

### QUESTION

The following information is for Question 1. The company has a number of departments, each of which is a profit center. The company's total sales are \$1,000,000. The company's total variable costs are \$400,000. The company's total fixed costs are \$200,000. The company's total operating income is \$400,000. The company's total operating expenses are \$600,000. The company's total operating assets are \$1,000,000. The company's total operating liabilities are \$400,000. The company's total operating equity is \$600,000. The company's total operating income is \$400,000. The company's total operating expenses are \$600,000. The company's total operating assets are \$1,000,000. The company's total operating liabilities are \$400,000. The company's total operating equity is \$600,000.

Department	Sales	Variable Costs	Fixed Costs	Operating Income
Department A	200,000	80,000	40,000	80,000
Department B	300,000	120,000	60,000	120,000
Department C	400,000	160,000	80,000	160,000
Department D	100,000	40,000	20,000	40,000

QUESTION 1: Calculate the contribution margin ratio for each department.

### ANSWER

The contribution margin ratio is calculated as follows:

$$\text{Contribution Margin Ratio} = \frac{\text{Sales} - \text{Variable Costs}}{\text{Sales}}$$

For Department A:

$$\text{Contribution Margin Ratio} = \frac{200,000 - 80,000}{200,000} = \frac{120,000}{200,000} = 0.60$$

For Department B:

$$\text{Contribution Margin Ratio} = \frac{300,000 - 120,000}{300,000} = \frac{180,000}{300,000} = 0.60$$

For Department C:

$$\text{Contribution Margin Ratio} = \frac{400,000 - 160,000}{400,000} = \frac{240,000}{400,000} = 0.60$$

For Department D:

$$\text{Contribution Margin Ratio} = \frac{100,000 - 40,000}{100,000} = \frac{60,000}{100,000} = 0.60$$