## **CHAPTER 1**

## **Managerial Accounting**

### **ASSIGNMENT CLASSIFICATION TABLE**

			Brief			Α
Lear	ning Objectives	Questions	Exercises	Do It!	Exercises	Problems
1.	Identify the features of managerial accounting and the functions of management.	1, 2, 3, 4, 5, 6, 7	1, 2	1	1	
2.	Describe the classes of manufacturing costs and the differences between product and period costs.	8, 9, 10	3, 4, 5, 6	2	2, 3, 4, 5, 6, 7, 13	1A, 2A
3.	Demonstrate how to compute cost of goods manufactured and prepare financial statements for a manufacturer.	11,12, 13, 14, 15, 16,	7, 8, 9, 10	3	8, 9, 10, 11, 12, 13, 14, 15, 16, 17	3A, 4A, 5A
4.	Discuss trends in managerial accounting.	17, 18, 19, 20, 21, 22, 23, 24, 25	11	4	18	

## **ASSIGNMENT CHARACTERISTICS TABLE**

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Classify manufacturing costs into different categories and compute the unit cost.	Simple	20–30
2A	Classify manufacturing costs into different categories and compute the unit cost.	Simple	20–30
ЗА	Indicate the missing amount of different cost items, and prepare a condensed cost of goods manufactured schedule, an income statement, and a partial balance sheet.	Moderate	30–40
4A	Prepare a cost of goods manufactured schedule, a partial income statement, and a partial balance sheet.	Moderate	30–40
5A	Prepare a cost of goods manufactured schedule and a correct income statement.	Moderate	30–40

### Correlation Chart between Bloom's Taxonomy, Learning Objectives and End-of-Chapter Exercises and Problems

**BLOOM'S TAXONOMY TABLE** 

Learning Objective	Knowledge	Comprehensi	n	Application	n	Analysis	Synthesis	Evaluation
Identify the features of managerial accounting and the functions of management.		Q1-1 Q1-2 BE1- Q1-3 BE1- Q1-4 DI1-1 Q1-5 E1-1 Q1-6	2					
Describe the classes of manufacturing costs and the differences between product and period costs.	Q1-10	Q1-8 BE1- Q1-9 DI1-2 E1-3 E1-5 BE1-3 E1-6 BE1-4 BE1-5		P1-2A				
Demonstrate how to compute cost of goods manufactured and prepare financial statements for a manufacturer.		Q1-7 Q1-11 Q1-12 E1-15	Q1-1 Q1-1 Q1-1 BE1- BE1-	4 BE1-10 5 DI1-3 E1-8	E1-16 E1-17	E1-9 E1-10 E1-11 P1-3A P1-5A		
Discuss trends in managerial accounting.	Q1-16 Q1-18	Q1-17 Q1-2: Q1-19 BE1- Q1-20 DI1-4 Q1-21 E1-18 Q1-22 Q1-23 Q1-24	1					
Continuing Problems			CD1 WP1					
Expand Your Critical Thinking	CT1-3	CT1-6				CT1-1 CT1-2 CT1-4		CT1-5 CT1-7

## **ANSWERS TO QUESTIONS**

- **1.** (a) Disagree. Managerial accounting is a field of accounting that provides economic and financial information for managers and other internal users.
  - (b) Joe is incorrect. Managerial accounting applies to all types of businesses—service, merchandising, and manufacturing.

LO1 BT: C Difficulty: Easy TOT: 3 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

- 2. (a) Financial accounting is concerned primarily with external users such as stockholders, creditors, and regulators. In contrast, managerial accounting is concerned primarily with internal users such as officers and managers.
  - (b) Financial statements are the end product of financial accounting. The statements are prepared quarterly and annually. In managerial accounting, internal reports may be prepared as frequently as needed.
  - (c) The purpose of financial accounting is to provide general-purpose information for all users. The purpose of managerial accounting is to provide special-purpose information for specific decisions.

LO1 BT: C Difficulty: Easy TOT: 5 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

**3.** Differences in the content of the reports are as follows:

#### **Financial**

- Pertains to business as a whole and is highly aggregated.
- Limited to double-entry accounting and cost data.
- Generally accepted accounting principles.

#### **Managerial**

- Pertains to subunits of the business and may be very detailed.
- Extends beyond double-entry accounting system to any relevant data.
- Standard is relevance to decisions.

In financial accounting, financial statements are verified annually through an independent audit by certified public accountants. There are no independent audits of internal reports issued by managerial accountants.

LO1 BT: C Difficulty: Easy TOT: 5 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

- **4.** Linda should know that the management of an organization performs three broad functions:
  - (1) **Planning** requires management to look ahead and to establish objectives.
  - (2) **Directing** involves coordinating the diverse activities and human resources of a company to produce a smooth-running operation.
  - (3) **Controlling** is the process of keeping the company's activities on track.

LO1 BT: C Difficulty: Easy TOT: 3 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

5. Disagree. Decision making is not a separate management function. Rather, decision making involves the exercise of good judgment in performing the three management functions explained in the answer to question four above.

LO1 BT: C Difficulty: Easy TOT: 2 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

6. Employees with line positions are directly involved in the company's primary revenue generating operating activities. Examples would include plant managers and supervisors, and the vice president of operations. In contrast, employees with staff positions are not directly involved in revenue-generating operating activities, but rather serve in a support capacity to line employees. Examples include employees in finance, legal, and human resources.

LO1 BT: C Difficulty: Easy TOT: 3 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

#### **Questions Chapter 1** (Continued)

- 7. The difference in balance sheets pertains to the presentation of inventories in the current asset section. In a merchandising company, only inventory is shown. In a manufacturing company, three inventory accounts are shown: finished goods, work in process, and raw materials.
- LO3 BT: C Difficulty: Easy TOT: 2 min. AACSB: None AICPA FC: Measurement IMA: Cost management
- **8.** Manufacturing costs are classified as either direct materials, direct labor, or manufacturing overhead. LO2 BT: C Difficulty: Easy TOT: 1 min. AACSB: None AICPA FC: Measurement IMA: Cost management
- No, Mel is not correct. The distinction between direct and indirect materials is based on two criteria:
   (1) physical association and (2) the convenience of making the physical association. Materials which cannot be easily associated with the finished product are considered indirect materials.

LO2 BT: C Difficulty: Easy TOT: 2 min. AACSB: None AICPA FC: Measurement IMA: Cost management

10. Product costs, or inventoriable costs, are costs that are a necessary and integral part of producing the finished product. Period costs are costs that are identified with a specific time period rather than with a salable product. These costs relate to nonmanufacturing costs and therefore are not inventoriable costs.

LO2 BT: K Difficulty: Easy TOT: 2 min. AACSB: None AICPA FC: Measurement IMA: Cost management

11. A merchandising company has beginning inventory, cost of goods purchased, and ending inventory. A manufacturing company has beginning finished goods inventory, cost of goods manufactured, and ending finished goods inventory.

LO3 BT: C Difficulty: Easy TOT: 5 min. AACSB: None AICPA FC: Measurement IMA: Cost management

- **12.** (a) X = total cost of work in process.
  - (b) X = cost of goods manufactured.

LO3 BT: C Difficulty: Easy TOT: 2 min. AACSB: None AICPA FC: Measurement IMA: Cost management

13. Raw materials inventory, beginning Raw materials purchases Total raw materials available for use Raw materials inventory, ending Direct materials used  LO3 BT: AP Difficulty: Easy TOT: 3 min. AACSB: Analytic AICPA FC: Measurement IMA: Cost management (\$12,000 + \$170,000 - \$15,000 = \$167,000) (Beg. RM + RM purch. – End. RM = DM used)	\$12,000 <u>170,000</u> 182,000 <u>(15,000</u> ) <u>\$167,000</u>
Direct materials used  Direct labor used  Total manufacturing overhead  Total manufacturing costs  LO3 BT: AP Difficulty: Easy TOT: 2 min. AACSB: Analytic AICPA FC: Measurement IMA: Cost management (\$240,000 + \$220,000 + \$180,000 = \$640,000)  (DM used + DL used + Tot. MOH = Tot. mfg. costs)	\$240,000 220,000 <u>180,000</u> <u>\$640,000</u>
<b>15.</b> (a) Total cost of work in process (\$26,000 + \$640,000)	\$666,000 \$634,000

**16.** The order of listing is finished goods inventory, work in process inventory, and raw materials inventory. LO3 BT: K Difficulty: Easy TOT: 1 min. AACSB: None AICPA FC: Measurement IMA: Cost management

#### **Questions Chapter 1 (Continued)**

17. The products differ in how each are consumed by the customer. Services are consumed immediately; the product is not put into inventory. Meals at a restaurant are the best example where they are consumed immediately by the customer. There could be a long lead time before the product is consumed in a manufacturing environment.

LO4 BT: C Difficulty: Easy TOT: 3 min. AACSB: None AICPA FC: Measurement IMA: Cost management

**18.** The product costing techniques apply equally well to manufacturers and service companies. Each needs to keep track of the cost of production or services in order to know whether it is generating a profit. The techniques shown in this chapter, to accumulate manufacturing costs to determine manufacturing inventory, are equally useful for determining the cost of services.

LO4 BT: K Difficulty: Easy TOT: 3 min. AACSB: None AICPA FC: Measurement IMA: Cost management

**19.** The value chain refers to all activities associated with providing a product or service. For a manufacturer, these include research and development, product design, acquisition of raw materials, production, sales and marketing, delivery, customer relations, and subsequent service.

LO4 BT: C Difficulty: Easy TOT: 3 min. AACSB: None AICPA FC: Decision Modeling IMA: Strategic Planning

**20.** An enterprise resource planning (ERP) system is an integrated software system that provides a comprehensive, centralized resource for information. Its primary benefits are that it replaces the many individual systems typically used for receivables, payables, inventory, human resources, etc. Also, it can be used to get information from, and provide information to, the company's customers and suppliers.

LO4 BT: C Difficulty: Easy TOT: 3 min. AACSB: None AICPA FC: Decision Modeling IMA: Strategic Planning

21. In a just-in-time inventory system, the company has no extra inventory stored. Consequently, if some units that are produced are defective, the company will not have enough units to deliver to customers.

LO4 BT: C Difficulty: Easy TOT: 2 min. AACSB: None AICPA FC: Decision Modeling IMA: Strategic Planning

**22.** The balanced scorecard is called "balanced" because it strives to not over emphasize any one performance measure, but rather uses both financial and non-financial measures to evaluate all aspects of a company's operations in an integrated fashion.

LO4 BT: C Difficulty: Easy TOT: 3 min. AACSB: None AICPA FC: Decision Modeling IMA: Strategic Planning

23. Budgets are prepared by companies to provide future direction. Because the budget is also used as an evaluation tool, some managers try to game the budgeting process by underestimating their division's predicted performance so that it will be easier to meet their performance targets. On the other hand, if the budget is set at unattainable levels, managers sometimes take unethical actions to meet targets to receive higher compensation or in some cases to keep their jobs.

LO4 BT: C Difficulty: Easy TOT: 3 min. AACSB: Ethics AICPA PC: Professional Demeanor IMA: Business Applications

**24.** CEOs and CFOs must now certify that financial statements give a fair presentation of the company's operating results and its financial condition and that the company maintains an adequate system of internal controls. In addition, the composition of the board of directors and audit committees receives more scrutiny, and penalties for misconduct have increased.

LO4 BT: C Difficulty: Easy TOT: 3 min. AACSB: Ethics AICPA FC: Measurement AICPA PC: Professional Demeanor IMA: FSA, Business Applications

**25.** Activity-based costing is an approach used to allocate overhead based on each product's relative use of activities in making the product. Activity-based costing is beneficial because it results in more accurate product costing and in more careful scrutiny of all activities in the value chain.

LO4 BT: C Difficulty: Easy TOT: 3 min. AACSB: None AICPA FC: Decision Modeling IMA: Cost management

## **SOLUTIONS TO BRIEF EXERCISES**

#### **BRIEF EXERCISE 1-1**

	Financial Accounting	Managerial Accounting	
Primary users	External users	Internal users	
Types of reports	Financial statements	Internal reports	
Frequency of reports	Quarterly and annually	As frequently as needed	
Purpose of reports	General-purpose	Special-purpose information for specific decisions	
Content of reports	Generally accepted accounting principles	Relevance to decisions	
Verification process	Annual audit by certified public accountant	No independent audits	
LO1 BT: C Difficulty: Easy TOT: 3 min. AACSB: None AICPA FC: Measurement IMA: Cost Management			

#### **BRIEF EXERCISE 1-2**

- (a) 1. Planning.
- (b) 2. Directing.
- (c) 3. Controlling.

LO1 BT: C Difficulty: Easy TOT: 1 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

#### **BRIEF EXERCISE 1-3**

- (a) <u>DM</u> Frames and tires used in manufacturing bicycles.
- (b) <u>DL</u> Wages paid to production workers.
- (c) MO Insurance on factory equipment and machinery.
- (d) <u>MO</u> Depreciation on factory equipment.

LO2 BT: C Difficulty: Easy TOT: 2 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

#### **BRIEF EXERCISE 1-4**

- (a) Direct materials.
- (b) Direct materials.
- (c) Direct labor.
- (d) Manufacturing overhead.
- Manufacturing overhead. (e)
- Direct materials.
- Direct materials. (g)

(h) Manufacturing overhead.

LO2 BT: C Difficulty: Easy TOT: 3 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

#### **BRIEF EXERCISE 1-5**

- (a) Product.
- (b) Period.
- (c) Period.
- (d) Period.
- (e) Product.
- Product.

LO2 BT: C Difficulty: Easy TOT: 3 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

#### **BRIEF EXERCISE 1-6**

	Product Costs				
	Direct	Direct	Factory		
	<b>Materials</b>	<u>Labor</u>	<b>Overhead</b>		
(a)			X		
(b)	X				
(c)			X		
(d)		X			

LO2 BT: C Difficulty: Easy TOT: 2 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

#### **BRIEF EXERCISE 1-7**

(a)	Direct materials used	\$180,000
	Direct labor	209,000
	Total manufacturing overhead	208,000
	Total manufacturing costs	<u>\$597,000</u>
(b)	Beginning work in process	\$ 25,000
` ,	Total manufacturing costs	597,000
	Total cost of work in process	\$622,000

#### **BRIEF EXERCISE 1-7 (Cont'd)**

(\$25,000 + \$597,000 = \$622,000)

(Beg. WIP + Tot. mfg. costs = Tot. cost in WIP)

LO3 BT: AP Difficulty: Easy TOT: 5 min. AACSB: Analytic AICPA FC: Measurement IMA: Cost Management

#### **BRIEF EXERCISE 1-8**

## ROLAND COMPANY Balance Sheet December 31, 2020

Current assets		
Cash		\$ 62,000
Accounts receivable		200,000
Inventories		
Finished goods	\$91,000	
Work in process	87,000	
Raw materials	83,000	261,000
Prepaid expenses		38,000
Total current assets		\$561,000

LO3 BT: AP Difficulty: Easy TOT: 5 min. AACSB: Analytic AICPA FC: Reporting IMA: Cost Management [\$62,000 + \$200,000 + (\$91,000 + \$87,000 + \$83,000) + \$38,000 = \$561,000]

[Cash + Accts. rec. + (Fin. gds. + WIP + Raw mat.) + Prepd. exp. = Tot. current assets]

#### **BRIEF EXERCISE 1-9**

<u>N</u>	Direct Naterials Used	Direct Labor Used	Factory Overhead	I otal Manufacturing Costs
(1)				\$151,000
(2)	\$81,000			
(3)		\$144,000		

LO3 BT: AP Difficulty: Easy TOT: 2 min. AACSB: Analytic AICPA FC: Measurement IMA: Cost Management

#### **BRIEF EXERCISE 1-10**

	Total Manufacturing Costs	Work in Process (January 1)	Work in Process (December 31)	Cost of Goods Manufactured
(1)	\$151,000*	• • • • • • • • • • • • • • • • • • • •		\$189,000
(2) (3)		\$133,000	\$58,000	

(3) \$58,000

\*\$40,000 + \$61,000 + \$50,000 (data from BE 1-9)

LO3 BT: AP Difficulty: Easy TOT: 5 min. AACSB: Analytic AICPA FC: Measurement IMA: Cost Management

#### **BRIEF EXERCISE 1-11**

One implication of SOX was to clarify top management's responsibility for the company's financial statements. CEOs and CFOs must certify that financial statements give a fair presentation of the company's operating results and its financial condition. In addition, top managers must certify that the company maintains an adequate system of internal controls to safeguard the company's assets and ensure accurate financial reports. Also, more attention is now paid to the composition of the company's board of directors. In particular, the audit committee of the board of directors must be comprised entirely of independent members (that is, non-employees) and must contain at least one financial expert. Finally, to increase the likelihood of compliance with these and other new rules, the penalties for misconduct were substantially increased.

LO4 BT: C Difficulty: Easy TOT: 6 min. AACSB: Analytic AICPA PC: Professional Demeanor, Communication IMA: FSA, Business Applications

## **SOLUTIONS FOR DO IT! EXERCISES**

#### **DO IT! 1-1**

- 1. False
- 2. False
- 3. False
- 4. True

LO1 BT: C Difficulty: Easy TOT: 4 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

#### DO IT! 1-2

#### Period costs:

**Advertising** 

Salaries of sales representatives

#### **Product costs:**

Blank CDs (DM)

**Depreciation of CD image burner (MO)** 

Salary of factory manager (MO)

**Factory supplies used (MO)** 

Paper inserts for CD cases (DM)

CD plastic cases (DM)

Salaries of factory maintenance employees (MO)

Salaries of employees who burn music onto CDs (DL)

LO2 BT: C Difficulty: Easy TOT: 4 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

# TOMLIN COMPANY Cost of Goods Manufactured Schedule For the Month Ended April 30

Work in process, April 1			\$	5,000
Direct materials			-	•
Raw materials, April 1	\$ 10,000			
Raw materials purchases	98,000			
Total raw materials available for use	108,000			
Less: Raw materials, April 30	14,000			
Direct materials used	\$	94,000		
Direct labor		80,000		
Manufacturing overhead	_1	60,000		
Total manufacturing costs			_3	34,000
Total cost of work in process			3	39,000
Less: Work in process, April 30				3,500
Cost of goods manufactured			\$3	35,500
LOG DE AD DIWIN IL FOR TOT ONLY AAOOD AND I'M AIOD	A EO D	44 0 ( 84 -		

LO3 BT: AP Difficulty: Easy TOT: 6 min. AACSB: Analytic AICPA FC: Reporting IMA: Cost Management [\$5,000 + ((\$10,000 + \$98,000 - \$14,000) + \$80,000 + \$160,000) - \$3,500 = \$335,500] [Beg. WIP + ((Beg. raw mat. + Raw mat. purch. – End. raw mat.) + DL + MOH) – End. WIP = COGM]

#### **DO IT! 1-4**

- 1. f
- 2. a
- 3. c
- 4. h
- 5. d
- 6. e
- 7. b
- 8. c

LO4 BT: C Difficulty: Easy TOT: 4 min. AACSB: None AICPA FC: Decision Modeling IMA: Cost Management

## **SOLUTIONS TO EXERCISES**

#### **EXERCISE 1-1**

- 1. False. Financial accounting focuses on providing information to *external* users.
- 2. False. Line positions are directly involved in the company's primary revenue-generating operating activities.
- 3. False. Preparation of budgets is part of managerial accounting.
- 4. False. Managerial accounting applies to *service*, merchandising and manufacturing companies.
- 5. True.
- 6. False. Managerial accounting reports are prepared as *frequently as* needed.
- 7. True.
- 8. True.
- 9. False. *Financial* accounting reports must comply with generally accepted accounting principles.
- 10. False. The company treasurer reports directly to the vice president of finance/chief financial officer.

LO1 BT: C Difficulty: Easy TOT: 6 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

#### **EXERCISE 1-2**

- 1. (b) Direct labor.\*
- 2. (c) Manufacturing overhead.
- 3. (c) Manufacturing overhead.
- 4. (c) Manufacturing overhead.
- 5. (a) Direct materials.
- 6. (b) Direct labor.
- 7. (c) Manufacturing overhead.
- 8. (c) Manufacturing overhead.
- 9. (c) Manufacturing overhead.
- 10. (a) Direct materials.

## \*or sometimes (c), depending on the circumstances

LO2 BT: C Difficulty: Easy TOT: 6 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

(a)	Bicycle componentsDM	Advertising expense Period
	Depreciation on plant MOH	Property taxes on plantMOH
	Property taxes on store Period	Delivery expensePeriod
	Labor costs of assembly	Sales commissions Period
	line workersDL	Salaries paid to sales clerksPeriod
	Factory supplies used MOH	

(b) Product costs are recorded as a part of the cost of inventory because they are an integral part of the cost of producing the bicycles. Product costs are not expensed until the goods are sold. Period costs are recognized as an expense when incurred.

LO2 BT: C Difficulty: Easy TOT: 8 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

#### **EXERCISE 1-4**

(a) Factory utilities	\$ 15,500
Depreciation on factory equipment	12,650
Indirect factory labor	48,900
Indirect materials	80,800
Factory manager's salary	8,000
Property taxes on factory building	2,500
Factory repairs	2,000
Manufacturing overhead	\$170,350
(\$15,500 + \$12,650 + \$48,900 + \$80,800 + \$8,000 + \$2,500 + \$2,000 = \$170,350) (Fact. util. + Depr. on fact. equip. + Ind. fact. labor + Ind. mat. + Fact. mgr's. sal. + Prop. tax. on repairs = MOH)	fact. bldg + Fact.
(b) Direct materials	\$137,600
Direct labor	69,100
Manufacturing overhead	170,350
Product costs	\$377,050
	<u></u>
(c) Depreciation on delivery trucks	\$ 3,800
Sales salaries	46,400
Repairs to office equipment	1,300
Advertising	15,000
Office supplies used	2,640
Period costs	\$ 69,140
(MO 000 - MAO 400 - MA 000 - MAE 000 - MO 0A0 - MO 440)	

(\$3,800 + \$46,400 + \$1,300 + \$15,000 + \$2,640 = \$69,140)

(Depr. on del. trks. + Sales sal. + Repairs on off. equip. + Advert. + Off. sup. used = Period costs)

LO2 BT: AP Difficulty: Easy TOT: 10 min. AACSB: Analytic AICPA FC: Measurement IMA: Cost Management

1.	(c)	3.	(a)	5. (k	)*	<b>7</b> . (	(a)	9.	(c)	
2.	(c)	4.	(c)	6. (0	d)	8.	(b)	10.		

## \*or sometimes (c), depending on the circumstances.

LO2 BT: C Difficulty: Easy TOT: 5 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

#### **EXERCISE 1-6**

- 1. (b)
- 2. (c)
- 3. (a)
- 4. (c) (Only for the portion that applies to the x-ray department)
- 5. (c)
- 6. (c)
- 7. (c)
- 8. (c)
- 9. (c)
- 10. (c) (Only for the portion that applies to the x-ray department)

LO2, 4 BT: C Difficulty: Easy TOT: 5 min. AACSB: None AICPA FC: Measurement IMA: Cost Management

#### **EXERCISE 1-7**

## (a) Delivery service (product) costs:

Indirect materials	\$ 6,400
Depreciation on delivery equipment	11,200
Dispatcher's salary	5,000
Gas and oil for delivery trucks	2,200
Drivers' salaries	16,000
Delivery equipment repairs	300
Total	\$41,100

(\$6,400 + \$11,200 + \$5,000 + \$2,200 + \$16,000 + \$300 = \$41,100) (Ind. mat. + Depr. on del. equip. + Dispatch. sal. + Gas & oil for del. trks. + Drivers' sal. + Del. equip. repairs = Tot. product costs)

## (b) Period costs:

Property taxes on office building	\$ 870
CEO's salary	12,000
Advertising	4,600
Office supplies	650
Office utilities	990
Repairs on office equipment	180
Total	\$19,290

LO2 BT: AP Difficulty: Easy TOT: 6 min. AACSB: Analytic AICPA FC: Measurement IMA: Cost Management

(a) Work in process, 1/1	\$ 12,000 327,000 339,000 15,500 \$323,500 P = COGM]
(b) Finished goods, 1/1	\$ 60,000 323,500 383,500 45,600 \$337,900 nagement
Total raw materials available for use:  Direct materials used	\$180,000 <u>22,500</u> <u>\$202,500</u>
Raw materials inventory (1/1):  Total raw materials available for use:  Direct materials used	\$180,000 22,500 202,500 158,000 \$ 44,500

## **EXERCISE 1-9 (Continued)**

E = \$252,500

Total cost of work in process:  Cost of goods manufactured  Add: Work in process (12/31)  Total cost of work in process	<u>81,000</u>
Total manufacturing costs:  Total cost of work in process  Less: Work in process (1/1)  Total manufacturing costs	<u>210,000</u>
Direct labor:  Total manufacturing costs  Less: Total overhead  Direct materials used  Standard Total overhead  [\$411,000 - (\$122,000 + \$180,000) = \$109,000]  [Tot. mfg. costs - (Tot. OH + DM used) = DL]  LO3 BT: AN Difficulty: Easy TOT: 10 min. AACSB: Analysis	\$122,000 <u>180,000</u> <u>302,000</u> <u>\$109,000</u>
EXERCISE 1-10	
<u>Case A</u> A + \$57,000 + \$46,500 = \$195,650 A = \$92,150	\$252,500 - \$11,000 = F F = \$241,500
\$195,650 + B = \$221,500 B = \$25,850	<u>Case C</u> \$130,000 + G + \$102,000 = \$253,700 G = \$21,700
\$221,500 - C = \$185,275 C = \$36,225	\$253,700 + H = \$337,000 H = \$83,300
<u>Case B</u> \$68,400 + \$86,000 + \$81,600 = D D = \$236,000	\$337,000 - \$70,000 = I I = \$267,000
\$236,000 + \$16,500 = E	

## Additional explanation to EXERCISE 1-10 solution:

## Case A

(a)	Less: Manufacturing overhead	\$46,500	\$195,650
	Direct labor	57,000	103,500 \$ 92,150
(b)	Total cost of work in process  Less: Total manufacturing costs  Work in process (1/1/20)		\$221,500 <u>195,650</u> \$ 25,850
(c)	Total cost of work in process  Less: Cost of goods manufactured  Work in process (12/31/20)		\$221,500 <u>185,275</u> \$ 36,225
Cas	e B		
	Direct materials used  Direct labor  Manufacturing overhead  Total manufacturing costs		\$ 68,400 86,000 <u>81,600</u> \$236,000
(e)	Total manufacturing costs  Work in process (1/1/20)  Total cost of work in process		\$236,000 <u>16,500</u> \$252,500
(f)	Total cost of work in process  Less: Work in process (12/31/20)  Cost of goods manufactured		\$252,500 <u>11,000</u> <u>\$241,500</u>
Cas	e C		
	Total manufacturing costs  Less: Manufacturing overhead  Direct materials used	\$102,000 <u>130,000</u>	\$253,700 <u>232,000</u> <u>\$ 21,700</u>

## **EXERCISE 1-10 (Continued)**

(h)	Total cost of work in process	\$337,000
	Less: Total manufacturing costs	253,700
	Work in process (1/1/20)	<u>\$ 83,300</u>
(i)	Total cost of work in process	\$337,000
` '	Less: Work in process (12/31/20)	70,000
	Cost of goods manufactured	\$267,000
LO3	BT: AN Difficulty: Easy TOT: 12 min. AACSB: Analytic AICPA FC: Reporting I	MA: Reporting

#### **EXERCISE 1-11**

- (a) (a) \$117,000 + \$140,000 + \$87,000 = \$344,000
  - (b) \$344,000 + \$33,000 \$360,000 = \$17,000

(\$344,000 + \$33,000 - \$360,000 = \$17,000)(Tot. mfg. costs + Beg. WIP - COGM = End. WIP)

(c) 
$$$450,000 - ($200,000 + $132,000) = $118,000$$

(d) 
$$$40,000 + $470,000 - $450,000 = $60,000$$

(\$40,000 + \$470,000 - \$450,000 = \$60,000) (End. WIP + COGM - Tot. mfg. costs = Beg. WIP)

(e) 
$$$265,000 - ($80,000 + $100,000) = $85,000$$

(f) 
$$$265,000 + $60,000 - $80,000 = $245,000$$

(\$265,000 + \$60,000 - \$80,000 = \$245,000)(Tot. mfg. costs + Beg. WIP - End. WIP = COGM)

(g) 
$$$288,000 - ($70,000 + $75,000) = $143,000$$

(h) 
$$$288,000 + $45,000 - $270,000 = $63,000$$

## **EXERCISE 1-11 (Continued)**

## (b)

## **HORIZON COMPANY Cost of Goods Manufactured Schedule** For the Year Ended December 31, 2020

Work in process, January 1		\$ 33,000
Direct materials	\$117,000	. ,
Direct labor	140,000	
Manufacturing overhead	87,000	
Total manufacturing costs		344,000
Total cost of work in process		377,000
Less: Work in process inventory,		
December 31		<u>17,000</u>
Cost of goods manufactured		<u>\$360,000</u>

[(\$33,000 + (\$117,000 + \$140,000 + \$87,000)) - \$17,000 = \$360,000]

[(Beg. WIP + (DM + DL + MOH)) - End. WIP = COGM]

LO3 BT: AN Difficulty: Easy TOT: 12 min. AACSB: Analytic AICPA FC: Reporting IMA: Reporting

### **EXERCISE 1-12**

(a)

## **CEPEDA CORPORATION Cost of Goods Manufactured Schedule** For the Month Ended June 30, 2020

Work in process, June 1			\$ 3,000
Direct materials used		\$20,000	
Direct labor		40,000	
Manufacturing overhead		·	
Indirect labor	\$4,500		
Factory manager's salary	3,000		
Indirect materials	2,200		
Maintenance, factory equipment	1,800		
Depreciation, factory equipment	1,400		
Factory utilities	400		
Total manufacturing overhead		13,300	
Total manufacturing costs			73,300
Total cost of work in process			76,300
Less: Work in process, June 30			3,800
Cost of goods manufactured			\$72,500

[(\$3,000 + (\$20,000 + \$40,000 + (\$4,500 + \$3,000 + \$2,200 + \$1,800 + \$1,400 + \$400))) - \$3,800 = \$72,500][(Beg. WIP + (DM used + DL + (Ind. labor + Fact. mgrs.. sal. + Ind. mat. + Maint., fact. equip. + Depr., fact. equip. + Fact. util.))) - End. WIP = COGM]

## **EXERCISE 1-12 (Continued)**

## (b) CEPEDA CORPORATION Income Statement (Partial) For the Month Ended June 30, 2020

Sales revenue		\$92,100
Cost of goods sold		
Finished goods inventory, June 1	\$ 5,000	
Cost of goods manufactured [from (a)]	72,500	
Cost of goods available for sale	77,500	
Less: Finished goods inventory, June 30	7,500	
Cost of goods sold		70,000
Gross profit		\$22,100

LO3 BT: AP Difficulty: Easy TOT: 10 min. AACSB: Analytic AICPA FC: Reporting IMA: Reporting

#### **EXERCISE 1-13**

(a)

# WASHINGTON CONSULTING Schedule of Cost of Contract Services Performed For the Month Ended August 31, 2020

Supplies used (direct materials)  Salaries of professionals (direct labor)  Service overhead:		\$ 1,700 15,600
Utilities for contract operations	<b>\$1</b> 400	
Contract equipment depreciation		
Insurance on contract operations	800	
Janitorial services for professional offices	700	
Total overhead		3,800
Cost of contract services provided		<u>\$21,100</u>

[\$1,700 + \$15,600 + (\$1,400 + \$900 + \$800 + \$700) = \$21,100]

[Supp. used + Sal. of profs. + (Util. on contract oper. + Contract equip. depr. + Ins. on contract oper. + Jan. srvs. for prof. off.) = \$21,100]

(b) The costs not included in the cost of contract services provided would all be classified as period costs. As such, they would be reported on the income statement under administrative expenses.

LO3 BT: AP Difficulty: Easy TOT: 6 min. AACSB: Analytic AICPA FC: Reporting IMA: Reporting

(a)	Work in process, 1/1			\$	13,500
	Direct materials				
	Materials inventory, 1/1	\$ 21,000			
	Materials purchased	<u> 150,000</u>			
	Materials available for use	171,000			
	Less: Materials inventory, 12/31	30,000			
	Direct materials used		\$141,000		
	Direct labor		220,000		
	Manufacturing overhead		<u> 180,000</u>		
	Total manufacturing costs			5	41,000
	Total cost of work in process			5	54,500
	Less: Work in process, 12/31				<u>17,200</u>
	Cost of goods manufactured			\$5	37,300
[\$13,	500 + ((\$21,000 + \$150,000 - \$30,000) + \$220,000 + \$180,0	00) - \$17,200 =	\$537,300]		

[Beg. WIP + ((Beg. DM + DM purch. - End. DM) + DL + MOH) - End. WIP = COGM]

## **AIKMAN COMPANY Income Statement (Partial)** For the Year Ended December 31, 2020

(b) Sales revenue		\$910,000
Cost of goods sold		
Finished goods, 1/1	\$ 27,000	
Cost of goods manufactured	537,300	
Cost of goods available for sale	564,300	
Less: Finished goods, 12/31	21,000	
Cost of goods sold		543,300
Gross profit		\$366,700
[\$910,000 - (\$27,000 + \$537,300 - \$21,000) = \$366,700]		
[Sales rev. – (Beg. FG + COGM – End. FG) = GP]		

## **AIKMAN COMPANY** (Partial) Balance Sheet **December 31, 2020**

#### (c) Current assets **Inventories** Finished goods..... \$21,000 17,200 Work in process ..... Raw materials..... 30,000 \$68,200

## **EXERCISE 1-14 (Continued)**

(d) In a merchandising company's income statement, the only difference would be in the computation of cost of goods sold. Beginning and ending finished goods would be replaced by beginning and ending inventory, and cost of goods manufactured would be replaced by purchases. In a merchandising company's balance sheet, there would be one inventory account (inventory) instead of three.

LO3 BT: AP Difficulty: Easy TOT: 15 min. AACSB: Analytic AICPA FC: Reporting IMA: Reporting

#### **EXERCISE 1-15**

1.	(a)	9.	(a)
2.	(a)	10.	(a), (b)
3.	(a), (c)	11.	(b)
	(b)	12.	(b)
5.	(a)	13.	(a)
6.	(a)	14.	(a)
7.	(a)	15.	(a)
8.	(b), (c)	16.	(a)
100	DT O D'CC IL E. TOT O	A A O O D A L A LO D A E O	Daniel IMAA

LO3 BT: C Difficulty: Easy TOT: 8 min. AACSB: None AICPA FC: Reporting IMA: Reporting

(a)

## **ROBERTS COMPANY Cost of Goods Manufactured Schedule** For the Month Ended June 30, 2020

Work in process inventory, June 1			\$	5,000
Direct materials				
Raw materials inventory, June 1	\$ 9,000			
Raw materials purchases	54,000	<u>)</u>		
Total raw materials available for use	63,000			
Less: Raw materials inventory, June 30	13,100	<u>)</u>		
Direct materials used		\$49,900		
Direct labor		47,000		
Manufacturing overhead		•		
Indirect labor	5,500	)		
Factory insurance	4,000			
Machinery depreciation	4,000			
Factory utilities	3,100			
Machinery repairs	1,800			
Miscellaneous factory costs	1,500			
Total manufacturing overhead		19,900		
Total manufacturing costs		10,000	1	16,800
Total cost of work in process				21,800
Less: Work in process inventory, June 30				7,000
Cost of goods manufactured			<u>¢1</u>	14,800
00 + ((\$9,000 + \$54,000 - \$13,100) + \$47,000 + (\$5,500 + \$4,000 +	\$4,000 + \$3	3 100 + \$1 80		
0 = \$114,800]				
WIP + ((Beg. raw mat. + Raw mat. purch End. raw mat.) + DL +	(Ind. labor +	Fact. ins. + N	/lach	. depr. +

[Beg. WIP + ((Beg. raw mat. + Raw mat. purch. - End. raw mat.) + DL + (Ind. labor + Fact. ins. + Mach. depr. + Fact. util. + Mach. repairs + Misc. fact. costs)) - End. WIP = COGMI

(b)

## ROBERTS COMPANY (Partial) Balance Sheet June 30, 2020

## **Current assets**

**Inventories** 

\$ 8,000 Finished goods ..... 7,000 Work in process..... \$28,100 Raw materials ..... 13,100

LO BT: AP Difficulty: Easy TOT: 8 min. AACSB: Analytic AICPA FC: Reporting IMA: Reporting

(a) Raw Materials account:  $(5,000 - 4,650) \times 15 = 5,250$ Work in Process account:  $(4,600 \times 10\%) \times 15 = 6,900$ 

Finished Goods account:  $(4,600 \times 90\% \times 30\%) \times $15 = $18,630$ Cost of Goods Sold account:  $(4,600 \times 90\% \times 70\%) \times $15 = $43,470$ 

Selling Expenses account: 50 X \$15 = \$750

Proof of cost of head lamps allocated (5,000 X \$15 = \$75,000)

Raw materials	\$ 5,250
Work in process	6,900
Finished goods	18,630
Cost of goods sold	43,470
Selling expenses	<b>750</b>
Total	\$75,000

[(Raw mat.: (5,000-4,650) x \$15 = \$5,250); (WIP: 4,600 x 10% x \$15 = \$6,900); (Fin. gds.: (4,600 x 90% x 30%) x \$15 = \$18,630); (CGS: (4,600 x 90% x 70%) x \$15 = \$43,470); (Sell. exp.: 50 x \$15 = \$750)] [(Raw mat.: (Lamps purch. – Lamps withdrawn) x Unit cost = Acct. bal.); (WIP: (Lamps issued to production x % still in production) x Unit cost = Acct. bal.); (Fin. Gds.: (Lamps in production x % completed x % not sold) x Unit cost = Acct. bal.); (CGS: Lamps in production x % completed x % sold) x Unit cost = Acct. bal.); (Sell. exp.: Lamps in sales staff cars x Unit cost = Acct. bal.)]

(b) To: Chief Accountant

From: Student

**Subject: Statement Presentation of Accounts** 

Two accounts will appear in the income statement. Cost of Goods Sold will be deducted from net sales in determining gross profit. Selling expenses will be shown under operating expenses and will be deducted from gross profit in determining net income. Sometimes, the calculation for Cost of Goods Sold is shown on the income statement. In these cases, the balance in Finished Goods inventory would also be shown on the income statement.

The other accounts associated with the head lamps are inventory accounts which contain end-of-period balances. Thus, they will be reported under inventories in the current assets section of the balance sheet in the following order: finished goods, work in process, and raw materials.

LO3 BT: AP Difficulty: Moderate TOT: 15 min. AACSB: Analytic AICPA FC: Measurement IMA: Cost Management

- (a) 3. Balanced scorecard
- (b) 4. Value chain
- (c) 2. Just-in-time inventory
- (d) 1. Activity-based costing

LO4 BT: C Difficulty: Easy TOT: 2 min. AACSB: None AICPA FC: Decision Modeling IMA: Strategic **Planning** 

(a)

Cost Item	Direct Materials	Direct Labor	Manufacturing Overhead		eriod osts
Rent on factory equipment			\$11,000		
Insurance on factory building			1,500		
Raw materials	\$75,000				
Utility costs for factory	·		900		
Supplies for general office				\$	300
Wages for assembly line workers		\$58,000			
Depreciation on office equipment					800
Miscellaneous materials			1,100		
Factory manager's salary			5,700		
Property taxes on factory building			400		
Advertising for helmets				1	4,000
Sales commissions				1	0,000
Depreciation on factory building			1,500		
	\$75,000	\$58,000	<b>\$22,100</b>	<b>\$2</b>	5,100
(MOH: \$11,000 + \$1,500 + \$900 + \$1,100 + \$5,70	0 + \$400 + \$1.500	$=\frac{100}{100}$	eriod costs: \$300 + \$800	$+ \frac{1}{\$14}$	1 000 +

**Product Costs** 

SOLUTIONS TO PROBLEMS

**PROBLEM** 

11-1A

[(MOH: \$11,000 + \$1,500 + \$900 + \$1,100 + \$5,700 + \$400 + \$1,500 = \$22,100); (Period costs: \$300 + \$800 + \$14,000 + \$10,000 = \$25,100)]

[(MOH: Rent, fact. equip. + Ins., fact. bldg. + Fact. util. + Misc. mat. + Fact. mgrs.. sal. + Prop. tax, fact. bldg.. + Depr., fact. bldg. = Tot.); (Period costs: Supp., gen. off. + Depr., off. equip. + Advert. for helmets + Sales comm. = Tot.)]

## (b) Total production costs

Direct materials	\$ 75,000
Direct labor	58,000
Manufacturing overhead	 22,100
Total production cost	\$ 155,100

## Production cost per helmet = \$155,100/10,000 = \$15.51.

LO2 BT: AP Difficulty: Easy TOT: 25 min. AACSB: Analytic AICPA FC: Measurement IMA: Cost Management

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(a)				
Cost Item	Direct Materials	Direct Labor	Manufacturing Overhead	Period Costs
Raw materials (1)	\$111,000			
Wages for workers (2)	,	\$90,000		
Rent on equipment		·	\$ 4,900	
Indirect materials (3)			7,500	
Factory supervisor's salary			3,000	
Janitorial costs			1,300	
Advertising				\$9,500
Depreciation on factory building (4)			650	
Property taxes on factory building (5)			<u>750</u>	
	<u>\$111,000</u>	<u>\$90,000</u>	<u>\$18,100</u>	<u>\$9,500</u>

**PROBLEM 1-2A** 

(1)\$74 X 1,500 = \$111,000.

(2)\$12 X 5 X 1,500 = \$90,000.

(3)\$5 X 1,500 = \$7,500.

(4)\$7,800/12 = \$650.

(5)\$9,000/12 = \$750.

[(MOH: \$4,900 + (\$5 x 1,500) + \$3,000 + \$1,300 + (\$7,800/12) + (\$9,000/12) = \$18,100); (Period costs: \$9,500)] [(MOH: Rent, equip. + (Ind. mat. cost/system x No. systems) + Fact. super. sal. + Jan. costs + (Ann. depr./Mos. in a yr.) + (Ann. prop.tax./Mos. in a yr.) = Tot.); (Period costs: Advert.)]

(b) Total production costs

Direct materials \$111,000
Direct labor 90,000
Manufacturing overhead 18,100
Total production cost \$219,100

Production cost per system = \$219,100/1,500 = \$146.07. (rounded)

LO2 BT: AP Difficulty: Easy TOT: 25 min. AACSB: Analytic AICPA FC: Measurement IMA: Cost Management

#### PROBLEM 1-3A

## (a) Case 1

$$A = \$9,600 + \$5,000 + \$8,000 = \$22,600$$

$$$22,600 + $1,000 - B = $17,000$$

$$B = $22,600 + $1,000 - $17,000 = $6,600$$

$$$17,000 + C = $22,000$$

$$C = $22,000 - $17,000 = $5,000$$

$$D = $22,000 - $3,400 = $18,600$$

$$E = ($24,500 - $2,500) - $18,600 = $3,400$$

$$F = $3,400 - $2,500 = $900$$

[(B: \$22,600 + \$1,000 - \$17,000 = \$6,600); (E: (\$24,500 - \$2,500) - \$18,600 = \$3,400)]

[(B: Tot. mfg. costs + Beg. WIP - COGM = End. WIP); (E: (Sales rev. - sales disc.) - CGS = GP)]

## Case 2

$$G + \$8,000 + \$4,000 = \$16,000$$

$$G = $16,000 - $8,000 - $4,000 = $4,000$$

$$$16.000 + H - $3.000 = $24.000$$

$$H = $24,000 + $3,000 - $16,000 = $11,000$$

$$(I - \$1,400) - K = \$7,000$$

$$(I - \$1,400) - \$24,800 = \$7,000$$

$$I = \$1,400 + \$24,800 + \$7,000 = \$33,200$$

(Note: Item I can only be solved after item K is solved.)

$$J = $24,000 + $3,300 = $27,300$$

$$K = $27,300 - $2,500 = $24,800$$

$$$7,000 - L = $5,000$$

$$L = $2,000$$

## **PROBLEM 1-3A (Continued)**

[(H: \$24,000 + \$3,000 - \$16,000 = \$11,000); (I: \$1,400 + \$24,800 + \$7,000 = \$33,200); (K: \$27,300 - \$2,500 = \$24,800)]

[(H: COGM + End. WIP - Tot. mfg. costs = Beg. WIP); (I: Sales disc. + CGS + GP = Sales rev.); (K: Gds. avail. for sale - End. fin. gds. = CGS)]

## (b) CASE 1 Cost of Goods Manufactured Schedule

Work in process, beginning		\$ 1,000
Direct materials	\$9,600	
Direct labor	5,000	
Manufacturing overhead	8,000	
Total manufacturing costs		22,600
Total cost of work in process		23,600
Less: Work in process, ending		6,600
Cost of goods manufactured		\$17,000

## (c) CASE 1 Income Statement

Sales revenue	\$24,500	
Less: Sales discounts	2,500	
Net sales	·	
\$22,000		
Cost of goods sold		
Finished goods inventory, beginning	5,000	
Cost of goods manufactured	<u> 17,000</u>	
Cost of goods available for sale	22,000	
Less: Finished goods inventory, ending	3,400	
Cost of goods sold		18,600
Gross profit		3,400
Operating expenses		2,500
Net income		\$ 900

[(\$24,500 - \$2,500) - (\$5,000 + \$17,000 - \$3,400) - \$2,500 = \$900]

[(Sales rev. – Sales disc.) – (Beg. fin. gds. + COGM – End. fin. gds.) – Oper. exp. = Net inc.]

## **PROBLEM 1-3A (Continued)**

## CASE 1 (Partial) Balance Sheet

Current assets		
Cash		\$ 3,000
Receivables (net) Inventories		15,000
Finished goods	\$3,400	
Work in process	6,600	
Raw materials	600	10,600
Prepaid expenses		400
Total current assets		\$29,000

LO3 BT: AN Difficulty: Moderate TOT: 40 min. AACSB: Analytic AICPA FC: Reporting IMA: Reporting

### **PROBLEM 1-4A**

#### (a) **CLARKSON COMPANY Cost of Goods Manufactured Schedule** For the Year Ended June 30, 2020

Work in process, July 1, 2019			\$	19,800	
Direct materials					
Raw materials inventory,					
July 1, 2019	\$ 48,000				
Raw materials purchases	96,400				
Total raw materials available					
for use	144,400				
Less: Raw materials inventory,	•				
June 30, 2020	39,600				
Direct materials used		\$104,800			
Direct labor		139,250			
Manufacturing overhead		,			
Plant manager's salary	58,000				
Factory utilities	27,600				
Indirect labor	24,460				
Factory machinery depreciation	16,000				
Factory property taxes	9,600				
Factory insurance	4,600				
Factory repairs	1,400				
Total manufacturing					
overhead		141,660			
Total manufacturing costs		•		385,710	
Total cost of work in process			_	405,510	
Less: Work in process, June 30, 2020				•	
18,600					
Cost of goods manufactured			\$3	<u>386,910</u>	
[\$19,800 + ((\$48,000 + \$96,400 - \$39,600) + \$139,250 + (\$58,000 + \$27,600 + \$24,460 + \$16,000 + \$9,600 +					

\$4,600 + \$1,400)) - \$18,600 = \$386,910]

[Beg. WIP + ((Beg. raw mat. + Raw mat. purch. - End. raw mat.) + DL + (Plant mgrs.. sal. + Fact. util. + Ind. labor + Fact. mach. depr. + Fact. prop. tax. + Fact. ins. + Fact. repairs)) - End. WIP = COGM]

## **PROBLEM 1-4A (Continued)**

#### **CLARKSON COMPANY** (b) (Partial) Income Statement For the Year Ended June 30, 2020

	,		
Sa	lles revenues		
	Sales revenue	\$534,000	
	Less: Sales discounts	<u>4,200</u>	
	Net sales		\$529,800
Co	est of goods sold		
	Finished goods inventory,		
	July 1, 2019	96,000	
	Cost of goods manufactured	<u> 386,910</u>	
	Cost of goods available for sale	482,910	
	Less: Finished goods inventory,		
	June 30, 2020	<u>75,900</u>	
	Cost of goods sold		<u>407,010</u>
	Gross profit		<u>\$122,790</u>
	0 - \$4,200) - (\$96,000 + \$386,910 - \$75,900) = \$122,790] v Sales disc.) - (Beg. fin. gds. + COGM - End. fin. gds.) = GP]		
)	CLARKSON COMPANY		
	(Partial) Balance Sheet		
	June 30, 2020		
	Assets		
Cu	irrent assets		
	Cash		\$ 32,000
	Accounts receivable		27,000
	Inventories		
	Finished goods	\$75,900	
	Work in process	18,600	
	Raw materials	39,600	134,100

LO3 BT: AP Difficulty: Moderate TOT: 35 AACSB: Analytic AICPA FC: Reporting IMA: Reporting

Total current assets.....

\$193,100

## (a)

# EMPIRE COMPANY Cost of Goods Manufactured Schedule For the Month Ended October 31, 2020

Work in process, October 1			\$ 20,000
Direct materials			
Raw materials inventory,			
October 1	\$ 18,000		
Raw materials			
purchases	<u> 264,000</u>		
Total raw materials available			
for use	282,000		
Less: Raw materials inventory,			
October 31	<u>29,000</u>		
Direct materials used		\$253,000	
Direct labor		190,000	
Manufacturing overhead			
Factory facility rent	60,000		
Depreciation on factory			
equipment	31,000		
Indirect labor	28,000		
Factory utilities*	9,000		
Factory insurance**	<u>4,800</u>		
Total manufacturing			
overhead		<u> 132,800</u>	
Total manufacturing costs			<u>575,800</u>
Total cost of work in process			595,800
Less: Work in process, October 31			14,000
Cost of goods manufactured			<u>\$581,800</u>

<sup>\*\$12,000</sup> X 75% = \$9,000

<sup>\*\*\$ 8,000</sup> X 60% = \$4,800

 $<sup>[\$20,000 + ((\$18,000 + \$264,000 - \$29,000) + \$190,000 + (\$60,000 + \$31,000 + \$28,000 + (\$12,000 \</sup>times 75\%) + (\$8,000 \times 60\%))) - \$14,000 = \$581,800]$ 

<sup>[</sup>Beg. WIP + ((Beg. raw mat. + Raw mat. purch. – End. raw mat.) + DL + (Fact. facil. rent + Depr. on fact. equip. + Ind. labor + Fact. util. + Fact. ins.)) – End. WIP = COGM]

## **PROBLEM 1-5A (Continued)**

# (b) EMPIRE COMPANY Income Statement For the Month Ended October 31, 2020

Sales revenue		\$780,000
Cost of goods sold		·
Finished goods inventory, October 1	\$ 30,000	
Cost of goods manufactured	581,800	
Cost of goods available for sale	611,800	
Less: Finished goods inventory,		
October 31	50,000	
Cost of goods sold		561,800
Gross profit		218,200
Operating expenses		
Advertising expense	90,000	
Selling and administrative salaries	75,000	
Depreciation expense—sales		
equipment	45,000	
Insurance expense**	3,200	
Utilities expense*	3,000	
Total operating expenses		216,200
Net income		\$ 2,000

<sup>\*\$12,000</sup> X 25%

LO3 BT: AN Difficulty: Moderate TOT: 35 AACSB: Analytic AICPA FC: Reporting IMA: Reporting

<sup>\*\*\$ 8,000</sup> X 40%

#### **CURRENT DESIGNS**

#### CD<sub>1</sub>

The answers to parts (a) and (b) may vary from student to student.

(a) What are the primary information needs of each manager?

Mike Cichanowski, CEO, needs to know the overall financial picture of the company. He also needs to have a general picture of sales by territory and product line, and of cost per unit by product line.

Diane Buswell, Controller, needs all accounting-related information.

Deb Welch, Purchasing Manager, needs to know the costs of the components for each product.

Bill Johnson, Sales Manager, needs to know sales by territory and product line.

Dave Thill, Kayak Plant Manager, needs to know all the costs of producing each type of kayak.

Rick Thrune, Production Manager for Composite Kayaks, needs to know the costs related to the composite kayak production.

# **CD1 (Continued)**

(b) Name one special-purpose management accounting report that could be designed for each manager. Include the name of the report, the information it would contain, and how frequently it should be issued.

Manager	Name of report	Information report would contain	How frequently should it be issued?
Mike Cichanowski	Analysis of proposed new product line	Projected revenues and expenses for a possible new product line	As needed and requested
Diane Buswell	Company- wide budget analysis	Revenues, expenses, and net income compared to the budgeted amounts for each	Monthly
Deb Welch	Purchasing History	List of items purchased and most recent cost for each item	Monthly or available on-
Bill Johnson	Sales Summary	Sales by product line and by customer	Monthly or weekly
Dave Thill	Cost of Production Report	Direct materials, direct labor, and manufacturing overhead costs assigned to each product line	Monthly or weekly
Rick Thrune	Cost of Production Report for Composite Kayaks	Detailed direct material and direct labor costs for the composite kayaks	Weekly

### **CD1 (Continued)**

(c) When Diane Buswell, controller for Current Designs, reviewed the accounting records for a recent period, she noted the following items. Classify each item as a product cost or a period cost. If a cost is a product cost, note if it is a direct materials, direct labor, or manufacturing overhead item.

		Product Costs			Period
Payee	Purpose	Direct	Direct	Manufacturing	Costs
	-	Materials	Labor	Overhead	
Winona Agency	Property insurance for				
	the manufacturing plant			\$3,200	
Bill Johnson	Payroll-payment to				
(sales manager)	sales manager				\$1,700
Xcel Energy	Electricity for				
	manufacturing plant			450	
Winona Printing	Price lists for salespeople				85
Jim Kaiser (sales	Sales commissions				
representative)					1,250
Dave Thill (plant	Payroll-payment to				
manager)	plant manager			1,450	
Dana Schultz (kayak	Payroll-payment to				
assembler)	kayak assembler		\$760		
Composite One	Bagging film used when				
	kayaks are assembled. It				
	is discarded after use.			260	
Fastenal	Shop supplies-brooms,				
	paper towels, etc.			890	
Ravago	Polyethylene powder				
	which is the main				
	ingredient for the				
	rotational molded kayaks	\$3,170			
Winona County	Property taxes on				
	manufacturing plant			5,480	
North American	Kevlar® fabric for				
Composites	composite kayaks	4,930			
Waste Management	Trash disposal for the				
	company office building				660
None	Journal entry to record				
	depreciation of				
	manufacturing equipment			4,540	
Totals		\$8,100	\$760	\$16,270	\$3,695

LO1, 2 BT: AN Difficulty: Moderate TOT: 60 min. AACSB: Analytic AICPA FC: Measurement IMA: Cost Management, Performance Measurement

#### **CT 1-1 DECISION-MAKING ACROSS THE ORGANIZATION**

### **Ending Raw Materials Inventory**

Beginning raw materials + Raw materials purchased

- = Raw materials available for use
- **= \$19,000 + \$365,000 = \$384,000**

Raw materials available for use – Ending raw materials inventory

= Direct materials used

\$384,000 - Ending raw materials inventory = \$350,000

Ending raw materials inventory = \$384.000 - \$350.000 = \$34.000

(\$19,000 + \$365,000 - \$350,000 = \$34,000)

(Beg. raw mat. + Raw mat. purch. - DM used = End. raw mat.)

### **Ending Work in Process Inventory**

Direct materials + Direct labor + Manufacturing overhead

- = Total manufacturing costs
- $= $350,000 + $250,000 + ($250,000 \times 60\%) = $750,000$

Beginning work in process inventory + Total manufacturing costs

- = Total cost of work in process
- **= \$25,000 + \$750,000 = \$775,000**

Cost of goods manufactured + Beginning finished goods inventory

= Cost of goods available for sale

Cost of goods manufactured + \$38,000 = \$770,000

Cost of goods manufactured = \$770.000 - \$38.000 = \$732.000

Total cost of work in process – Ending work in process inventory

= Cost of goods manufactured

\$775,000 - Ending work in process inventory = \$732,000

Ending work in process inventory = \$775,000 - \$732,000 = \$43,000

 $[(\$25,000 + (\$350,000 + \$250,000 + (\$250,000 \times 60\%)) = \$775,000); (\$770,000 - \$38,000 = \$732,000);$ (\$775,000 - \$732,000 = \$43,000)

[(Beg. WIP + (DM + DL + (DL x MOH rate)) = Tot. cost in WIP); (Cost of gds. avail. for sale – Beg. fin. gds. = COGM); (Tot. cost in WIP - COGM = End. WIP)]

# **Ending Finished Goods Inventory**

Sales – Cost of goods sold = Gross profit

1,240,000 - Cost of goods sold = 1.240.000 X 40%

Cost of goods sold = \$1,240,000 - \$496,000 = \$744,000

## CT1-1 (Continued)

Cost of goods available for sale - Ending finished goods inventory = Cost of goods sold \$770,000 - Ending finished goods inventory = \$744,000 Ending finished goods inventory = \$770,000 - \$744,000 = \$26,000

LO3 BT: AN Difficulty: Moderate TOT: 40 min. AACSB: Analytic AICPA FC: Reporting IMA: Reporting Since the questions were fairly open-ended, the following are only suggested results. The class may be able to think of others, or of more items for each one.

(a) Jason Dennis Needs information on sales, perhaps by salesper-

son and by territory.

Peggy Groneman Needs cost information for her department.

Dave Marley Needs all manufacturing accounting information.

Kevin Carson Needs product cost information.

Sally Renner Needs information on component costs and costs

for her department.

(b) Jason Dennis Income statement.

Peggy Groneman None.

Dave Marley All.

Kevin Carson Income statement and cost of goods manufactured

schedule.

Sally Renner None.

(c) Jason Dennis Sales by Territory—Detailed information, possibly

by product line, issued daily or weekly.

Peggy Groneman Cost of Computer Programs—Accumulated cost

incurred for each major program used including maintenance and updates of program, issued

monthly.

Dave Marley Cost of Preparing Reports—Detailed analysis of all

reports provided, their frequency, time, and estimated

cost to prepare, issued monthly.

Kevin Carson Cost of Product—Detailed cost by product line,

including a comparison with estimated costs for that product. Issued as each batch of production

is completed.

Sally Renner Cost of Product Design—Accumulated total costs

of each new product, issued at end of each project.

LO3 E Manag	T: AN Difficulty: Moderate TOT: 40 lement, Performance Meaurement	min. AACSB: Analytic AICPA FC: Reporting IM	IA: Cost
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#### **REAL-WORLD FOCUS**

- (a) The IMA has more than 85,000 members. These members include business leaders, managers, and decision makers in accounting and finance.
- (b) Student and Associate members receive most of the benefits of Regular membership at a significant savings.
  - Unique access to the professional designation, the Certified Management Accountant (CMA)
  - Specialized learning opportunities
  - Educational assistance, grants, educational competitions
  - Around-the-Clock Networking
  - Career management resources
- (c) The answer to this question will vary by school.

LO N/A BT: K Difficulty: Easy TOT: 20 min. AACSB: Technology AICPA PC: Communication IMA: None

#### **COMMUNICATION ACTIVITY**

Ms. Shelly Phillips President Phillips Company

### **Dear Shelly:**

As you requested, I corrected the income statement for October from the information you gave me. The corrected statement is enclosed and it shows that you actually earned net income of \$2,000 for October. I also noticed that you did not have a cost of goods manufactured schedule, so I prepared one for you.

The income statement your assistant accountant prepared was not correct for two primary reasons. First, product costs were not separated from selling and administrative expenses. Second, and more importantly, the reported net loss did not reflect changes in inventories. This had the effect of treating these costs as expenses rather than assets. A reconciliation of the reported net loss of \$23,000 to net income of \$2,000 is as follows:

Net loss as reported			
Increase (decrease) in inventories			
Raw materials (\$29,000 - \$18,000)	\$11,000		
Work in process (\$14,000 - \$20,000)	(6,000)		
Finished goods (\$50,000 - \$30,000)	20,000		
Total increase		<b>25,000</b>	
Net income as corrected		\$ 2,000	

The changes in raw materials and work in process inventories are reported in the cost of goods manufactured schedule. You will see, for example, that the cost of direct materials used was \$253,000, not \$264,000 as reported by your accountant in the income statement. The difference is the change in raw materials inventories. Similarly, you will see that the \$6,000 decrease in work in process inventories increases total manufacturing costs of \$575,800 to produce cost of goods manufactured of \$581,800.

The change in finished goods inventories is reported in the income statement. Notice that the change of \$20,000 is subtracted from cost of goods manufactured of \$581,800 to produce cost of goods sold of \$561,800.

### CT 1-4 (Continued)

I have also modified the form of the income statement to recognize the distinction between product costs (cost of goods sold) and period costs (operating expenses) as required by generally accepted accounting principles.

Thanks for letting me help. If I can be of further assistance, don't hesitate to call. I hope you find a replacement for your controller soon.

### Sincerely,

LO3 BT: AN Difficulty: Moderate TOT: 15 min. AACSB: Analytic AICPA FC: Reporting IMA: Reporting

- (a) The stakeholders in this situation are:
  - The users of Newton Industries' financial statements.
  - Steve Morgan, controller.
  - The vice-president of finance.
  - The president of Newton Industries.
- (b) The ethical issues in this situation pertain to the adherence to sound and acceptable accounting principles. Intentional violation of generally accepted accounting principles in order to satisfy a practical short-term personal or company need and thus create misleading financial statements would be unethical. Selecting one acceptable method of accounting and reporting among other acceptable methods is not necessarily unethical.
- (c) Ethically, the management of Newton Industries should be trying to report the financial condition and results of operations as fairly as possible; that is, in accordance with GAAP. Steve should inform management what is acceptable accounting and what is not. The basic concept to be supported in this advertising cost transaction is matching costs and revenues. Normally, advertising costs are expensed in the period in which they are incurred because it is very difficult to associate them with specific revenues.

LO2, 3 BT: E Difficulty: Moderate TOT: 20 min. AACSB: Ethics AICPA FC: Reporting AICPA PC: professional Demeanor, Communication IMA: Business Applications, Reporting

#### **ALL ABOUT YOU**

Student responses will vary. We have provided some basic examples that may represent common responses.

- (a) Individuals must often make purchase decisions which involve choosing between an item that has a more expensive initial purchase price, but is expected to either last longer, or provides some form of cost savings. The question that the individual faces is whether the cost savings or additional benefit justifies the additional initial cost. For example, more expensive dishwashers and refrigerators also tend to be more energy efficient. The labels on these appliances provide information regarding the energy savings which can be used to make a break-even evaluation.
- (b) In order to increase control over their financial situation and reduce the probability of financial hardship, all people should prepare personal budgets. Preparation of a personal budget requires the individual to plan for the future and to prioritize expenditures.
- (c) Companies employ the balanced scorecard as a mechanism to ensure that their financial goals are consistent with their efforts. Use of the balanced scorecard requires clear articulation of goals, priorities, and strategies. By employing these same techniques in their everyday life, individuals can be better assured that they will expend effort on those things that really matter to them, rather than wasting efforts on less important distractions.
- (d) Capital budgeting involves financial evaluation of long-term assets. Companies routinely make capital budgeting decisions, but so do individuals. The purchase of a home or car is a decision that has implications for your finances for many subsequent years. Buying a house or car is a very personal decision, influenced by many personal, nonfinancial, preferences. However, these decisions should also be subjected to a financial evaluation using capital budgeting techniques to ensure that the choice makes good economic sense.

LO N/A BT: C Difficulty: Moderate TOT: 25 min. AACSB: None AICPA FC: Measurement IMA: Cost Management, Budget Preparation Performance Measurement

### CT 1-7 CONSIDERING YOUR COSTS AND BENEFITS

Discussion guide: This is a difficult decision. While the direct costs of outsourced tax return preparation may in fact be lower, you must also consider other issues: Will the accuracy of the returns be as high? Will your relationships with your customers suffer due to the loss of direct contact? Will customers resent having their personal information shipped overseas? While you may not want to lay off six employees, you also don't want to put your firm at risk by not remaining competitive. Perhaps one solution would be to outsource the most basic tasks, and then provide training to the six employees so they can perform higher-skilled services such as tax planning. Many of the techniques that you learn in the remaining chapters of this text will help you evaluate the merits of your various options.

LO2 BT: E Difficulty: Moderate TOT: 25 min. AACSB: Analytic AICPA FC: Measurement AICPA PC: Communication IMA: Cost management