

RD SHARMA

Solutions

Class 7 Maths

Chapter 11

Ex 11.5

Q1. What per cent of

(i) 24 is 6?

$$\begin{aligned}\text{Required percentage} &= \frac{6}{24} \times 100 \\ &= \frac{100}{4} \\ &= 25\%\end{aligned}$$

Hence 6 is 25% of 24

(ii) Rs.125 is Rs.10?

$$\begin{aligned}\text{Required percentage} &= \text{Rs.} \left(\frac{10}{125} \times 100 \right) \\ &= \frac{1000}{125} \\ &= 8\%\end{aligned}$$

Hence Rs.10 is 8% of Rs.125

(iii) 4km is 160 metres?

$$\text{Required percentage} = \text{km} \left(\frac{160}{4} \times 100 \right)$$

$$1\text{km} = 1000\text{metres}$$

$$4\text{km} = 4000\text{metres}$$

$$\text{km} \left(\frac{160}{4000} \times 100 \right)$$

$$\frac{16000}{4000} = 4\%$$

Hence 160metres of 4km is 4%

(iv) Rs.8 is 25 paise?

We know that, Rs.1 = 100paise

Therefore Rs.8 = 800paise

$$\text{Required percentage} = \text{paise} \left(\frac{25}{800} \times 100 \right)$$

$$= \frac{25}{8} \%$$

$$= 3.125\%$$

Hence 25paise is 3.125% of Rs.8

(v) 2 days is 8 hours?

We know that,

1 day is 24 hours

$$\text{hour} = \frac{1}{24} \text{ day}$$

$$8 \text{ hours} = \frac{8}{24} \text{ day} = \frac{1}{3} \text{ day}$$

$$\text{Therefore required percentage} = \frac{1}{3} \times 100$$

$$= \frac{100}{3} \%$$

Hence 8 hours is $16\frac{2}{3}\%$ of 2 days

(vi) 1 litre is 175ml

We know that

1litre=1000ml

$$\text{Therefore required percentage} = \frac{175\text{ml}}{1\text{litre}}$$

$$= \frac{175\text{ml}}{1000\text{ml}} \times 100$$

$$= 17.5\%$$

Hence 175ml is 17.5% of 1 litre

Q2. What per cent is equivalent to $\frac{3}{8}$?

$$\frac{3}{8} \times 100$$

$$= \frac{300}{8}$$

$$= 37.5$$

Q3. Find the following:

(i) 8 is 4% of which number

let x be the required number. Then,

$$4\% \text{ of } x = 8$$

$$\left(\frac{4}{100} \times x\right) = 8$$

$$x = \frac{800}{4}$$

$$x = 200$$

(ii) 6 is 60% of which number

let x be the required number. Then,

$$60\% \text{ of } x = 6$$

$$\left(\frac{60}{100} \times x\right) = 6$$

$$x = \frac{600}{6}$$

$$x = 100$$

(iii) 6 is 30% of which number

let x be the required number. Then,

$$30\% \text{ of } x = 6$$

$$\left(\frac{30}{100} \times x\right) = 6$$

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

$$x = 20$$

(iv) 12 is 25% of which number

let x be the required number. Then,

$$25\% \text{ of } x = 12$$

$$\left(\frac{25}{100} \times x\right) = 12$$

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

$$x = 48$$

26

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

$$25 \text{ marks out of } 30 = \frac{25}{30} \times 100$$

$$= \frac{250}{3} \%$$

$$= 83.33\%$$

$$35 \text{ marks out of } 40 = \frac{35}{40} \times 100$$

$$= \frac{7}{8} \times 100\%$$

$$= 87.5\%$$

Therefore 35 marks out of 40(87.5%) is more than 25 marks out of 30

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

$$100 \text{ runs scored off } 110 \text{ balls} = \frac{100}{110} \times 100$$

$$= 90.91\%$$

$$50 \text{ runs scored off } 55 \text{ balls} = \frac{50}{55} \times 100$$

$$= 90.91\%$$

Both are same (90.91%)

Q5. Find 20% more than Rs.200.

We have

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

$$\text{Therefore } 20\% \text{ more than Rs. } 200 = \text{Rs. } 200 + \text{Rs. } 40$$

$$= \text{Rs. } 240$$

Q6. Find 10% less than Rs.150

We have

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

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