principles of Honesty, Fairness, Objectivity, and Responsibility. The standards of ethical practice include the following:

I. COMPETENCE

1. Maintain an appropriate level of professional expertise by continually developing 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.
4. Recognize and communicate professional limitations or other constraints that would preclude responsible judgment or successful performance of an activity.

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 subordinates' activities 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.

IV. CREDIBILITY

1. Communicate information fairly and objectively.
2. Disclose all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, analyses, or recommendations.
3. Disclose delays or deficiencies in information, timeliness, processing, or internal controls in conformance with organization policy and/or applicable law.

Source: IMA Statement of Ethical Professional Practices 2012 : http://www.imanet.org/docs/default-source/press_releases/statement-of-ethical-professional-practice_2-2-12.pdf?sfvrsn=2

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Learning Objective 2



Classify costs used in managerial accounting

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HOW ARE COSTS CLASSIFIED?

- Service companies sell their time, skill, and knowledge.
- Merchandising companies resell products they previously bought from suppliers.
- Manufacturing companies use labor, equipment, supplies, and facilities to convert raw materials into finished products.

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Manufacturing Companies

- Manufacturing companies have three kinds of inventory:
  - Raw Materials Inventory (RM) includes materials used to make a product.
  - Work-in-Process Inventory (WIP) includes goods that are in the manufacturing process but are not yet complete.
  - Finished Goods Inventory (FG) includes completed goods that have not yet been sold.

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Direct and Indirect Costs

- 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.
- Costs that cannot be easily or cost-effectively traced directly to a cost object are indirect costs.

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Manufacturing Costs

- Direct materials (DM) are raw materials used in production.
- Direct labor (DL) is labor of employees working on the products.
- Manufacturing overhead (MOH) is the indirect product costs associated with production, including:
  - Indirect materials
  - Indirect labor
  - Factory costs for rent, utilities, insurance, etc.

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Manufacturing Costs

Exhibit 18-5 | **Manufacturing Costs**

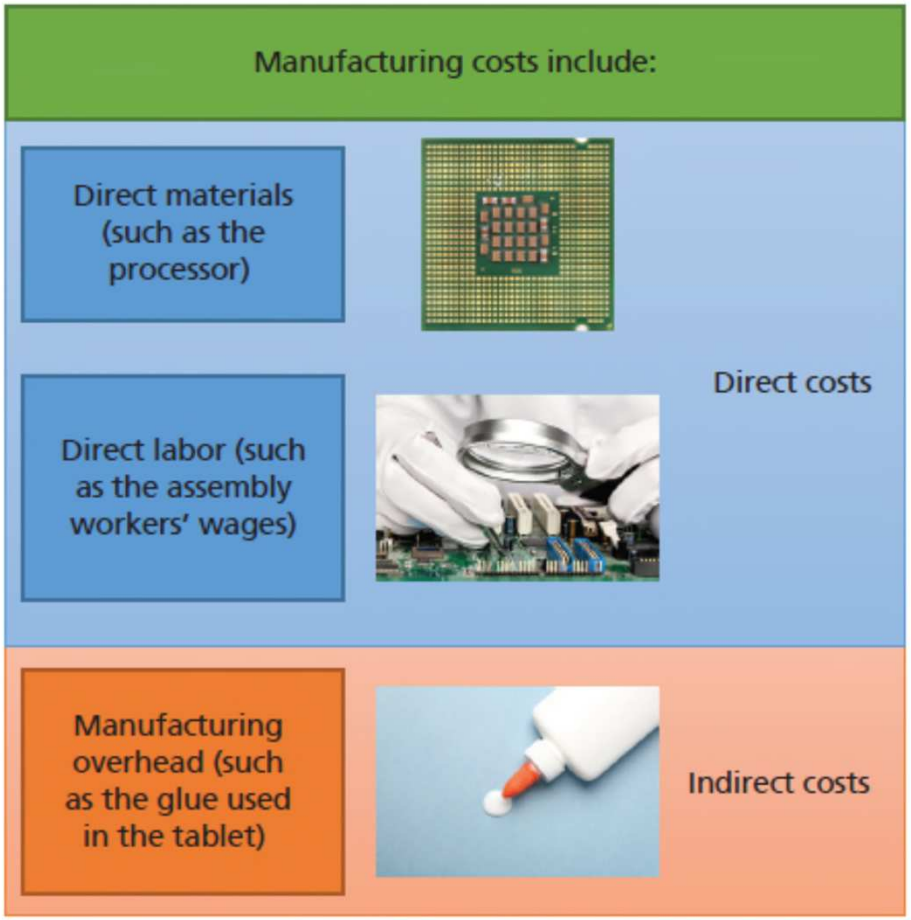


Exhibit 18-5 illustrates the three different manufacturing costs and the difference between direct and indirect costs.

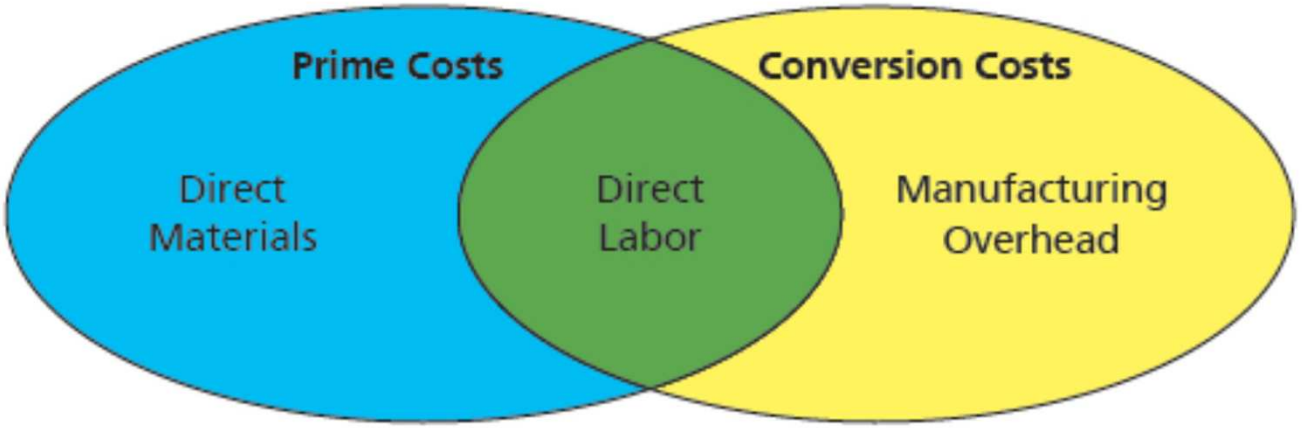
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Prime and Conversion Costs

- Prime costs combine the direct costs of direct materials and direct labor.
- Conversion costs combine direct labor with manufacturing overhead.

Exhibit 18-6 | **Prime and Conversion Costs**



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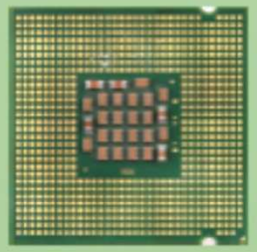
Product and Period Costs

- Product costs include the costs of purchasing or making a product.
  - Direct materials, direct labor, and manufacturing overhead
- Period costs are non-manufacturing costs.
  - Selling and administrative expenses and other expenses such as taxes and interest

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Exhibit 18-7 | Period Versus Product Costs

Period costs: non-manufacturing costs	Product costs: manufacturing costs
 Selling expenses (such as a marketer's salary)	Direct materials (such as the processor) 
 Administrative expenses (such as rent on an administrative building)	Direct labor (such as the assembly workers' wages) 
	Manufacturing overhead (such as the glue used in the tablet) 
Expensed when incurred.	Recorded first as an asset. Expensed when sold.

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Exhibit 18-8 | 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.

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Learning Objective 3



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

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HOW DO MANUFACTURING COMPANIES PREPARE FINANCIAL STATEMENTS?

- Service companies carry no inventories on their balance sheet.
- Merchandising companies record the cost of inventory purchased as an asset, Merchandise Inventory, on their balance sheet.
- Manufacturing companies keep track of costs using three inventory accounts: Raw Materials Inventory, Work-in-Process Inventory, and Finished Goods Inventory.

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Balance Sheet

Exhibit 18-9 | **Balance Sheet Comparison**

Service Company Balance Sheet (Partial) December 31, 2019		Merchandising Company Balance Sheet (Partial) December 31, 2019		Manufacturing Company Balance Sheet (Partial) December 31, 2019		
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**

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Income Statement

- Service companies only record period costs such as salaries expense and rent expense.
- Merchandising companies and manufacturing companies report Cost of Goods Sold as the major expense.
  - Because a manufacturer makes the product it sells, the calculation of cost of goods sold is different for manufacturing companies than for merchandising companies.

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Income Statement

Exhibit 18-10 | **Income Statement Comparison**

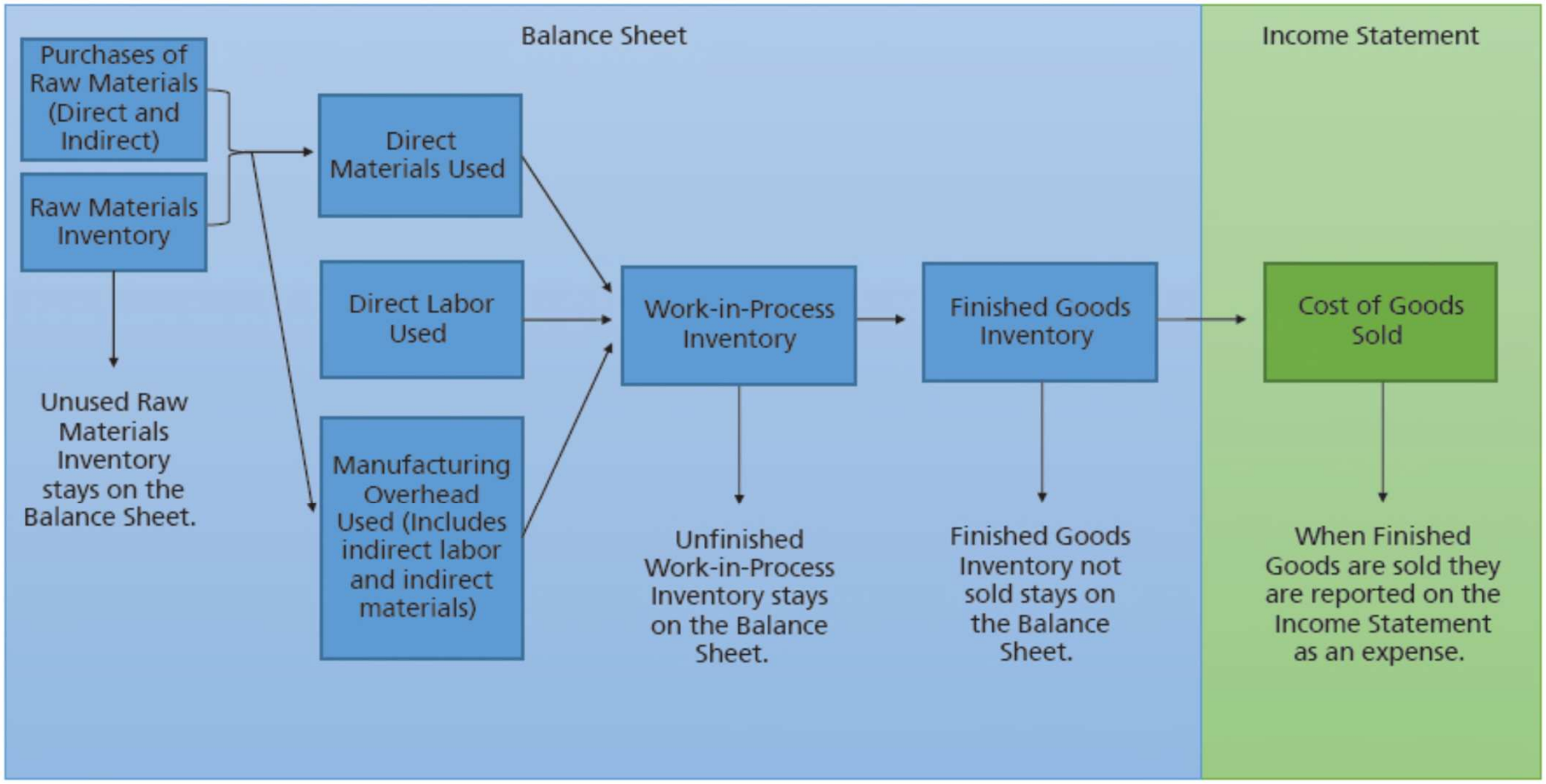
Service Company Income Statement Month Ended December 31, 2019			**Merchandising Company** Income Statement Month Ended December 31, 2019			**Manufacturing Company** Income Statement Month Ended December 31, 2019		
Revenues:			**Revenues:**			**Revenues:**		
Service Revenue		$ 7,600	Sales Revenue		$ 7,600	Sales Revenue		$ 7,600
Expenses:			Cost of Goods Sold:			Cost of Goods Sold:		
Salaries Expense	$ 3,800		Beginning Merchandise Inventory	$ 2,000		Beginning Finished Goods Inventory	$ 2,000	
Rent Expense	1,000		Purchases and Freight In	3,800		Cost of Goods Manufactured	3,800	
Utilities Expense	400		Cost of Goods Available for Sale	5,800		Cost of Goods Available for Sale	5,800	
Total Expenses		5,200	Ending Merchandise Inventory	(2,200)		Ending Finished Goods Inventory	(2,200)	
Operating Income		$ 2,400	Cost of Goods Sold		3,600	Cost of Goods Sold		3,600
			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

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Product Costs Flow Through a Manufacturing Company

Exhibit 18-11 | **Product Costs Flow through Manufacturing Company**



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Calculating Cost of Goods Manufactured

- Cost of goods manufactured is the manufacturing costs of the goods that finished the production process in a given accounting period.
- Three calculation steps:
  - Step 1: Calculate direct materials used.
  - Step 2: Calculate total manufacturing costs incurred during the year.
  - Step 3: Calculate cost of goods manufactured.

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Calculating Cost of Goods Manufactured

Step 1: Calculate 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

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Calculating Cost of Goods Manufactured

Step 2: Calculate total manufacturing costs incurred during the year.

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

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Calculating Cost of Goods Manufactured

Step 3: Calculate cost of goods manufactured.

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

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Exhibit 18-12 | Schedule of Cost of Goods Manufactured

SMART TOUCH LEARNING
Schedule of Cost of Goods Manufactured
Year Ended December 31, 2020

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**

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Calculating Cost of Goods Sold

- Cost of goods sold represents the cost of the Finished Goods Inventory that has been sold.
- Assume that Smart Touch Learning has beginning Finished Goods Inventory of $0 and ending Finished Goods Inventory of $60,000.

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

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Calculating Cost of Goods Sold

Exhibit 18-13 | Income Statement—Manufacturing Company

SMART TOUCH LEARNING Income Statement Year Ended December 31, 2020		
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.

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Flow of Costs Through the Inventory Accounts

Exhibit 18-14 | **Flow of 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

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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.

- Smart Touch Learning produced 2,200 tablets during 2020.

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

- During 2020, Smart Touch Learning sold 2,000 tablets.

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

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Learning Objective 4



Describe business trends affecting managerial accounting

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WHAT ARE BUSINESS TRENDS THAT ARE AFFECTING MANAGERIAL ACCOUNTING?

- Shift toward a service economy
- Global competition
- Time-based competition:
  - Enterprise Resource Planning (ERP) systems integrate companies' data.
  - E-commerce allows companies to sell products to customers around the world.
  - Just-in-Time (JIT) Management is an inventory management tool.

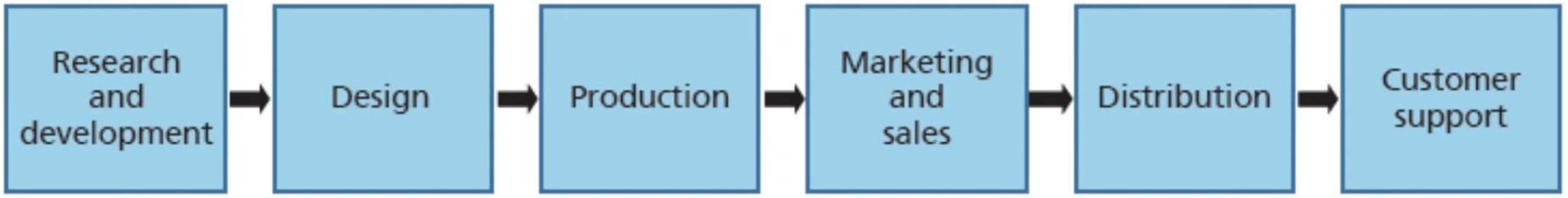
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Total Quality Management

- Total Quality Management (TQM) is a philosophy of continuous improvement in products and processes.
  - It creates a culture of cooperation.
  - Each step adds value to the end product, and this is referred to as the value chain.

Exhibit 18-15 | **Value Chain**



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The Triple Bottom Line

- The economic, social, and environmental impact of doing business is referred to as the triple bottom line, which includes:
  - Profits
  - People
  - Planet
- Increasingly, customers and stockholders are choosing to support companies based on their labor practices, community service, and sustainable environmental practices.

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Learning Objective 5



Describe how managerial accounting is used in service and merchandising companies

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HOW IS MANAGERIAL ACCOUNTING USED IN SERVICE AND MERCHANDISING COMPANIES?

Managers of service and merchandising organizations make decisions on pricing based on cost per service or cost per item.

- In 2018, Smart Touch Learning incurred costs of $3,900 and provided 1,950 e-learning services. In December 2019, Smart Touch Learning sold 260 tablets.

Total costs	/	Total number of services provided	=	Unit cost per service
$3,900	/	1,950 services	=	$2 per service

Total cost of goods sold	/	Total number of items sold	=	Unit cost per item
$90,800	/	260 tablets	=	$349.23 per tablet

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Appendix B
Statement of Cash Flows

Review Questions

1. The statement of cash flows reports on a business's cash receipts and cash payments for a specific period.

2. The statement of cash flows helps users do the following:
- Predict future cash flows.
- Evaluate management decisions.
- Predict ability to pay debts and dividends.

3. The three basic types of cash flow activities are: operating, investing, and financing. Operating activities are ones that create revenue or expenses in the entity's business. Investing activities increase or decrease long-term assets. Financing activities include cash inflows and outflows involved with long-term liabilities and equity.

4. Investing and financing transactions that do not involve cash are called non-cash investing and financing activities. Examples of these non-cash investing and financing activities include issuing stock in exchange for plant assets, retirement of debt by issuing stock, or purchasing plant assets with long-term notes payable.

5. The two formats for reporting the operating activities section are the indirect and direct methods. The indirect method starts with net income and adjusts it to net cash provided by operating activities. The direct method restates the income statement in terms of cash. It shows all the cash receipts and cash payments from operating activities.

6. The five steps used to prepare the statement of cash flows by the indirect method are:
- **STEP 1:** Complete the cash flows from operating activities section using net income and adjusting for increases or decreases in current assets (other than cash) and current liabilities. Also, adjust for gains or losses on long-term assets and non-cash expenses such as depreciation expense.
- **STEP 2:** Complete the cash flows from investing activities section by reviewing the long-term assets section of the balance sheet.
- **STEP 3: C**omplete the cash flows from financing activities section by reviewing the long-term liabilities and equity sections of the balance sheet.
- **STEP 4:** Compute the net increase or decrease in cash during the year. The change in cash is the key reconciling figure for the statement of cash flows and must match the change in cash reported on the comparative balance sheet.
- **STEP 5:** Prepare a separate schedule reporting any non-cash investing and financing activities.

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7. Depreciation expense, depletion expense, and amortization expense all impact the income statement decreasing net income. None of these use cash at the time they are expensed, these expenses occurred when the asset was purchased. Therefore, to go from net income to cash flows, depreciation must be removed by adding it back to net income.

8. A loss on disposal of long-term assets would be removed from the net income on the statement of cash flows by adding it back in the operating section. The loss was originally included in net income, but the cash from the sale needs to be shown in the investing section of the statement of cash flows.

9. An increase in a current asset other than cash causes a decrease adjustment to net income in the operating activities section of the statement of cash flows. A decrease in a current asset other than cash causes an increase adjustment to net income.

10. An increase in current liabilities causes an increase adjustment to net income in the operating activities section of the statement of cash flows. A decrease in current liabilities causes a decrease adjustment to net income.

11. The long-term asset accounts must be evaluated when completing the investing activities section of the statement of cash flows.

12. The long-term liability accounts and the equity accounts must be evaluated when completing the financing activities section of the statement of cash flows.

13. The net change in the cash section of the statement of cash flows reconciles the statement of cash flows. It is computed by combining the cash provided for or used by operating, investing, and financing activities. This amount should equal the change in cash on the balance sheet.

14. Free cash flow is the amount of cash available from operating activities after paying for planned investments in long-term assets and after paying dividends to shareholders. It is calculated as: Net cash provided by operating activities – Cash planned for investments in long-term assets – Cash dividends.

15A. In the indirect method, start with net income and then adjust it to cash basis through a series of adjusting items. When calculating the direct method, take each line item of the income statement and convert it from accrual to cash basis.

16B. Companies face complex situations, and a spreadsheet can help in preparing the cash flow statement. It details the balance sheet accounts' beginning and ending balances as well as the debit and credit amounts to each account.

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Short Exercises

SB-1

a. The statement of cash flows helps predict future cash flows by reporting past cash receipts and payments, which are good predictors of future cash flows.
b. The statement of cash flows helps evaluate management decisions by reporting on managers' investments. Good decisions will benefit the company's performance.
c. The statement of cash flows helps predict the ability to make debt payments to lenders and pay dividends to stockholders by reporting where cash came from and how it was spent.

SB-2

a.	Operating	f.	Investing
b.	Financing	g.	Financing
c.	Investing	h.	Operating
d.	Operating	i.	Financing
e.	Non-cash	j.	Operating

SB-3

a.	O+	f.	O+
b.	F−	g.	O+
c.	O−	h.	O−
d.	F+	i.	O+
e.	O−	j.	I−

SB-4

DVR EQUIPMENT, INC. Statement of Cash Flows—Partial Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 43,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 6,000	
Increase in Accounts Receivable	(6,000)	
Decrease in Accounts Payable	(2,000)	(2,000)
Net Cash Provided by Operating Activities		$ 41,000

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SB-5

WINDING ROAD CELLULAR Statement of Cash Flows—Partial Year Ended April 30, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 55,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 2,000	
Increase in current assets other than cash	(27,000)	
Decrease in current liabilities	(20,000)	(45,000)
Net Cash Provided by Operating Activities		$ 10,000

SB-6

WINDING ROAD CELLULAR Statement of Cash Flows Year Ended April 30, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 55,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 2,000	
Increase in Current Assets other than Cash	(27,000)	
Decrease in Current Liabilities	(20,000)	(45,000)
Net Cash Provided by Operating Activities		10,000
Cash Flows from Investing Activities:		
Cash Purchase of Equipment	(44,000)	
Cash Receipt from Sale of Land	27,000	
Net Cash Used for Investing Activities		(17,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	17,000	
Cash Payment of Dividends	(5,800)	
Net Cash Provided by Financing Activities		11,200
Net Increase (Decrease) in Cash		4,200
Cash Balance, April 30, 2017		48,000
Cash Balance, April 30, 2018		$ 52,200

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SB-7
Requirement 1

Plant Assets			
12/31/2017	84,350		
Acquisitions	***21,000***	0	Disposals
12/31/2018	105,350		

Requirement 2

Notes Payable			
		12,000	12/31/2017
Payment	***7,400***	4,400	Issuance
		9,000	12/31/2018

SB-8

PRESTON MEDIA CORPORATION Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 19,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 11,000	
Increase in Accounts Receivable	(4,500)	
Increase in Accounts Payable	3,500	10,000
Net Cash Provided by Operating Activities		29,000
Cash Flows from Investing Activities:		
Cash Purchase of Plant Assets	(21,000)	
Net Cash Used for Investing Activities		(21,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	4,000	
Cash Receipt from Issuance of Notes Payable	4,400	
Cash Payment of Dividends	(7,900)	
Cash Payment of Notes Payable	(7,400)	
Net Cash Used for Financing Activities		(6,900)
Net Increase (Decrease) in Cash		1,100
Cash Balance, December 31, 2017		3,900
Cash Balance, December 31, 2018		$ 5,000

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SB-8, cont.

Common Stock			
		23,000	12/31/2017
Retirement	0	4,000	Issuance
		27,000	12/31/2018

Retained earnings (let Dividends = X)

Beginning	+	Net Income	−	*Dividends*	=	Ending
$35,500	+	$19,000	−	*X*	=	$46,600
				X	=	$ 7,900

Retained Earnings			
		35,500	12/31/2017
		19,000	Net Income
Dividend	7,900		
		46,600	12/31/2018

SB-9
Requirement 1

Net income	$ 27,000
Plus Depreciation Expense	+ 16,000
Increase in Cash	$ 43,000

Requirement 2

Yes, there was a non-cash transaction for the company, the acquisition of building with a long-term note payable. It would be reported in the non-cash investing and financing activities section of the statement of cash flows or in a note.

Non-cash Investing and Financing Activities:	
Acquisition of building by issuing long-term notes payable	$119,000
Total non-cash Investing and Financing Activities	$119,000

SB-10

Net Cash provided by Operating Activities	$ 148,000
− Cash payments planned for Long-Term Assets	(77,000)
− Cash Dividends	(7,000)
= Free Cash Flow	$ 64,000

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SBA-11

JELLY BEAN, INC Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 614,000	
Total Cash Receipts		$ 614,000
Payments:		
To Suppliers	(212,000)	
To Employees	(205,000)	
Total Cash Payments		(417,000)
Net Cash Provided by Operating Activities		197,000
Cash Flows from Investing Activities:		
Cash Purchase of Equipment	(148,000)	
Net Cash Used for Investing Activities		(148,000)
Cash Flows from Financing Activities:		
Cash Payment of Dividends	(57,000)	
Net Cash Used for Financing Activities		(57,000)
Net Increase (Decrease) in Cash		(8,000)
Cash Balance, December 31, 2017		58,000
Cash Balance, December 31, 2018		$ 50,000

SBA-12

AMY'S LEARNING CENTER Statement of Cash Flows—Partial Year Ended June 30, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 188,000	
Total Cash Receipts		$ 188,000
Payments:		
To Suppliers	(115,000)	
To Employees	(66,000)	
Total Cash Payments		(181,000)
Net Cash Provided (Used for) by Operating Activities		7,000

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SBA-13

AMY'S LEARNING CENTER Statement of Cash Flows Year Ended June 30, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 188,000	
Total Cash Receipts		$ 188,000
Payments:		
To Suppliers	(115,000)	
To Employees	(66,000)	
Total Cash Payments		(181,000)
Net Cash Provided (Used for) by Operating Activities		7,000
Cash Flows from Investing Activities:		
Cash Receipts from sale of Land	58,000	
Cash Purchase of Equipment	(39,000)	
Net Cash Provided by Investing Activities		19,000
Cash Flows from Financing Activities:		
Cash Receipts from issuance of Stock	22,000	
Cash Payments of Notes Payable	(34,000)	
Cash Payment of Dividends	(7,500)	
Net Cash Used for Financing Activities		(19,500)
Net Increase (Decrease) in Cash		6,500
Cash Balance, June 30, 2017		41,000
Cash Balance, June 30, 2018		$ 47,500

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SBA-14
Requirement 1

Net Sales Revenue	$ 134,000
+ Beginning Accounts Receivable	+ 42,000
− Ending Accounts Receivable	− 53,000
= Cash receipts from customers	$ 123,000

Requirement 2

Cost of Goods Sold	$ 79,000
− Beginning Merchandise Inventory	− 88,000
+ Ending Merchandise Inventory	+ 76,000
+ Beginning Accounts Payable	+ 38,000
− Ending Accounts Payable	− 42,000
Cash paid for merchandise inventory	$ 63,000

SBB-15

a. Debit
b. Credit
c. Credit
d. Credit
e. Debit
f. Debit

Exercises

EB-16

a. Investing
b. Financing
c. Operating
d. Operating
e. Investing & Operating (gain)
f. Financing
g. Non-cash investing and financing

EB-17

a. Financing
b. Financing
c. Operating
d. Investing
e. Operating
f. Financing
g. Non-cash investing and financing
h. Investing
i. Financing
j. Non-cash investing and financing
k. Operating

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EB-18

a.	O+	i.	I+
b.	NIF	j.	F+
c.	F−	k.	O+
d.	NIF	l.	F−
e.	O+	m.	F+
f.	O+	n.	O+
g.	O−	o.	O+
h.	O−	p.	F−

EB-19

VINTAGE COLOR ENGRAVING Statement of Cash Flows—Partial Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 36,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 5,000	
Loss on Sale of Land	4,000	
Increase in current assets other than cash	(10,000)	
Decrease in current liabilities	(19,000)	(20,000)
Net Cash Provided by Operating Activities		$ 16,000

EB-20

CD SALES, INC. Statement of Cash Flows—Partial For Month Ended July 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 50,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 2,000	
Decrease in Accounts Receivable	3,500	
Increase in Merchandise Inventory	(10,000)	
Increase in Accounts Payable	4,000	(500)
Net Cash Provided by Operating Activities		$ 49,500

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EB-21

BOOST PLUS, INC Statement of Cash Flows Year Ended September 30, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 53,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 27,000	
Decrease in Accounts Receivable	15,000	
Increase in Merchandise Inventory	(6,000)	
Increase in Accounts Payable	17,000	
Decrease in Accrued Liabilities	(8,000)	45,000
Net Cash Provided by Operating Activities		98,000
Cash Flows from Investing Activities:		
Acquisition of Plant Asset	(108,000)	
Cash Receipt from Sale of Land	20,000	
Net Cash Used for Investing Activities		(88,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	36,000	
Cash Payment of Notes Payable	(15,000)	
Cash Payment of Dividends	(5,000)	
Net Cash Provided by Financing Activities		16,000
Net Increase (Decrease) in Cash		26,000
Cash Balance, September 30, 2017		13,000
Cash Balance, September 30, 2018		$ 39,000
Non-cash Investing and Financing Activities:		
Acquisition of Plant Assets with Notes Payable		$ 16,000
Total Non-cash Investing and Financing Activities		$ 16,000

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EB-22
Requirement 1

Retained Earnings (let Dividends = X)

Beginning	+	Net income	−	*Dividends*	=	Ending
$45,000	+	$60,000	−	*X*	=	$70,000
				X	=	$35,000

Retained Earnings			
		45,000	Beginning
		60,000	Net Income
Dividend	35,000		
		70,000	Ending

Requirement 2

Plant Assets (let X = Cost of Assets Sold)

Beginning	+	Acquisitions	−	Sold	=	Ending
$124,500	+	$29,000	−	X	=	$134,500
				X	=	$19,000

Plant Assets			
Beginning	124,500		
Acquisitions	29,000		
		19,000	*Sold*
Ending	134,500		

Accumulated Depreciation – Plant Assets			
		21,500	Beginning
		17,000	Depreciation Expense
Sold	*12,000*		
		26,500	Ending

Book Value of Plant Asset Sold	$ 7,000
(Cost $19,000 – Acc. Depr. $12,000)	
Gain on Plant Asset Sold	5,000
Total Cash Receipt for Sale of Plant Assets	$ 12,000

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EB-23
Requirement 1

Plant Assets			
12/31/2017	216,400		
Acquisitions	***92,000***		
		47,900	Disposed of
12/31/2018	260,500		

Accumulated Depreciation—Plant Assets			
		32,400	12/31/2017
		54,000	Depreciation Exp.
Disposed of	47,900		
		38,500	12/31/2018

Requirement 2

Notes Payable			
		69,000	12/31/2017
		0	Issuance
Payment	***8,000***		
		61,000	12/31/2018

Requirement 3

Common Stock			
		34,000	12/31/2017
		11,000	***Issuance***
Retirement	0		
		45,000	12/31/2018

Requirement 4

Retained Earnings			
		230,000	12/31/2017
		107,000	Net Income
Dividend	***47,000***		
		290,000	12/31/2018

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EB-24

ROUSE EXERCISE EQUIPMENT, INC. Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 107,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 54,000	
Increase in Accounts Receivable	(11,000)	
Decrease in Merchandise Inventory	11,000	
Increase in Accounts Payable	1,000	
Decrease in Salaries Payable	(2,000)	53,000
Net Cash Provided by Operating Activities		160,000
Cash Flows from Investing Activities:		
Acquisition of Plant Asset	(92,000)	
Cash Payment for Investments	(23,000)	
Net Cash Used for Investing Activities		(115,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	11,000	
Cash Payment of Notes Payable	(8,000)	
Cash Payment of Dividends	(47,000)	
Net Cash Used for Financing Activities		(44,000)
Net Increase (Decrease) in Cash		1,000
Cash Balance, December 31, 2017		16,000
Cash Balance, December 31, 2018		$ 17,000

EB-25

DIRTBIKES, INC. Statement of Cash Flows - Partial Year Ended December 31, 2018	
Non-cash Investing and Financing Activities:	
Acquisition of a Building by issuing Common Stock	$ 96,000
Acquisition of a Truck by issuing a Long-Term Note	29,000
Retirement of Short-term Note by issuing Common Stock	28,000
Total Non-cash Investing and Financing Activities	$ 153,000

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EB-26

Net Cash provided by Operating Activities	$ 160,000
− Cash payments planned for Long-Term Assets	(148,000)
− Cash Dividends	(3,500)
= Free Cash Flow	$ 8,500

EBA-27

FOUR SEASONS PARTS Statement of Cash Flows—Partial Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 116,000	
Dividends Received on Investments	5,000	
Total Cash Receipts		$ 121,000
Payments:		
To Suppliers	(51,000)	
To Employees	(34,000)	
For Interest	(17,000)	
For Income Tax	(16,000)	
Total Cash Payments		(118,000)
Net Cash Provided by Operating Activities		$ 3,000

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EBA-28

VALUE CORPORATION Statement of Cash Flows Year Ended June 30, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 246,000	
Dividends Received on Investments	7,000	
Total Cash Receipts		$ 253,000
Payments:		
To Suppliers	(116,000)	
To Employees	(51,000)	
For Interest	(2,500)	
For Taxes	(7,500)	
Total Cash Payments		(177,000)
Net Cash Provided by Operating Activities		76,000
Cash Flows from Investing Activities:		
Cash Receipts from sale of Land	29,000	
Cash Purchase of Plant Assets	(102,000)	
Net Cash Used for Investing Activities		(73,000)
Cash Flows from Financing Activities:		
Cash Receipts from issuance of Stock	38,000	
Cash Payments of Notes Payable	(10,000)	
Cash Payment of Dividends	(9,000)	
Net Cash Provided by Financing Activities		19,000
Net Increase (Decrease) in Cash		22,000
Cash Balance, June 30, 2017		21,000
Cash Balance, June 30, 2018		$ 43,000

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EBA-29
Requirement 1

Net Sales Revenue	$ 68,000
+ Beginning Accounts Receivable	+ 24,000
− Ending Accounts Receivable	− 20,000
= Cash receipts from customers	$ 72,000

Requirement 2

Cost of Goods Sold	$ 77,000
−Beginning Merchandise Inventory	− 29,000
+Ending Merchandise Inventory	+ 26,000
+Beginning Accounts Payable	+ 12,000
−Ending Accounts Payable	− 16,000
Cash paid for merchandise inventory	$ 70,000

EBA-30
Requirement 1

Net Sales Revenue	$ 25,118
+ Beginning Accounts Receivable	+ 615
− Ending Accounts Receivable	− 798
= Cash receipts from customers	$ 24,935

Requirement 2

Cost of Goods Sold	$ 18,074
− Beginning Merchandise Inventory	− 2,832
+ Ending Merchandise Inventory	+ 3,483
+ Beginning Accounts Payable	+ 1,364
− Ending Accounts Payable	− 1,547
Cash paid for Merchandise Inventory	$ 18,542

Requirement 3

Other Operating Expenses	$ 4,632
+ Beginning Accrued Liabilities	+ 851
− Ending Accrued Liabilities	− 938
= Cash paid for other operating expenses	$ 4,545

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EBA-30, cont.
Requirement 4

Property and Equipment, net			
12/31/2017	3,437		
Acquisitions	***1,185***		
		271	Depreciation
12/31/2018	4,351		

Requirement 5

Long-Term Liabilities			
		461	12/31/2017
		16	***Issuance***
Payment	0		
		477	12/31/2018

Requirement 6

Common Stock			
		443	12/31/2017
		227	***Issuance***
Retirement	0		
		670	12/31/2018

Requirement 7

Retained Earnings			
		3,784	12/31/2017
		1,611	Net Income
Dividend	***374***		
		5,021	12/31/2018

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EBB-31

BOOST PLUS, INC.
Statement of Cash Flows
Year Ended September 30, 2018

			Transaction Analysis			
Panel A – Balance Sheet:	**9/30/2017**		**DEBIT**	**CREDIT**		**9/30/2018**
Cash	$ 13,000	(l)	26,000			$ 39,000
Accounts Receivable	61,000			15,000	(c)	46,000
Merchandise Inventory	88,000	(d)	6,000			94,000
Land	102,000			20,000	(h)	82,000
Plant Assets	90,000	(g)	108,000			214,000
		(g)	16,000			
Accumulated Depreciation	(34,000)			27,000	(b)	(61,000)
Total Assets	$ 320,000					$ 414,000
Accounts Payable	15,000			17,000	(e)	32,000
Accrued Liabilities	20,000	(f)	8,000			12,000
Notes Payable	15,000	(j)	15,000	16,000	(g)	16,000
Common Stock, no par	4,000			36,000	(i)	40,000
Retained Earnings	266,000	(k)	5,000	53,000	(a)	314,000
Total Liabilities and Stockholders' Equity	$ 320,000		$ 184,000	$ 184,000		$ 414,000

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EBB-31, cont.

Panel B – Statement of Cash Flows:				
Cash Flows from Operating Activities:				
Net Income	(a)	53,000		
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:				
Depreciation Expense	(b)	27,000		
Decrease in Accounts Receivable	(c)	15,000		
Increase in Merchandise Inventory			6,000	(d)
Increase in Accounts Payable	(e)	17,000		
Decrease in Accrued Liabilities			8,000	(f)
Net Cash Provided by Operating Activities				
Cash Flows from Investing Activities:				
Cash Receipt from Sale of Land	(h)	20,000		
Cash Payment for Acquisition of Plant Assets			108,000	(g)
Net Cash Used for Investing Activities				
Cash Flows from Financing Activities:				
Cash Receipt from Issuance of Common Stock	(i)	36,000		
Cash Payments of Notes Payable			15,000	(j)
Cash Payment of Dividends			5,000	(k)
Net Cash Provided by Financing Activities				
Net Increase (Decrease) in Cash			26,000	(l)
Non-cash Investing and Financing Activities:				
Acquisition of a Plant Asset by issuing a Note Payable			16,000	(g)
Total Non-cash Investing and Financing Activities	(g)	16,000		
		$ 184,000	$ 184,000	

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Problems (Group A)

PB-32A
Requirement 1

The purpose of the statement of cash flow is to report on the cash receipts and cash payments for a specific period. It will help users do the following:

- Predict future cash flows.
- Evaluate management decisions.
- Predict ability to pay debts and dividends.

Requirement 2

AMERICAN RARE COINS Income Statement Year Ended December 31, 2018		
Revenue:		
Sales (2,400 × $275)		$ 660,000
Expenses:		
Cost of Goods Sold	$ 250,000	
Salaries and Wages Expense	96,000	
Depreciation Expense ($53,000 / 5 years)	10,600	
Rent Expense	20,000	
Income Tax Expense	17,000	
Total Expenses		393,600
Net Income		$ 266,400

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PB-32A, cont.
Requirement 3

AMERICAN RARE COINS Balance Sheet December 31, 2018		
Assets		
Current Assets:		
Cash	$305,000	
Accounts Receivable ($660,000 × 15%)	99,000	
Merchandise Inventory	329,000	
Total current assets		$ 733,000
Property, Plant, and Equipment:		
Store Fixtures	53,000	
Accumulated Depreciation	(10,600)	
Total property, plant, and equipment		42,400
Total Assets		$ 775,400
Liabilities		
Current Liabilities:		
Accounts Payable ($239,000 − $139,000)	$ 100,000	
Salaries Payable	3,000	
Total current liabilities		$ 103,000
Total Liabilities		103,000
Stockholders' Equity		
Common Stock, no par		450,000
Retained Earnings		222,400
Total Stockholders' Equity		672,400
Total Liabilities and Stockholders' Equity		$ 775,400

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PB-32A, cont.
Requirement 4

AMERICAN RARE COINS Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 266,400
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 10,600	
Increase in Accounts Receivable	(99,000)	
Increase in Merchandise Inventory	(329,000)	
Increase in Accounts Payable	100,000	
Increase in Salaries Payable	3,000	(314,400)
Net Cash Used by Operating Activities		(48,000)
Cash Flows from Investing Activities:		
Acquisition of Store Fixtures	(53,000)	
Net Cash Used for Investing Activities		(53,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	450,000	
Cash Payment of Dividends	(44,000)	
Net Cash Provided by Financing Activities		406,000
Net Increase (Decrease) in Cash		305,000
Cash Balance, December 31, 2017		0
Cash Balance, December 31, 2018		$ 305,000

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PB-33A

MORGANSON, INC. Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 68,500
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 24,000	
Gain on Sale of Building	(4,500)	
Decrease in Accounts Receivable	5,600	
Increase in Merchandise Inventory	(8,000)	
Increase in Accounts Payable	2,400	
Decrease in Income Tax Payable	(2,000)	17,500
Net Cash Provided by Operating Activities		86,000
Cash Flows from Investing Activities:		
Acquisition of Equipment for Cash	(74,000)	
Cash Receipt from Sale of Building	58,500	
Net Cash Used for Investing Activities		(15,500)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	38,000	
Cash Receipt from Issuance of Notes Payable	62,000	
Cash Payment of Notes Payable	(46,100)	
Cash Payment of Dividends	(50,000)	
Net Cash Provided by Financing Activities		3,900
Net Increase (Decrease) in Cash		74,400
Cash Balance, December 31, 2017		25,000
Cash Balance, December 31, 2018		$ 99,400
Non-cash Investing and Financing Activities:		
Acquisition of Land by issuing Long-term Notes Payable		$ 119,000
Total Non-cash Investing and Financing Activities		$ 119,000

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PB-34A
Requirement 1

ROLLING HILLS, INC. Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 96,400
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 14,400	
Increase in Accounts Receivable	(1,100)	
Decrease in Merchandise Inventory	11,700	
Increase in Accounts Payable	5,300	
Decrease in Accrued Liabilities	(1,600)	28,700
Net Cash Provided by Operating Activities		125,100
Cash Flows from Investing Activities:		
Acquisition of Plant Asset for Cash	(23,600)	
Net Cash Used for Investing Activities		(23,600)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	24,400	
Cash Payment of Notes Payable	(50,100)	
Cash Payment of Dividends	(64,600)	
Net Cash Used for Financing Activities		(90,300)
Net Increase (Decrease) in Cash		11,200
Cash Balance, December 31, 2017		15,700
Cash Balance, December 31, 2018		$ 26,900
Non-cash Investing and Financing Activities:		
Acquisition of Land by issuing Long-term Notes Payable		$ 21,100
Total Non-cash Investing and Financing Activities		$ 21,100

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PB-34A
Requirement 1, cont.

Plant Assets			
12/31/2017	114,650		
Acquisitions	***23,600***		
		13,410	Disposed of
12/31/2018	124,840		

Accumulated Depreciation—Plant Assets			
		17,950	12/31/2017
		14,400	Depreciation Exp.
Disposed of	13,410		
		18,940	12/31/2018

Retained Earnings			
		10,100	12/31/2017
		96,400	Net Income
Dividend	***64,600***		
		41,900	12/31/2018

Notes Payable			
		108,000	12/31/2017
		21,100	Issuance
Payment	***50,100***		
		79,000	12/31/2018

Requirement 2

I will be able to evaluate an investment with this information because I can see the cash receipts and cash payments for a specific period. This information can help me predict future cash flows, evaluate management decisions, and predict the ability of the company to pay their debts and dividends.

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PB-35A
Requirement 1

JACKSON EDUCATIONAL SUPPLY Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 57,600
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 16,700	
Decrease in Accounts Receivable	6,700	
Increase in Merchandise Inventory	(2,200)	
Increase in Accounts Payable	2,000	
Decrease in Accrued Liabilities	(700)	22,500
Net Cash Provided by Operating Activities		80,100
Cash Flows from Investing Activities:		
Acquisition of Equipment for Cash	(54,700)	
Acquisition of Building for Cash	(98,000)	
Net Cash Used for Investing Activities		(152,700)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	105,000	
Cash Receipt from Issuance of Notes Payable	48,000	
Cash Payment of Dividends	(16,200)	
Net Cash Provided by Financing Activities		136,800
Net Increase (Decrease) in Cash		64,200
Cash Balance, December 31, 2017		23,500
Cash Balance, December 31, 2018		$ 87,700

Requirement 2

The company shows a strong cash flow. They are generating cash from their operations due primarily to net income. They are investing in Building and Equipment for their business and are financing it using the issuance of Common Stock and Notes Payable. The overall cash position increased over last year by $64,200.

Requirement 3

Net Cash provided by Operating Activities	$ 80,100
− Cash payments planned for Long-Term Assets	(152,700)
− Cash Dividends	(16,200)
= Free Cash Flow	$ (88,800)

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PBA-36A
Requirement 1

BOUNDARY RARE COINS Income Statement Year Ended December 31, 2018		
Revenue:		
Sales (2,200 × $450)		$ 990,000
Expenses:		
Cost of Goods Sold	$ 330,000	
Salaries and Wages Expense	80,000	
Depreciation Expense ($53,000 / 5 years)	10,600	
Rent Expense	13,000	
Income Tax Expense	24,000	
Total Expenses		457,600
Net Income		$ 532,400

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PBA-36A, cont.
Requirement 2

BOUNDARY RARE COINS Balance Sheet December 31, 2018		
Assets		
Current Assets:		
Cash	$ 690,500	
Accounts Receivable ($990,000 × 15%)	148,500	
Merchandise Inventory	170,000	
Total current assets		$ 1,009,000
Property, Plant, and Equipment		
Store Fixtures	53,000	
Accumulated Depreciation	(10,600)	
Total property, plant, and equipment		42,400
Total Assets		$ 1,051,400
Liabilities		
Current Liabilities:		
Accounts Payable ($240,000 − $160,000)	80,000	
Salaries Payable	4,000	
Total current liabilities		$ 84,000
Total Liabilities		84,000
Stockholders' Equity		
Common Stock, no par		475,000
Retained Earnings		492,400
Total Stockholders' Equity		967,400
Total Liabilities and Stockholders' Equity		$ 1,051,400

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PBA-36A, cont.
Requirement 3

BOUNDARY RARE COINS Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers (2,200 × $450 × 0.85)		$ 841,500
Payments:		
To Suppliers	$ (433,000)	
To Employees ($80,000 − $4,000)	(76,000)	
For Income Taxes	(24,000)	(533,000)
Net Cash Provided by Operating Activities		308,500
Cash Flows from Investing Activities:		
Acquisition of Store Fixtures	(53,000)	
Net Cash Used for Investing Activities		(53,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	475,000	
Cash Payment of Dividends	(40,000)	
Net Cash Provided by Financing Activities		435,000
Net Increase (Decrease) in Cash		690,500
Cash Balance, December 31, 2017		0
Cash Balance, December 31, 2018		$ 690,500

Cash Payments to Suppliers	
For Inventory	$ 260,000
For Accounts Payable	160,000
For Rent	13,000
Total	$ 433,000

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PBA-37A
Requirement 1

ROLLING HILLS, INC. Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 438,900	
Interest Received	8,700	$ 447,600
Payments:		
To Suppliers	(204,000)	
To Employees	(77,400)	
For Interest	(21,100)	
For Income Tax	(20,000)	(322,500)
Net Cash Provided by Operating Activities		125,100
Cash Flows from Investing Activities:		
Acquisition of Plant Asset for Cash	(23,600)	
Net Cash Used for Investing Activities		(23,600)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	24,400	
Cash Payment of Notes Payable	(50,100)	
Cash Payment of Dividends	(64,600)	
Net Cash Used for Financing Activities		(90,300)
Net Increase (Decrease) in Cash		11,200
Cash Balance, December 31, 2017		15,700
Cash Balance, December 31, 2018		$ 26,900
Non-cash Investing and Financing Activities:		
Acquisition of Land by issuing Long-term Notes Payable		$ 21,100
Total Non-cash Investing and Financing Activities		$ 21,100

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PBA-37A, cont.
Requirement 1, cont.

Net Sales Revenue	$ 440,000
+ Beginning Accounts Receivable	+ 25,400
− Ending Accounts Receivable	− 26,500
= Cash receipts from customers	$ 438,900

Cost of Goods Sold	$ 209,200
−Beginning Merchandise Inventory	− 91,500
+Ending Merchandise Inventory	+ 79,800
+Beginning Accounts Payable	+ 30,400
−Ending Accounts Payable	− 35,700
Cash paid for merchandise inventory	$ 192,200

Other Operating Expenses	$ 10,200
+ Beginning Accrued Liabilities	+ 30,300
− Ending Accrued Liabilities	− 28,700
= Cash paid for other operating expenses	$ 11,800

Cash Payments to Suppliers	
For Inventory	$ 192,200
For Operating Expenses	11,800
Total	$ 204,000

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PBA-37A, cont.
Requirement 1, cont.

Plant Assets			
12/31/2017	114,650		
Acquisitions	***23,600***		
		13,410	Disposed of
12/31/2018	124,840		

Accumulated Depreciation—Plant Assets			
		17,950	12/31/2017
		14,400	Depreciation Expense
Disposed of	13,410		
		18,940	12/31/2018

Retained Earnings			
		10,100	12/31/2017
		96,400	Net Income
Dividend	***64,600***		
		41,900	12/31/2018

Notes Payable			
		108,000	12/31/2017
		21,100	Issuance
Payment	***50,100***		
		79,000	12/31/2018

Requirement 2

I will be able to evaluate an investment with this information because I can see the cash receipts and cash payments for a specific period. This information can help me predict future cash flows, evaluate management decisions, and predict the ability of the company to pay their debts and dividends.

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PBB-38A

APPLETON GROUP, INC.
Statement of Cash Flows
Year Ended December 31, 2018

Panel A – Balance Sheet:	Balance 12/31/2017		Transaction Analysis DEBIT	Transaction Analysis CREDIT		Balance 12/31/2018
Cash	$ 15,900			1,200	(m)	$ 14,700
Accounts Receivable	43,900			1,700	(c)	42,200
Merchandise Inventory	93,900	(d)	3,700			97,600
Land	17,000	(i)	25,200			42,200
Plant Assets	110,750	(h)	22,800	11,600	(g)	121,950
Accumulated Depreciation—Plant Assets	(16,450)	(g)	11,600	15,400	(b)	(20,250)
Total Assets	$ 265,000					$ 298,400
Accounts Payable	26,900	(e)	1,000			$ 25,900
Accrued Liabilities	22,700			1,800	(f)	24,500
Notes Payable	65,000	(j)	14,000			51,000
Total Liabilities	114,600					101,400
Common Stock, no par	130,700			8,200	(k)	138,900
Retained Earnings	19,700	(l)	28,300	66,700	(a)	58,100
Total Liabilities and Stockholders' Equity	$ 265,000		$ 106,600	$ 106,600		$ 298,400

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PBB-38A, cont.

Panel B – Statement of Cash Flows:				
Cash Flows from Operating Activities:				
Net Income	(a)	66,700		
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:				
Depreciation Expense—Plant Assets	(b)	15,400		
Decrease in Accounts Receivable	(c)	1,700		
Increase in Merchandise Inventory			3,700	(d)
Decrease in Accounts Payable			1,000	(e)
Increase in Accrued Liabilities	(f)	1,800		
Net Cash Provided by Operating Activities				
Cash Flows from investing Activities:				
Cash Payment for Acquisition of Plant Assets			22,800	(h)
Cash Payment for Acquisition of Land			25,200	(i)
Net Cash Used for Investing Activities				
Cash Flows from Financing Activities:				
Cash Payment of Notes Payable			14,000	(j)
Cash Receipt from Issuance of Common Stock	(k)	8,200		
Cash Payment of Dividends			28,300	(l)
Net Cash Provided by Financing Activities				
Net Increase (Decrease) in Cash	(m)	1,200		
Non-cash Investing and Financing Activities:				
Disposal of Plant Asset at Book Value			11,600	(g)
Total Non-cash Investing and Financing Activities	(g)	11,600		
		$ 106,600	$ 106,600	

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Problems (Group B)

PB-39B
Requirement 1

The purpose of the statement of cash flow is to report on the cash receipts and cash payments for a specific period. It will help users do the following:

- Predict future cash flows.
- Evaluate management decisions.
- Predict ability to pay debts and dividends.

Requirement 2

CLASSIC RARE COINS Income Statement Year Ended December 31, 2018		
Revenue:		
Sales (2,800 × $325)		$ 910,000
Expenses:		
Cost of Goods Sold	$ 290,000	
Salaries and Wages Expense	82,000	
Depreciation Expense ($51,000 / 5 years)	10,200	
Rent Expense	18,000	
Income Tax Expense	17,000	
Total Expenses		417,200
Net Income		$ 492,800

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PB-39B, cont.
Requirement 3

CLASSIC RARE COINS Balance Sheet December 31, 2018		
Assets		
Current Assets:		
Cash	$ 795,500	
Accounts Receivable ($910,000 × 5%)	45,500	
Merchandise Inventory	193,000	
Total current assets		$ 1,034,000
Property, Plant, and Equipment		
Store Fixtures	51,000	
Accumulated Depreciation	(10,200)	
Total property, plant and equipment		40,800
Total Assets		$ 1,074,800
Liabilities		
Current Liabilities:		
Accounts Payable ($243,000 − $153,000)	$ 90,000	
Salaries Payable	5,000	
Total current liabilities		$ 95,000
Total Liabilities		95,000
Stockholders' Equity		
Common Stock, no par		525,000
Retained Earnings		454,800
Total Stockholders' Equity		979,800
Total Liabilities and Stockholders' Equity		$ 1,074,800

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PB-39B, cont.
Requirement 4

CLASSIC RARE COINS Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 492,800
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 10,200	
Increase in Accounts Receivable	(45,500)	
Increase in Merchandise Inventory	(193,000)	
Increase in Accounts Payable	90,000	
Increase in Salaries Payable	5,000	(133,300)
Net Cash Provided by Operating Activities		359,500
Cash Flows from Investing Activities:		
Acquisition of Store Fixtures	(51,000)	
Net Cash Used for Investing Activities		(51,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	525,000	
Cash Payment of Dividends	(38,000)	
Net Cash Provided by Financing Activities		487,000
Net Increase (Decrease) in Cash		795,500
Cash Balance, December 31, 2017		0
Cash Balance, December 31, 2018		$ 795,500

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PB-40B

BENSON, INC. Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 66,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 24,000	
Gain on Sale of Building	(4,500)	
Decrease in Accounts Receivable	4,500	
Increase in Merchandise Inventory	(4,000)	
Increase in Accounts Payable	1,900	
Decrease in Income Tax Payable	(2,200)	19,700
Net Cash Provided by Operating Activities		85,700
Cash Flows from Investing Activities:		
Acquisition of Equipment for Cash	(69,000)	
Cash Receipt from Sale of Building	65,500	
Net Cash Used for Investing Activities		(3,500)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	37,000	
Cash Receipt from Issuance of Notes Payable	68,000	
Cash Payment of Notes Payable	(47,100)	
Cash Payment of Dividends	(53,000)	
Net Cash Provided by Financing Activities		4,900
Net Increase (Decrease) in Cash		87,100
Cash Balance, December 31, 2017		18,000
Cash Balance, December 31, 2018		$ 105,100
Non-cash Investing and Financing Activities:		
Acquisition of Land by issuing Long-term Notes Payable		$ 123,000
Total Non-cash Investing and Financing Activities		$ 123,000

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PB-41B
Requirement 1

SWEET VALLEY, INC. Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 107,500
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 14,500	
Increase in Accounts Receivable	(1,300)	
Decrease in Merchandise Inventory	12,000	
Increase in Accounts Payable	5,500	
Decrease in Accrued Liabilities	(1,900)	28,800
Net Cash Provided by Operating Activities		136,300
Cash Flows from Investing Activities:		
Acquisition of Plant Asset for Cash	(20,700)	
Net Cash Used for Investing Activities		(20,700)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	23,400	
Cash Payment of Notes Payable	(47,900)	
Cash Payment of Dividends	(80,200)	
Net Cash Used for Financing Activities		(104,700)
Net Increase (Decrease) in Cash		10,900
Cash Balance, December 31, 2017		15,400
Cash Balance, December 31, 2018		$ 26,300
Non-cash Investing and Financing Activities:		
Acquisition of Land by issuing Long-term Notes Payable		$ 20,900
Total Non-cash Investing and Financing Activities		$ 20,900

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PB-41B, cont.
Requirement 1, cont.

Plant Assets			
12/31/2017	108,330		
Acquisitions	***20,700***		
		13,240	Disposed of
12/31/2018	115,790		

Accumulated Depreciation—Plant Assets			
		18,630	12/31/2017
		14,500	Depreciation Expense
Disposed of	13,240		
		19,890	12/31/2018

Retained Earnings			
		4,800	12/31/2017
		107,500	Net Income
Dividend	***80,200***		
		32,100	12/31/2018

Notes Payable			
		105,000	12/31/2017
		20,900	Issuance
Payment	***47,900***		
		78,000	12/31/2018

Requirement 2
I will be able to evaluate an investment with this information because I can see the business's cash receipts and cash payments for a specific period. This information can help me predict future cash flows, evaluate management decisions, and predict the ability of the company to pay their debts and dividends.

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PB-42B
Requirement 1

ROBESON EDUCATIONAL SUPPLY Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 63,600
Adjustments to Reconcile Net Income to Net Cash		
Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 17,400	
Decrease in Accounts Receivable	7,300	
Increase in Merchandise Inventory	(1,400)	
Increase in Accounts Payable	1,500	
Decrease in Accrued Liabilities	(1,400)	23,400
Net Cash Provided by Operating Activities		87,000
Cash Flows from Investing Activities:		
Acquisition of Equipment for Cash	(54,400)	
Acquisition of Building for Cash	(103,000)	
Net Cash Used for Investing Activities		(157,400)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	111,000	
Cash Receipt from Issuance of Notes Payable	44,000	
Cash Payment of Dividends	(21,200)	
Net Cash Provided by Financing Activities		133,800
Net Increase (Decrease) in Cash		63,400
Cash Balance, December 31, 2017		20,500
Cash Balance, December 31, 2018		$ 83,900

Requirement 2

The company shows a strong cash flow. They are generating cash from their operations due primarily to net income. They are investing in Building and Equipment for their business and are financing it using the issuance of Common Stock and Notes Payable. The overall cash position increased over last year by $63,400.

Requirement 3

Net Cash provided by Operating Activities	$ 87,000
− Cash payments planned for Long-Term Assets	(157,400)
− Cash Dividends	(21,200)
= Free Cash Flow	$ (91,600)

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PBA-43B
Requirement 1

DIVERSION RARE COINS Income Statement Year Ended December 31, 2018		
Revenue:		
Sales (2,700 × $400)		$ 1,080,000
Expenses:		
Cost of Goods Sold	$ 340,000	
Salaries and Wages Expense	97,000	
Depreciation Expense ($46,000 / 5 years)	9,200	
Rent Expense	18,000	
Income Tax Expense	18,000	
Total Expenses		482,200
Net Income		$ 597,800

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PBA-43B, cont.
Requirement 2

DIVERSION RARE COINS Balance Sheet December 31, 2018		
Assets		
Current Assets:		
Cash	$ 712,000	
Accounts Receivable ($1,080,000 × 15%)	162,000	
Merchandise Inventory	208,000	
Total current assets		$ 1,082,000
Property, Plant and Equipment:		
Store Fixtures	46,000	
Accumulated Depreciation	(9,200)	
Total property, plant and equipment		36,800
Total Assets		$ 1,118,800
Liabilities		
Current Liabilities:		
Accounts Payable ($238,000 − $138,000)	$ 100,000	
Salaries Payable	6,000	
Total current liabilities		$ 106,000
Total Liabilities		106,000
Stockholders' Equity		
Common Stock, no par		$ 450,000
Retained Earnings		562,800
Total Stockholders' Equity		1,012,800
Total Liabilities and Stockholders' Equity		$ 1,118,800

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PBA-43B, cont.
Requirement 3

DIVERSION RARE COINS Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers (2,700 × $400 × 0.85)		$ 918,000
Payments:		
To Suppliers	$ (466,000)	
To Employees ($97,000 − $6,000)	(91,000)	
For Income Taxes	(18,000)	(575,000)
Net Cash Provided by Operating Activities		343,000
Cash Flows from Investing Activities:		
Acquisition of Store Fixtures	(46,000)	
Net Cash Used for Investing Activities		(46,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	450,000	
Cash Payment of Dividends	(35,000)	
Net Cash Provided by Financing Activities		415,000
Net Increase (Decrease) in Cash		712,000
Cash Balance, December 31, 2017		0
Cash Balance, December 31, 2018		$ 712,000

Cash Payments to Suppliers	
For Inventory	$ 310,000
For Accounts Payable	138,000
For Rent	18,000
Total	$ 466,000

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PBA-44B
Requirement 1

SWEET VALLEY, INC. Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 443,700	
Interest Received	8,200	
		$ 451,900
Payments;		
To Suppliers	(197,700)	
To Employees	(77,400)	
For Interest	(21,100)	
For Income Tax	(19,400)	(315,600)
Net Cash Provided by Operating Activities		136,300
Cash Flows from Investing Activities:		
Acquisition of Plant Asset for Cash	(20,700)	
Net Cash Used for Investing Activities		(20,700)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	23,400	
Cash Payment of Notes Payable	(47,900)	
Cash Payment of Dividends	(80,200)	
Net Cash Used for Financing Activities		(104,700)
Net Increase (Decrease) in Cash		10,900
Cash Balance, December 31, 2017		15,400
Cash Balance, December 31, 2018		$ 26,300
Non-cash Investing and Financing Activities:		
Acquisition of Land by issuing Long-term Notes Payable		$ 20,900
Total Non-cash Investing and Financing Activities		$ 20,900

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PBA-44B
Requirement 1, cont.

Net Sales Revenue	$ 445,000
+ Beginning Accounts Receivable	+ 25,100
− Ending Accounts Receivable	− 26,400
= Cash receipts from customers	$ 443,700

Cost of Goods Sold	$ 203,200
−Beginning Merchandise Inventory	− 91,300
+Ending Merchandise Inventory	+ 79,300
+Beginning Accounts Payable	+ 30,100
−Ending Accounts Payable	− 35,600
Cash paid for merchandise inventory	$ 185,700

Other Operating Expenses	$ 10,100
+ Beginning Accrued Liabilities	+ 30,800
− Ending Accrued Liabilities	− 28,900
= Cash paid for other operating expenses	$ 12,000

Cash Payments to Suppliers	
For Inventory	$ 185,700
For Operating Expenses	12,000
Total	$ 197,700

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PBA-44B
Requirement 1, cont.

Plant Assets			
12/31/2017	108,330		
Acquisitions	***20,700***		
		13,240	Disposed of
12/31/2018	115,790		

Accumulated Depreciation—Plant Assets			
		18,630	12/31/2017
		14,500	Depreciation Expense
Disposed of	13,240		
		19,890	12/31/2018

Retained Earnings			
		4,800	12/31/2017
		107,500	Net Income
Dividend	***80,200***		
		32,100	12/31/2018

Notes Payable			
		105,000	12/31/2017
		20,900	Issuance
Payment	***47,900***		
		78,000	12/31/2018

Requirement 2

I will be able to evaluate an investment with this information because I can see the cash receipts and cash payments for a specific period. This information can help me predict future cash flows, evaluate management decisions, and predict the ability of the company to pay their debts and dividends.

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PB-45B

ATTLEBORO GROUP, INC.
Statement of Cash Flows
Year Ended December 31, 2018

Panel A – Balance Sheet:	Balance 12/31/2017		Transaction Analysis DEBIT	CREDIT		Balance 12/31/2018
Cash	$ 15,500			1,500	(m)	$ 14,000
Accounts Receivable	43,700			1,700	(c)	42,000
Merchandise Inventory	93,300	(d)	3,500			96,800
Land	11,000	(i)	25,400			36,400
Plant Assets	112,850	(h)	22,000	13,600	(g)	121,250
Accumulated Depreciation—Plant Assets	(18,650)	(g)	13,600	15,300	(b)	(20,350)
Total Assets	$ 257,700					$ 290,100
Accounts Payable	26,000	(e)	1,500			24,500
Accrued Liabilities	22,600			1,300	(f)	23,900
Notes Payable	69,000	(j)	13,000			56,000
Total Liabilities	117,600					104,400
Common Stock, no par	121,000			8,500	(k)	129,500
Retained Earnings	19,100	(l)	28,200	65,300	(a)	56,2000
Total Liabilities and Stockholders' Equity	$ 257,700		$ 107,200	$ 107,200		$ 290,100

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PB-45B, cont.

Panel B – Statement of Cash Flows:				
Cash Flows from Operating Activities:				
Net Income	(a)	65,300		
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:				
Depreciation Expense—Plant Assets	(b)	15,300		
Decrease in Accounts Receivable	(c)	1,700		
Increase in Merchandise Inventory			3,500	(d)
Decrease in Accounts Payable			1,500	(e)
Increase in Accrued Liabilities	(f)	1,300		
Net Cash Provided by Operating Activities				
Cash Flows from investing Activities:				
Cash Payment for Acquisition of Plant Assets			22,000	(h)
Cash Payment for Acquisition of Land			25,400	(i)
Net Cash Used for Investing Activities				
Cash Flows from Financing Activities:				
Cash Payment of Notes Payable			13,000	(j)
Cash Receipt from Issuance of Common Stock	(k)	8,500		
Cash Payment of Dividends			28,200	(l)
Net Cash Provided by Financing Activities				
Net Increase (Decrease) in Cash	(m)	1,500		
Non-cash Investing and Financing Activities:				
Disposal of Plant Asset at Book Value			13,600	(g)
Total Non-cash Investing and Financing Activities	(g)	13,600		
		$ 107,200	$ 107,200	

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Excel Skill

PB-46

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Continuing Problem

PB-47

CANYON CANOE COMPANY Statement of Cash Flows Year Ended December 31, 2019		
Cash Flows from Operating Activities:		
Net Income		$ 417,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 34,330	
Amortization Expense	254	
Decrease in Accounts Receivable	5,178	
Increase in Merchandise Inventory	(355)	
Decrease in Office Supplies	105	
Decrease in Prepaid Rent	2,000	
Increase in Short-term Investments	(23,840)	
Increase in Accounts Payable	2,145	
Increase in Utilities Payable	450	
Increase in Telephone Payable	375	
Increase in Wages Payable	3,000	
Increase in Interest Payable	300	
Increase in Unearned Revenue	150	24,092
Net Cash Provided by Operating Activities		441,092
Cash Flows from Investing Activities:		
Acquisition of Building	(575,000)	
Acquisition of Office Furniture and Equipment	(150,000)	
Net Cash Used for Investing Activities		(725,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	182,000	
Cash Receipt from Issuance of Notes Payable	15,000	
Cash Receipt from Issuance of Mortgage Payable	405,000	
Cash Receipt from Issuance of Bonds Payable	208,476	
Cash Payment of Dividends	(15,000)	
Net Cash Provided by Financing Activities		795,476
Net Increase (Decrease) in Cash		511,568
Cash Balance, December 31, 2018		12,125
Cash Balance, December 31, 2019		$ 523,693
Non-cash Investing and Financing Activities:		
Acquisition of land by issuing preferred stock		$70,000

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Critical Thinking

Tying It All Together Case B-1

Requirement 1
Amazon.com, Inc. states their financial focus is on long-term, sustainable growth in free cash flows per share. Free cash flows are the amount of cash available from operating activities after paying for planned investments in long-term assets and dividends. Amazon.com plans to increase its free cash flows by increasing operating income and efficiently managing working capital and cash capital expenditures.

Requirement 2
Amazon.com reported the following noncash adjustments to net income: depreciation, stock-based compensation, other operating expense (income), losses (gains) on sales of marketable securities, other expense (income), deferred income taxes, and excess tax benefits from stock-based compensation.

Requirement 3
The net cash used for investing activities was $6,450 million. This included the following inflows and outflows:

Purchases of property and equipment	$ (4,589)
Acquisitions, net of cash	(795)
Sales and maturities of marketable securities	3,025
Purchases of marketable securities	(4,091)

Requirement 4
The net cash used for financing activities was $3,763 million. This included the following inflows and outflows:

Excess tax benefits from stock-based compensation	$ 119
Proceeds from long-term debt and other	353
Repayments of long-term debt and other	(1,652)
Principal repayments of capital lease obligations	(2,462)
Principal repayments of finance lease obligations	(121)

Decision Case B-1

Show Cinemas looks like a better investment because:

1. They have more cash provided from their operating activities. This is a key indicator when reviewing a cash flow statement. If a company cannot generate sufficient cash from operations, it can run into difficulty in the future.
2. They are investing in the company by purchasing Plant Assets. Theater by Design appears to be selling more Plant Assets than they are purchasing.
3. Show Cinemas has raised more cash by issuing Common Stock, which is a less risky source of capital. Theater by Design paid down its Long-term Debt which is also a favorable indicator for them.

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Ethical Issue B-1
Requirement 1

	Without Reclassification	With Reclassification
Net Income	$ 60,000	$60,000
Increase in Accounts Receivable	(80,000)	0
Net Cash Provided by Operating Activities	$(20,000)	$60,000

Moss Exports looks better with the reclassification of the Accounts Receivable from current assets to long-term.

Requirement 2

The reclassification would be unethical because it would be misleading on both the Statement of Cash Flows and on the Allowance for Doubtful Accounts on the Balance Sheet. Also if the terms of the agreement require the customer to pay within a short period of time, the assets would still be classified as short-term. One way to make the situation ethical would be to work with the clients and convert their accounts receivable into a note receivable with longer payment terms.

Financial Statement Case B-1
Requirement 1

Target uses the indirect method to report net cash flows from operating activities. The section begins with net income and then adds back non-cash items and shows the changes in operating assets and liabilities.

Requirement 2

Target provided cash from operations in 2015 and 2014. Cash provided by operations was $5,844 million in 2015. Net income in 2015 was $3,363 million.

Requirement 3

Yes, Target paid $1,362 million in cash dividends for the year ended January 30, 2016.

Requirement 4

Yes, Target used $1,438 million to purchase property, and equipment for the year ended January 30, 2016.

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