

10. A man sold a bicycle at 5% profit. He had sold it if the cost had been 30% less and the selling price ₹63 less, he would have made a profit at 30%. What was the cost price of the bicycle.

$$SP = (100 + 5) = ₹105$$

$$CP = \left(100 - \frac{30}{100} \times 100\right)$$

$$= ₹(100 - 30) = ₹70$$

$$\text{Profit} = 30\%$$

$$SP = \frac{(100 + \text{Profit})}{100} \times CP$$

$$= \frac{100 + 30}{100} \times 70 = \frac{170}{100} \times 70$$

$$= \frac{170 \times 70}{100}$$

$$= \frac{170 \times 70}{100} = ₹91$$

Difference between two selling prices

$$= 105 - 91 = ₹14$$

If the difference is 14 then C.P of the bicycle = ₹100

$$= ₹1 = \frac{₹100}{14}$$

$$₹63 = \frac{₹100}{14} \times 63$$

$$= \frac{₹100 \times 63}{14} = ₹50 \times 9 = ₹450$$