



Finding SP and CP

Understanding the Topic

To solve problems on profit and loss, we sometimes need to find the missing value: either the Selling Price (SP) or the Cost Price (CP).

Formulas to Find SP and CP

- $SP = CP + \text{Profit}$
- $SP = CP - \text{Loss}$
- $CP = SP - \text{Profit}$
- $CP = SP + \text{Loss}$

What to Check First

- Is it a profit or a loss?
- What two values are given?
- Use the correct formula based on the question.

Examples with Solutions

1. Example – Finding SP (Easy)

Question: $CP = ₹40$, Profit = ₹10. Find SP

Solution: $SP = CP + \text{Profit} = 40 + 10 = ₹50$

2. Example – Finding SP with Loss (Easy)

Question: $CP = ₹90$, Loss = ₹15. Find SP

Solution: $SP = CP - \text{Loss} = 90 - 15 = ₹75$

3. Example – Finding CP (Moderate)

Question: $SP = ₹120$, Profit = ₹20. Find CP

Solution: $CP = SP - \text{Profit} = 120 - 20 = ₹100$

4. Example – Finding CP with Loss (Moderate)

Question: $SP = ₹65$, Loss = ₹15. Find CP

Solution: $CP = SP + \text{Loss} = 65 + 15 = ₹80$

5. Example – Word Problem (Moderate)

Question: A book is sold for ₹150 at a profit of ₹30. What is the cost price?



Solution: $CP = SP - \text{Profit} = 150 - 30 = ₹120$

Summary Points

- SP is Selling Price, CP is Cost Price.
- $SP = CP + \text{Profit}$ when there is profit.
- $SP = CP - \text{Loss}$ when there is loss.
- $CP = SP - \text{Profit}$ when profit and SP are given.
- $CP = SP + \text{Loss}$ when loss and SP are given.
- Always read the question carefully to check if it's profit or loss.
- Use correct units like ₹ in all answers.
- These formulas help in solving shopping and business problems.
- Helpful in understanding how profit and loss work in real life.
- Practice improves speed and understanding of concept.