

RD Sharma
Solutions

Class 7

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⑦

Exercise 11.5

Q.1 What percent of

(i) 24 is 6

(ii) Rs 125 of Rs 10

(iii) 4 km is 160 metres

(iv) Rs 8 is 25 Paise?

(v) 2 days in 8 hours

(vi) 1 litre is 175 ml

Solution

(i)

$$\text{Percent} = \frac{6}{24} \times 100 = 25\%$$

(ii)

$$\text{Percent} = \frac{10}{125} \times 100 = 8\%$$

(iii)

$$\because 4 \text{ km} = 4 \times 1000 = 4000 \text{ metres}$$

$$\therefore \text{Percentage} = \frac{160}{4000} \times 100 = 4\%$$

(iv)

$$\underline{\text{Rs 8 is 25 Paise}}$$

$$\therefore \text{Rs 1} = 100 \text{ Paise}$$

$$\therefore \text{Rs 8} = 8 \times 100 = 800 \text{ Paise}$$

$$\text{required percentage} = \frac{25}{800} \times 100 = \frac{25}{8} \% = 3\frac{1}{8} \%$$

(v)

$$\underline{2 \text{ days in 8 hours}}$$

$$\therefore 1 \text{ day} = 24 \text{ hours.}$$

$$\therefore 2 \text{ days} = 2 \times 24 = 48 \text{ hours}$$

$$\text{Required \%} = \frac{8}{48} \times 100 = \frac{1}{6} \times 100 = \frac{50}{3} = 16\frac{2}{3} \%$$

(v) 1 litre is 175 ml

here 1 litre = 1000 ml

$$\text{Required \%} = \frac{175}{1000} \times 100 = \frac{175}{10} = \frac{35}{2} = 17\frac{1}{2} \%$$

Q.2 What percent is equivalent to $\frac{3}{8}$?

Solution: $\% = \frac{\frac{3}{8} \times 100}{1} = \frac{75}{2} = 37\frac{1}{2} \%$

Q.3 Find the following:

- (i) 8 is 4% of which number.
- (ii) 6 is 60% of which number.
- (iii) 6 is 30% of which number.
- (iv) 12 is 25% of which number.

Solution: (i) let 4% of $x = 8$

$$\Rightarrow \frac{4}{100} \times x = 8 \quad \Rightarrow \frac{1}{25} \times x = 8$$

$$\Rightarrow x = 25 \times 8 = 200.$$

(ii) let 60% of $x = 6$

$$\Rightarrow \frac{60}{100} \times x = 6 \quad \Rightarrow x = \frac{6 \times 100}{60} = 10$$

(iii) let 30% of $x = 6$

$$\Rightarrow \frac{30}{100} \times x = 6$$

$$\Rightarrow x = \frac{60}{3} = 20$$

(iv) let 25% of $x = 12$

$$\Rightarrow \frac{25}{100} \times x = 12$$

$$\Rightarrow x = \frac{12 \times 100}{25} = 48$$

Q4 Convert each of the following pairs into percentages and find out which is more?

(i) 25 marks out of 30, 35 marks out of 40

(ii) 100 runs scored off 110 balls, 50 runs scored off 55 balls.

Solution:

(i) 25 marks out of 30

$$\text{Percentage marks} = \frac{25}{30} \times 100 = \frac{5}{6} \times 100 = 83.33\%$$

35 marks out of 40

$$\text{Percentage marks} = \frac{35}{40} \times 100 = 87.5\%$$

$\therefore$ 35 marks out of 40 is more.

(11) 100 runs scored of 110 balls

$$\% \text{ score} = \frac{100}{110} \times 100 = 90.91\%$$

50 runs scored off 55 balls

$$\% \text{ score} = \frac{50}{55} \times 100 = 90.91\%$$

$\therefore$ both scores are same.

Q5 Find 20% more than Rs. 200

Solution: $\therefore 20\% \text{ of } 200 = \frac{20}{100} \times 200 = \text{Rs. } 40$

$$\begin{aligned} \text{Now } 20\% \text{ More than } 200 &= 200 + 40 \\ &= \text{Rs. } 240 \end{aligned}$$

Q6 Find 10% less than Rs. 150.

Solution: $10\% \text{ of } 150 = \frac{10}{100} \times 150 = \text{Rs. } 15$

$$\begin{aligned} 10\% \text{ less than Rs. } 150 &= \text{Rs. } 150 - \text{Rs. } 15 \\ &= \text{Rs. } 135 \end{aligned}$$