

Chapter 1 – Managerial Accounting and Cost Concepts

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Exercise 1-4

Java Express operates a number of espresso coffee stands in busy suburban malls. The fixed weekly expense of a coffee stand is \$1,500 and the variable cost per cup of coffee served is \$0.19.

Required:

Estimate the total costs and average cost per cup of coffee at the indicated levels of activity for a coffee stand. Round off the cost of a cup of coffee to the nearest cent.

	<u>Cups of Coffee Served in a</u> <u>Week</u>		
	<i>3,700</i>	<i>3,800</i>	<i>3,900</i>
Fixed cost	\$1,500	\$1,500	\$1,500
Variable cost	<u>703</u>	<u>722</u>	<u>741</u>
Total cost	<u>\$2,203</u>	<u>\$2,222</u>	<u>\$2,241</u>
Average cost per cup of coffee served	<u>\$ 0.60</u>	<u>\$ 0.58</u>	<u>\$ 0.57</u>

Exercise 1-6

Otsego, Inc., is a merchandiser that provided the following information:

Number of units sold	12,000
Selling price per unit	\$25
Variable selling expense per unit	\$2.50
Variable administrative expense per unit	\$2
Total fixed selling expense	\$16,000
Total fixed administrative expense	\$17,000
Merchandise inventory, beginning balance	\$25,000
Merchandise inventory, ending balance	\$18,000
Merchandise purchases	\$101,000

Required:

1. Prepare a traditional income statement.
2. Prepare a contribution format income statement.

Requirement 1:

Prepare a traditional income statement.

Otsego, Inc.**Traditional Income Statement**

Sales (\$25 per unit X 12,000 units)	\$46,000	\$ 300,000
Cost of goods sold (\$25,000 + 101,000 - 18,000)		<u>108,000</u>
Gross margin		192,000
Selling and administrative expenses:		
Selling expenses ((\$2.50 per unit X 12,000 units) + \$16,000)		
Administrative expenses ((\$2 per unit X 12,000 units) + \$17,000)	<u>41,000</u>	<u>87,000</u>
Net operating income		<u>\$ 105,000</u>

Requirement 2:

Prepare a contribution format income statement.

Otsego, Inc.**Contribution Format Income Statement**

Sales (\$25 per unit X 12,000 units)

\$ 300,000

Variable expenses:

Cost of goods sold ($\$25,000 + 101,000 - 18,000$)

\$ 108,000

Selling expenses (\$2.50 per unit X 12,000 units)

30,000

Administrative expenses (\$2 per unit X 12,000 units)

24,000162,000

Contribution margin

138,000

Fixed expenses:

Selling expenses

16,000

Administrative expenses

17,00033,000

Net operating income

\$ 105,000

Exercise 1-11

Hough Company manufactures and sells a single product. A partially completed schedule of the company's total and per unit costs over a relevant range of 80,000 to 120,000 units produced and sold each year is given below:

	<u>Units produced and sold</u>		
	<u>80,000</u>	<u>100,000</u>	<u>120,000</u>
Total costs:			
Variable costs	\$240,000		
Fixed costs	<u>320,000</u>		
Total costs	<u>\$560,000</u>		
Cost per unit:			
Variable cost			
Fixed cost			
Total cost per unit			

Required:

1. Complete the schedule of the company's total and unit costs.
2. Assume that the company produces and sells 110,000 units during the year at the selling price of \$6.50 per unit. Prepare a contribution format income statement for the year.

Requirement 1:

Complete the schedule of total costs and unit costs.

	<u>Units produced and sold</u>		
	<u>80,000</u>	<u>100,000</u>	<u>120,000</u>
Total costs:			
Variable costs	\$240,000	\$300,000	\$360,000
Fixed costs	<u>320,000</u>	<u>320,000</u>	<u>320,000</u>
Total costs	<u>\$560,000</u>	<u>\$620,000</u>	<u>\$680,000</u>
Cost per unit:			
Variable cost	\$3.00	\$3.00	\$3.00
Fixed cost	<u>4.00</u>	<u>3.20</u>	<u>2.67</u>
Total cost per unit	<u>\$7.00</u>	<u>\$6.20</u>	<u>\$5.67</u>

Variable cost per unit = Total variable cost/Number of units

Variable cost per unit = \$240,000/80,000 units

Variable cost per unit = \$3.00/unit

Requirement 2:

Assume that the company produces and sells 110,000 units during the year at the selling price of \$6.50 per unit. Prepare a contribution format income statement for the year.

Hough Company
Contribution Format Income Statement
For the year

Sales (110,000 units × \$6.50 per unit)	\$715,000
Variable expenses (110,000 units × \$3.00 per unit)	<u>330,000</u>
Contribution margin	385,000
Fixed expenses	<u>320,000</u>
Net operating income	<u><u>\$ 65,000</u></u>

Exercise 1-15

Maui Mike's is a large retailer of surfboards. The company assembled the information shown below for the quarter ended May 31:

	Amount
Total sales revenue	\$750,000
Selling price per unit	\$500
Variable selling expense per unit	\$40
Variable administrative expense per unit	\$15
Total fixed selling expense	\$125,000
Total fixed administrative expense	\$100,000
Merchandise inventory, beginning balance	\$65,000
Merchandise inventory, ending balance	\$85,000
Merchandise purchases	\$295,000

Required:

1. Prepare a traditional income statement for the quarter ended May 31.
2. Prepare a contribution format income statement for the quarter ended May 31.
3. What was the contribution toward fixed expenses and profits for each surfboard sold during the quarter? (State this figure in a single dollar amount per surfboard.)

Requirement 1:

Prepare a traditional income statement.

Maui Mike's**Traditional Income Statement**

Sales ($\$750,000 / \$500 = 1,500$ units)		\$ 750,000
Cost of goods sold ($\$65,000 + 295,000 - 85,000$)		<u>275,000</u>
Gross margin		475,000
Selling and administrative expenses:		
Selling expenses ($(\$40 \text{ per unit} \times 1,500 \text{ units}) + \$125,000$)	\$185,000	
Administrative expenses ($(\$15 \text{ per unit} \times 1,500 \text{ units}) + \$100,000$)	<u>122,500</u>	<u>307,500</u>
Net operating income		<u>\$ 167,500</u>

Requirement 2: Prepare a contribution format income statement.

Requirement 3:

What was the contribution toward fixed expenses and profits for each surfboard sold during the quarter? (State this figure in a single dollar amount per surfboard.)

Maui Mike's
Contribution Format Income Statement

Sales ($\$750,000 / \$500 = 1,500$ units)

\$ 750,000

Variable expenses: Contribution margin: \$392,500

Cost of goods sold

\$ 275,000

boards sold 1,500

Selling expenses (\$4

60,000

Administrative expenses

CM per board: \$262

22,500

357,500

Contribution margin

392,500

Fixed expenses

Selling expenses

125,000

Administrative expenses

100,000

225,000

Net operating income

\$ 167,500