

Numerical of Profit/Volume
Ratio

How to calculate contribution

Total Contribution:

$$\text{Contribution} = \text{Sales} - \text{Variable Cost} \quad \text{Or} \quad C = S - V$$

$$\text{Contribution} = \text{Fixed Cost} + \text{Profit} / (- \text{Loss})$$

$$\text{Contribution} = \text{Sales} \times \text{P/V Ratio}$$

Per Unit Contribution:

$$\text{Contribution per Unit} = \text{Sales per Unit} - \text{Variable Cost per Unit}$$

Q.1 Calculate “per unit” and “total contribution”:

Sales(in ₹)	40,000
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Sales (in units)	4,000
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Variable Cost (in ₹)	30,000
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Solution:

$$\begin{aligned}\text{Contribution} &= \text{Sales} - \text{Variable Cost} \\ &= 40,000 - 30,000 = ₹ 10,000\end{aligned}$$

$$\begin{aligned}\text{Contribution per Unit} &= \text{Sales per Unit} - \text{Variable Cost per Unit} \\ &= \frac{40,000}{4,000} - \frac{30,000}{4,000}\end{aligned}$$

Cont....

$$= \frac{40,000}{4,000} - \frac{30,000}{4,000}$$

$$= 10 - 7.5$$

$$= ₹ 2.5 \text{ per unit}$$

Q.2 Calculate Contribution from the following data:

- a) Sales ₹ 1,50,000, P/V ratio = 40%
- b) Fixed Cost ₹ 40,000, Profit ₹ 30,000
- c) Fixed Cost ₹ 50,000, Loss ₹ 20,000

Solution:

$$\begin{aligned} \text{a) Contribution} &= \text{Sales} \times \text{P/V Ratio} \\ &= 1,50,000 \times \frac{40}{100} \\ &= ₹ 60,000 \end{aligned}$$

$$\begin{aligned} \text{b) Contribution} &= \text{Fixed Cost} + \text{Profit} \\ &= 40,000 + 30,000 \\ &= ₹ 70,000 \end{aligned}$$

$$\begin{aligned} \text{c) Contribution} &= \text{Fixed Cost} - \text{Loss} \\ &= 50,000 - 20,000 \\ &= ₹ 30,000 \end{aligned}$$

To do activity

1 Calculate Contribution from the following data:

- a. Selling price per unit ₹ 10, variable cost per unit ₹ 7.
- b. Sales ₹ 4,00,000, P/V ratio 40%
- c. Fixed Cost ₹ 40,000, Profit ₹ 80,000
- d. Fixed Cost ₹ 60,000, Loss ₹ 10,000

[Ans. a. ₹ 3 per unit, b. ₹ 1,60,000, c. ₹ 1,20,000, d. ₹ 50,000]

Thank You