



SpeedLabs

MATHS

ICSE 8th

TEEVRA EDUTECH PVT. LTD.

1. Convert each of the following into the fraction:

(i) 68%

(ii) $3\frac{1}{3}$

(iii) 224%

(iv) 0.05%

Ans. (i) $\frac{68}{100} = 0.68$

(ii) $\frac{10}{3 \times 100} = 0.033$

(iii) $\frac{224}{100} = 2.24$

(iv) $\frac{0.05}{100} = 0.0005$

2. Find the value of:

(i) 33% of Rs.50

(ii) $6\frac{2}{3}\%$ of 3m

(iii) $3\frac{1}{4}\%$ of 5 Liters

Ans. (i) 33% of Rs. 50 = $\left(\frac{33}{100} \times 50\right)$

(ii) $6\frac{2}{3}\%$ of 3m = $\frac{22}{3}\%$ of 3m = $\left(\frac{22}{3} \times \frac{3}{100}\right) = \frac{1}{5}$ m

(iii) $3\frac{1}{4}\%$ of 5 Liters = $\left(\frac{13}{14} \times \frac{5}{100}\right) = 0.1625$ liters = 162.5ml

3. Explain the Following:

(i) What percentage of Rs.9 in Rs.5?

(ii) What percentage of 32 m in 80m?

(iii) What percentage of 50kg in 65kg?

Ans. (i) Let x% of Rs. 9 = Rs. 5

$$\text{Then, } \frac{x}{100} \times 9 = 5 \text{ or } x = \frac{5 \times 100}{9} = 55\frac{5}{9}\%$$

(ii) Let $x\%$ $32m = 80m$

$$\text{Then, } \frac{x}{100} \times 32 = 80 \text{ or } x = \frac{80 \times 100}{32} = 250\%$$

(iii) Let $x\%$ of $50 \text{ kg} = 65 \text{ kg}$

$$\text{Then, } \frac{x}{100} \times 50 = 65 \text{ or } x = \frac{65 \times 100}{50} = 130\%$$

4. Explain the Following:

(i) If 8% of a number is 24 , find the Number.

(ii) If 7.25% of a number is 2.9 , find the Number.

(iii) If $6\frac{2}{3}\%$ of a number is 1 , find the Number.

Ans. (i) Let the number to be x

$$\text{Then, } \frac{8}{100} \times x = 24 \text{ or } x = 100 \frac{24}{8} = 300$$

(ii) Let the number to be x

$$\text{Then, } \frac{7.25}{100} \times x = 2.9 \text{ or } x = 40$$

(iii) Let the number to be x

$$\text{Then, } \frac{20}{3 \times 100} \times x = 1 \text{ or } x = 15$$

5. What Number Increase by 15% Becomes 276%

Ans. Let the number to be x

$$\text{Then, } x \left(1 + \frac{15}{100} \right) = 276 \text{ or } x = 240$$

6. What Number when Decrease by 8% Becomes 345%

Ans. Let the number to be x

$$\text{Then, } x \left(1 - \frac{8}{100} \right) = 345 \text{ or } x = 375$$

7. 36% of the students in a school is girls. If the number of boys is 1440 , find the total strength of the school.

Ans. Let the strength of the school x

$$\% \text{ of Boys} = (100 - 36)\% = 64\%$$

$$\text{Therefore } \frac{64}{100} \times x = 1440$$

$$\text{or } x = 2250$$

Therefore, the strength of the school = 2250 students

8. Geeta saves 18% of her monthly salary. If she spends Rs.10250 per month, what is her monthly salary?

Ans. Let the monthly salary be x Rs.

Geeta spends = $(100 - 18) \% = 82\%$ of her salary

$$\text{Then, } \frac{72}{100} \times x = 10250$$

Or x = Rs. 12500 Monthly Salary

9. In an Examination, a student secures 40% mark to pass. Raul gets 178 marks and fails by 32 marks. What are the maximum marks?

Ans. Let the Maximum Marks x

$$\text{Then } \frac{40}{100} \times x = 178 + 32 \text{ or } x = 525 \text{ Maximum Marks}$$

10. 8% of the students in a school remained absent on a day. If 1633 attended the school on that day, how many remained absent?

Ans. Let the total number of students in school be x

% of students attended the school = 92%

$$\text{Then, } \frac{92}{100} \times x = 1633 \text{ or } x = 1775 \text{ students}$$

$$\text{Therefore, the number of students absent } \frac{8}{100} \times 1775 = 142$$

11. On increasing the price of the article by 14%, it becomes Rs.1995. What was its original Price?

Ans. Let the original Price be x Rs.

$$\text{Then } x \left(1 + \frac{14}{100} \right) = 1995 \text{ or } x = 1750 \text{ Rs. Original Price}$$

12. Two candidates contest an election. One of them secured 58% votes and won the election by a margin of 2560 votes. How many votes were polled in all?

Ans. Let the total no. of votes polled be x

Then

$$\frac{58}{100} x - \frac{42}{100} x = 2560$$

$$0.16x = 2560$$

$$\text{or } x = 16000 \text{ votes}$$

13. In an examination, Preety scored 60 out of 75 in sciences, 84 out of 100 in mathematics, 36 out of 50 in Hindi and 30 out of 45 in English?

In which subject the performance is worst?

In which subject the performance is best?

What is her aggregate percentage of marks?

Ans. Let's first calculate % marks in each subject

$$\text{Science\%} = \frac{60}{75} \times 100 = 80\%$$

$$\text{Mathematics\%} = \frac{84}{100} \times 100 = 84\%$$

$$\text{Hindi \%} = \frac{36}{50} \times 100 = 72\%$$

$$\text{English\%} = \frac{30}{45} \times 100 = 66.67\%$$

Worst performance is in English

Best performance is in Math.

$$\text{Aggregate} = \frac{\text{total marks obtained}}{\text{total marks}} \times 100$$

$$\text{Aggregate} = \frac{60 + 84 + 36 + 30}{75 + 100 + 50 + 45} \times 100 = 77.78\%$$

14. The price of an article is increased by 25%. By how much % must this new price be decreased to return to its formal value?

Ans. Let the price of the article be x

$$\text{New price} = x \left(1 + \frac{25}{100} \right) = 1.25x$$

Let % to be decreased to restore it to formal value be y

$$\text{Then} = 1.25x \left(1 - \frac{y}{100} \right) = x$$

$$1.25 \left(1 - \frac{y}{100} \right) = 1 \text{ or } y = 20$$

Therefore, the new price must be decreased by 20%

15. The price of an article is reduced by 10% by how much this % value be increased to restore it to its formal value?

Ans. Let the value of the article be x

$$\text{New price} = x \left(1 - \frac{10}{100} \right) = 0.9x$$

Let us increase the price by y%

$$\text{Then} = 0.9x \left(1 + \frac{y}{100} \right) = x$$

$$90 + 0.9y = 100 \text{ or } y = 11.11\%$$