

Class 7-Mathematics

Instructions for students: The notes provided must be copied to the Maths copy and then do the homework in the same copy.

Chapter 7

Percentage and its Applications

Part- 2

FINDING THE PERCENTAGE OF A GIVEN QUANTITY.

To find the percentage of a given quantity, change the percentage into fraction and multiply by the given quantity.

Example:

$$\begin{aligned} 25\% \text{ of } 200 &= \frac{25}{100} \times 200 \\ &= 50 \end{aligned}$$

EXPRESSING ONE QUANTITY AS THE PERCENTAGE OF ANOTHER QUANTITY

To express one quantity as percentage of another quantity,

$$\text{Percentage} = \left(\frac{\text{one quantity}}{\text{another quantity}} \times 100 \right) \%$$

FINDING PERCENTAGE INCREASE/DECREASE

$$\text{Percentage increase} = \left(\frac{\text{Increase in value}}{\text{Original value}} \times 100 \right) \%$$

$$\text{Percentage decrease} = \left(\frac{\text{Decrease in value}}{\text{Original value}} \times 100 \right) \%$$

Exercise 7.2

1.(v) Find 120% of ₹250

$$\begin{aligned} 120\% \text{ of } ₹250 &= \frac{120}{100} \times ₹250 = \frac{6}{5} \times ₹250 \\ &= 6 \times ₹50 = ₹300 \end{aligned}$$

4. (iii) Express 90 cm as a percentage of 4.5 m

$$\begin{aligned} 4.5 \text{ m} &= 4.5 \times 100 = 450 \text{ cm} \\ \text{Required percentage} &= \frac{90}{450} \times 100 \\ &= \frac{1}{5} \times 100 = 20\% \end{aligned}$$

$$\begin{aligned}
 7. \text{ Initial price of the shirt} &= ₹80 \\
 \text{Decreased price} &= ₹60 \\
 \text{Decrease in price} &= ₹80 - ₹60 = ₹20 \\
 \text{Percentage of decrease} &= \left(\frac{\text{Decrease in value}}{\text{Original value}} \times 100 \right) \% \\
 &= \frac{20}{80} \times 100 \\
 &= \frac{1}{4} \times 100 = 25\%
 \end{aligned}$$

$$\begin{aligned}
 8. \text{ Price of petrol in Mother's childhood} &= ₹1 \\
 \text{Price of petrol now} &= ₹65 \\
 \text{Increase in price} &= ₹65 - ₹1 = ₹64 \\
 \text{Percentage increase} &= \left(\frac{\text{Increase in value}}{\text{Original value}} \times 100 \right) \% \\
 &= \frac{₹64}{₹1} \times 100 \\
 &= 6400\%
 \end{aligned}$$

Home work: Solve Exercise 7.2 Questions 1 to 12 in the Maths copy in Maths copy.