a general ledger account. Assume Apple's subsidiary records for 2020 contain the following data:

1.  Net delivered cost of materials purchased was $49,300.
2.  The cost of direct materials used in production was $44,400.
3.  Direct labor totaled $17,500.
4.  Manufacturing overhead consists of the following:

| | |
|---|---:|
| Indirect materials . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $  5,000 |
| Indirect labor. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 4,000 |
| Various costs . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 62,500 |
| Year-end adjustments. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $36,159* |
| | $107,659 |

*This is composed of $4,000 for manufacturing supplies and $32,159 for depreciation on factory machinery.

Based on this information, assume Apple records the following entries for 2020:

1.  Acquisition of materials

| | | |
|---|---:|---:|
| Materials inventory | 49,300 | |
|     Accounts payable | | 49,300 |
|     *To record the delivered cost of materials purchased.* | | |

2.  Use of direct materials and indirect materials

| | | |
|---|---:|---:|
| Work-in-process inventory | 44,400 | |
| Manufacturing overhead | 5,000 | |
|     Materials inventory | | 49,400 |
|     *To record the transfer of direct materials ($44,400) to the work-in-process inventory and the transfer of indirect materials ($5,000) to manufacturing overhead.* | | |

3.  Incurrence of factory payroll

| | | |
|---|---:|---:|
| Work-in-process inventory | 17,500 | |
| Manufacturing overhead | 4,000 | |
|     Wages payable | | 21,500 |
|     *To record the factory payroll as direct labor ($17,500) to the work-in-process inventory and as indirect labor ($4,000) to manufacturing overhead.* | | |

4.  Incurrence of manufacturing overhead costs during year

| | | |
|---|---:|---:|
| Manufacturing overhead | 62,500 | |
|     Accounts payable or cash | | 62,500 |
|     *To record various factory costs incurred during the year as manufacturing overhead.* | | |

5.  Recognition of certain manufacturing overhead costs with year-end adjustments

| | | |
|---|---:|---:|
| Manufacturing overhead | 36,159 | |
|     Manufacturing supplies | | 4,000 |
|     Accumulated depreciation—factory machinery | | 32,159 |
|     *To record cost of supplies used for and depreciation on factory machinery.* | | |

## DATA ANALYTICS, DATA VISUALIZATION, AND EXCEL ACTIVITIES

**Data Analytics, Data Visualization, and Excel Activities** are available in myBusinessCourse. These assignments develop Excel, Tableau, and Data Analytics skills, which will enhance students' career readiness. These exercises are assignable and auto graded by MBC. For an overview of data analytics, see the appendix at the end of this book.

## EXERCISES—SET A

**LO1** **E2-1A.** **Cost Classification** Classify each of the following costs relative to the cost object "client project" for a CPA firm that specializes in audit:

| | Product or Period | Variable, Fixed, or Mixed | Direct or Indirect |
|---|---|---|---|
| Staff auditor salaries. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |
| Receptionist salary . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |
| Depreciation on staff auditor laptop computers . . . . . . . . . . . | | | |
| Health insurance for administrative staff. . . . . . . . . . . . . . . . | | | |
| Subscription to cloud backup service for project files. . . . . . . | | | |
| Office lease expense . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |
| Travel to client location . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |

**LO1** **E2-2A.** **Cost Classification** Classify each of the following costs relative to the cost object "customer" for a clothing retailer:

| | Product or Period | Variable, Fixed, or Mixed | Direct or Indirect |
|---|---|---|---|
| Salesperson wages . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |
| Store manager salary . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |
| Depreciation on furniture and fixtures . . . . . . . . . . . . . . . . . . | | | |
| Cost of merchandise . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |
| Online advertising. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |
| Cost of discount coupon . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |
| Store lease expense . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |

**LO2, 3** **E2-3A.** **Product Cost Flows** Complete the following T-accounts:

**Materials Inventory**

| | |
|---|---|
| 320 | |
| ? | ? |
| | 18,120 |
| 250 | |

**Finished Goods Inventory**

| | |
|---|---|
| 1,500 | |
| ? | |
| 1,200 | |

**Wages Payable**

| | |
|---|---|
| | 9,000 |
| | 300 |

**Work-in-Process Inventory**

| | |
|---|---|
| 1,000 | ? |
| ? | |
| 9,000 | |
| ? | |
| 500 | |

**Manufacturing Overhead**

| | |
|---|---|
| 50 | ? |
| ? | |
| 18,000 | |
| 4,500 | |
| | 0 |

**Cost of Goods Sold**

| | |
|---|---|
| ? | |

# EXERCISES—SET B

**E2-1B. Cost Classification** Classify each of the following costs relative to the cost object "patient" for a medical office:
LO1

| | Product or Period | Variable, Fixed, or Mixed | Direct or Indirect |
|---|---|---|---|
| Nurse salaries. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |
| Receptionist salary . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |
| Depreciation on exam room computers . . . . . . . . . . . . . . . . | | | |
| Health insurance for administrative staff. . . . . . . . . . . . . . . | | | |
| Subscription to patient management software service . . . . . . | | | |
| Office lease expense . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |
| Gloves, swabs, and other medical supplies . . . . . . . . . . . . . | | | |

**E2-2B. Cost Classification** Classify each of the following costs relative to the cost object "customer" for a new car dealer:
LO1

| | Product or Period | Variable, Fixed, or Mixed | Direct or Indirect |
|---|---|---|---|
| Salesperson wages . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |
| Dealership manager salary . . . . . . . . . . . . . . . . . . . . . . . . | | | |
| Depreciation on showroom furniture. . . . . . . . . . . . . . . . . . | | | |
| Cost of automobiles . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |
| Online advertising. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |
| Cost of new car prep . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |
| Showroom lease expense . . . . . . . . . . . . . . . . . . . . . . . . . . | | | |

**E2-3B. Product Cost Flows** Complete the following T-accounts:
LO2, 3

**Materials Inventory**

| | |
|---|---|
| ? | |
| 20,000 | ? |
| | 19,900 |
| 300 | |

**Finished Goods Inventory**

| | |
|---|---|
| 5,000 | |
| ? | |
| 3,000 | |

**Wages Payable**

| | |
|---|---|
| | 15,000 |
| | ? |

**Work-in-Process Inventory**

| | |
|---|---|
| 2,000 | ? |
| ? | |
| ? | |
| 32,000 | |
| 5,000 | |

**Manufacturing Overhead**

| | |
|---|---|
| 300 | ? |
| ? | |
| 27,000 | |
| 3,900 | |
| | 0 |

**Cost of Goods Sold**

| | |
|---|---|
| 65,900 | |

**E2-4B. Prime Cost and Conversion Cost** Benton Engineering Services Company incurred the following during the year:
LO2

SERVICE AND MERCHANDISING

| | |
|---|---|
| Direct labor . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $ 60,000 |
| Overhead . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 110,000 |
| Selling expenses . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 56,000 |
| Administrative expenses. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 95,000 |

Calculate prime cost and conversion cost for Benton Engineering Services Company.

# ANSWERS TO SELF-STUDY QUESTIONS:

1. c   2. d   3. c   4. a   5. c   6. c   7. c   8. c

# YOUR TURN! SOLUTIONS

## Solution 10.1

| | |
|---|---|
| Budgeted returns . . . . . . . . . . . . . . . . . . . . . . . . | 750 |
| Actual returns . . . . . . . . . . . . . . . . . . . . . . . . . . | 800 |
| Returns processed variance. . . . . . . . . . . . . . . . | [(50) F] |

| | Actual Results for 800 Returns Processed | Budget Based on 750 Returns | Variances |
|---|---|---|---|
| Revenue . . . . . . . . . . . . . . . . . . . . . . | $80,000 | $75,000 | $ 5,000 F |
| Variable costs . . . . . . . . . . . . . . . . . . | 36,000 | 37,500 | [1,500 F] |
| Fixed costs . . . . . . . . . . . . . . . . . . . . . | 12,500 | 12,000 | 500 U |
| Net income . . . . . . . . . . . . . . . . . . . . . | $31,500 | $25,500 | [$ 6,000 F] |

## Solution 10.2

| | Actual Results | Flexible Budget | Variance |
|---|---|---|---|
| Sales units . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 100,000 | 100,000 | |
| Sales dollars. . . . . . . . . . . . . . . . . . . . . . . . . . . . | $190,000 | $200,000 | [$10,000 U] |
| Variable costs . . . . . . . . . . . . . . . . . . . . . . . . . . | 125,000 | 120,000 | 5,000 U |
| Fixed costs . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 50,000 | 45,000 | 5,000 U |
| Operating income . . . . . . . . . . . . . . . . . . . . . . . . | $ 15,000 | $ 35,000 | [$20,000 U] |

## Solution 10.3

PACCAR Trucks segment, Parts segment, and Financial Services segment.

## Solution 10.4

| | |
|---|---|
| Revenue . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $600,000 |
| Traceable departmental expenses: | |
|     Direct materials. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $30,000 |
|     Direct labor . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 25,000 |
|     Other traceable expenses. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 40,000 |
| Department contribution. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $505,000 |
| **Common expenses**. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | **155,000** |
| Departmental operating income . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $350,000 |