

CHAPTER 08**Comparing Quantities****Example:**

A cycle is marked at Rs. 3600 and sold for Rs. 3312. What is the discount and discount percentage?

Sol.

$$\text{Discount} = \text{Marked Price} - \text{Sale Price}$$

$$\text{Discount} = \text{Rs. } 3600 - \text{Rs. } 3312$$

$$\text{Discount} = \text{Rs. } 288$$

Since, discount is calculated on marked price for calculating the discount percentage we use marked price as the base.

On marked price of Rs. 3600, the discount is Rs. 288

On marked price of Rs. 100, how much will the discount be?

$$\text{Discount Percent} = \frac{\text{Discount}}{\text{M. P}} \times 100$$

$$\text{Discount Percent} = \frac{288}{3600} \times 100$$

$$\text{Discount Percent} = \frac{\overset{8}{\cancel{28,800}}}{\cancel{3600}}$$

$$\text{Discount} = 8\%$$

Example:

Arun bought a pair of skates at a sale where the discount given was 20%. If the amount he pays is Rs. 1,600, find the marked price.

Sol.

Selling Price = Rs. 1600

Discount = 20%

We know,

$$\text{M. P} = \frac{\text{S. P}}{\left(1 - \frac{\text{Discount}\%}{100}\right)}$$

$$\text{M. P} = \frac{1600}{\left(1 - \frac{20}{100}\right)}$$

$$\text{M. P} = \frac{1600}{4/5}$$

$$M. P = \frac{400}{1600} \times \frac{5}{4}$$

$$\therefore \text{Marked Price (M. P)} = \text{Rs. } 2000$$

Example:

I purchased a pair of shoes for Rs. 5,400 including 8% VAT. Find the price before VAT was added.

Sol.

Cost Price (C. P) = Rs. 5,400

VAT = 8%

$$\text{Original Price} = \frac{100}{100 + \text{Tax}\%} \times \text{C. P}$$

$$\text{Original Price} = \frac{100}{100 + 8} \times 5,400$$

$$\text{Original Price} = \frac{\begin{array}{r} 50 \\ 100 \\ \hline 108 \\ 54 \\ \hline 27 \end{array}}{\begin{array}{r} 100 \\ 2700 \\ \hline 5400 \end{array}} \times 5,400$$

Original Price = Rs. 5,000