

Board – CBSE

Class – 7th

Topic – Percentage

Q.1 Find :6.5 % of 400

Ans. We have :

$$6.5\% \text{ of } 400 = \left(\frac{6.5}{100} \times 400\right) = \left(\frac{65}{10 \times 100} \times 400\right) = \left(\frac{65 \times 4}{10}\right) = \frac{260}{10} = 26$$

Q.2 Find the number whose 13% is 65.

Ans. Let x be the required number.

Then, 13% of x = 65

$$\Rightarrow \left(\frac{13}{100} \times x\right) \text{ of } = 65$$

$$\Rightarrow x = \left(65 \times \frac{100}{13}\right) = 500$$

Hence, the required number is 500.

Q.3 Find the number whose $6\frac{1}{4}$ % is 2.

Ans. Let x be the required number.

Then $\Rightarrow 6\frac{1}{4}$ % of x = 2

$$\Rightarrow \left(6\frac{1}{4} \% \times x\right) = 2$$

$$\Rightarrow \left(\frac{25}{400} \times x\right) = 2$$

$$\Rightarrow x = \left(2 \times \frac{400}{25}\right) = 32$$

Hence, the required number is 32.

Q.4 What percentage is Rs 15 of Rs 120?

Ans. Let x% of Rs 120 be Rs 15.

Then, Rs $\left(\frac{x}{100} \times 120\right) =$ Rs 15

$$\Rightarrow \left(\frac{6x}{5}\right) = 15$$

$$\therefore x = \left(\frac{1 \times 55}{6}\right)\% = \left(\frac{25}{20}\right)\% = 12.5\%$$

Hence, 12.5% of Rs 120 is Rs 15

Q.5 Rupesh secures 495 marks out of 750 in his annual examination. Find the percentage of marks obtained by him.

Ans. Maximum marks of the examination = 750

Marks secured by Rupesh = 495

$$\text{Percentage of marks secured} = \left(\frac{495}{750} \times 100 \right) \% = 66\%$$

Hence, Rupesh scored 66% in the examination.

Q.6 The excise duty on a certain item has been reduced to Rs 760 from Rs 950. Find the reduction per cent in the excise duty on that item.

Ans. Original excise duty on the item = Rs 950

Amount reduced on excise duty = Rs (950 – 760) = Rs 190

$$\therefore \text{Reduction percent} = \left(\frac{\text{Reduction amount}}{\text{Original value}} \times 100 \right)$$

$$= \left(\frac{190}{950} \times 100 \right) = 20$$

Hence, the excise duty on that item is reduced by 20%.

Q.7 An ore contains 12% copper. How many kilograms of the ore are required to get 69 kg of copper?

Ans. Let x kg be the amount of the required ore.

Then, 12% of x kg = 69 kg

$$\Rightarrow \left(\frac{12}{100} \times x \right) \text{kg} = 69 \text{ kg}$$

$$\Rightarrow x = \left(\frac{69 \times 100}{12} \right) \text{kg} = 575$$

Hence, 575 kg of ore is required to get 69 kg of copper.

Q.8 The value of a machine depreciated 10% annually. If its present value is Rs 25000, what will be its value after 1 year?

Ans. Present value of the machine = Rs 25000

Decrease in its value after 1 year = 10% of Rs 25000

$$= \text{Rs} \left(\frac{10}{100} \times 25000 \right) = \text{Rs } 2500$$

Depreciated value after 1 year = Rs (25000-2500) =Rs 22500

Hence, the value of the machine after 1 year will be Rs 22500

Q.9 In an examination it is required to get 36% to pass. A student gets 145 marks and fails by 35 marks. The maximum marks are

Ans. Let x be maximum marks.

$$\text{Pass marks} = (145 + 35) = 180$$

$$\therefore 36\% \text{ of } x = 180$$

$$\Rightarrow \left(\frac{36}{100} \times x\right) = 180$$

$$\Rightarrow x = \left(\frac{180 \times 100}{36}\right) = (5 \times 100) = 500$$

Hence, maximum marks = 500

Q.10 Convert: $\frac{4}{5}$ into a percentage

Ans. We have :

$$\frac{4}{5} = \left(\frac{4}{5} \times 100\right)\% = (4 \times 20)\% = 80\%$$

Q.11 If 35% of a number added to 39 is the number itself, the number is

Ans. Let the number be x .

According to question, we have:

$$(35\% \text{ of } x) + 39 = x$$

$$\Rightarrow \left(\frac{35}{100} \times x\right) + 39 = x \Rightarrow \left(\frac{7x}{20}\right) + 39 = x$$

$$\Rightarrow \left(x - \frac{7x}{20}\right) = 39$$

$$\Rightarrow \left(\frac{20x - 7x}{20}\right) = 39$$

$$\Rightarrow \left(\frac{13x}{20}\right) = 39$$

$$\therefore x = \left(\frac{39 \times 20}{13}\right) = 60$$

Hence, the required number is 60.

Q.12 Convert each of the following fraction into a percentage: $\frac{9}{20}$

Ans. We have :

$$\frac{9}{20} = \left(\frac{9}{20} \times 100\right)\% = (9 \times 5)\% = 45\%$$

Q.13 Convert each of the following decimals into a percentage:0.6

Ans. We have

$$0.6 = (0.6 \times 100)\% = 60\%$$