**12.18**

**CVP analysis-what-if questions; sales mix issue.**

Camden Metal Co. makes a single product that sells for $84,000 per unit. Variable costs are $54.00 per unit, and fixed costs total $120,000 per month.

**Required:**

1. Calculate the number of units that must be sold each month for the firm to break even.
2. Calculate operating income if 5,000 units are sold in a month.
3. Calculate operating income if the selling price is raised to $88 per unit, advertising expenditures are increased by $16,000 per month, and monthly unit sales volume becomes 5,200.
4. Assume that the firm adds another product to its product line and that the new product sells for $40 per unit, has variable costs of $28 per unit, and causes fixed expenses in total to increase to $150,000 per month. Calculate the firm’s operating income if 5,000 units of the original product and 3,000 units of the new product are sold each month. For the original product, use the selling price and variable cost data given in the problem statement.
5. Calculate the firm’s operating income if 4,000 units of the original product and 4,000 units of the new product are sold each month.
6. Explain why operating income is different in parts D and E, even though sales totaled 8,000 units in each case.