

## TEXT BOOK EXERCISE 7.1

Q. 1. Find the ratio :

- (i) Speed of cycle 12 km/hr to the speed of car 36 km/hr.  
 (ii) 10 m to 10 km  
 (iii) 1.5 m to 10 cm  
 (iv) 1 hr to 300 seconds  
 (v) 80 paise to ₹ 4  
 (vi) 200 g to 8 kg.

**Solution.**

- (i) Speed of cycle = 12 km/hr  
 Speed of car = 36 km/hr

∴ Ratio of speed of cycle to the speed of car

$$= 12 : 36 = \frac{12}{36} = \frac{1}{3}$$

$$= 1 : 3 \text{ Ans.}$$

(ii) We know that

$$10 \text{ km} = 10 \times 1000 \text{ m} = 10000 \text{ m}$$

$$[\because 1 \text{ km} = 1000 \text{ m}]$$

∴ Ratio of 10 m : 10 km = 10 m : 10000 m

$$= \frac{10 \text{ m}}{10000 \text{ m}}$$

$$= \frac{1}{1000} = 1 : 1000 \text{ Ans.}$$

(iii) We know that

$$1.5 \text{ m} = \frac{15}{10} \times 100 \text{ cm}$$

$$[\because 1 \text{ m} = 100 \text{ cm}]$$

$$= 150 \text{ cm}$$

∴ Ratio of 1.5 m to 10 cm = 150 cm : 10 cm

$$= \frac{150 \text{ cm}}{10 \text{ cm}} = \frac{15}{1}$$

$$= 15 : 1 \text{ Ans}$$

(iv) We know that

$$1 \text{ hr} = 60 \text{ minutes}$$

$$[\because 1 \text{ hour} = 60 \text{ minutes}]$$

$$= 60 \times 60 \text{ seconds.}$$

$$[\because 1 \text{ minute} = 60 \text{ seconds}]$$

$$= 3600 \text{ seconds.}$$

∴ Ratio of 1 hr to 300 seconds

$$= 3600 \text{ seconds} : 300 \text{ seconds}$$

$$= \frac{3600 \text{ seconds}}{300 \text{ seconds}}$$

$$= \frac{12}{1} = 12 : 1 \text{ Ans.}$$

(v) We know that

$$₹ 4 = 4 \times 100 \text{ paise}$$

$$[\because ₹ 1 = 100 \text{ paise}]$$

$$= 400 \text{ paise}$$

∴ Ratio of 80 paise to ₹ 4

$$= 80 \text{ paise} : 400 \text{ paise}$$

$$= \frac{80 \text{ paise}}{400 \text{ paise}} = \frac{1}{5} = 1 : 5 \text{ Ans.}$$

(vi) We know that

$$8 \text{ kg} = 8 \times 1000 \text{ g}$$

$$[\because 1 \text{ kg} = 1000 \text{ g}]$$

$$= 8000 \text{ g.}$$

∴ Ratio of 200 g to 8 kg = 200 g : 8000 g

$$= \frac{200 \text{ g}}{8000 \text{ g}}$$

$$= \frac{1}{40} = 1 : 40 \text{ Ans.}$$

Q. 2. Out of 20 students in a class, 50% of students are good in science. Find the number of students good in science.

**Solution.** Number of students good in science = 50% of 20

$$= \frac{50}{100} \times 20 = 10 \text{ Ans.}$$

Q. 3. 35% of 40 students are good in statistics. How many students are not good in statistics?

**Solution.** The students which are good in

$$\text{statistics} = 35\% \text{ of } 40 = \frac{35}{100} \times 40 = 14$$

$$\text{The students which are not good in statistics} = 40 - 14 = 26 \text{ Ans.}$$

Q. 4. What percent of numbers from 1 to 50 are prime ?

Solution. Total numbers = 50

Number of Primes = 15 (2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47 are prime numbers.

Out of 50, number of primes = 15

$$\begin{aligned} \text{Out of 100, number of primes} &= \frac{15}{50} \times 100 \\ &= 30\% \text{ Ans.} \end{aligned}$$

Q. 5. Convert the following ratios to percentage :

- (i) 1:3      (ii) 4:5      (iii) 1:2  
(iv) 2:5      (v) 5:4      (vi) 1:5.

Solution.

$$\begin{aligned} \text{(i)} \quad 1 : 3 &= \frac{1}{3} = \frac{1}{3} \times \frac{100}{100} \\ &= \frac{100}{3} \% = 33\frac{1}{3} \% \text{ Ans.} \end{aligned}$$

$$\begin{aligned} \text{(ii)} \quad 4 : 5 &= \frac{4}{5} = \frac{4}{5} \times \frac{100}{100} \\ &= \frac{80}{100} = 80\% \text{ Ans.} \end{aligned}$$

$$\begin{aligned} \text{(iii)} \quad 1 : 2 &= \frac{1}{2} = \frac{1}{2} \times \frac{100}{100} \\ &= \frac{50}{100} = 50\% \text{ Ans.} \end{aligned}$$

$$\begin{aligned} \text{(iv)} \quad 2 : 5 &= \frac{2}{5} = \frac{2}{5} \times \frac{100}{100} \\ &= \frac{40}{100} = 40\% \text{ Ans.} \end{aligned}$$

$$\begin{aligned} \text{(v)} \quad 5 : 4 &= \frac{5}{4} = \frac{5}{4} \times \frac{100}{100} \\ &= \frac{125}{100} = 125\% \text{ Ans.} \end{aligned}$$

$$\begin{aligned} \text{(vi)} \quad 1 : 5 &= \frac{1}{5} = \frac{1}{5} \times \frac{100}{100} \\ &= \frac{20}{100} = 20\% \text{ Ans.} \end{aligned}$$

Q. 6. A man spent 87% of his salary. If he saved ₹ 325, find his salary.

Solution. Let the salary = ₹ x

Amount spent = 87%

Amount saved = (100 - 87) % = 13%

So, As per question, 13% of x = 325

$$\Rightarrow \frac{13}{100} \times x = 325$$

$$x = \frac{325 \times 100}{13} = 2500$$

Hence, salary of man = ₹ 2500 Ans.

Q. 7. A Kabbadi team played 15 matches and won 60% of the matches. How many matches did they lose ?

Solution. Total number of matches = 15

Number of matches won = 60% of 15

$$= \frac{60}{100} \times 15 = 9$$

Number of matches they lost

$$= 15 - 9 = 6$$

Hence, number of matches they lost = 6 Ans.

Q. 8. From a class of 60 students, 40% students like chess, 15% like carrom and remaining students like other games. Find number of students who like carrom, chess and other games.

Solution. Total number of students = 60

Number of students who like chess

$$= 40\% \text{ of } 60$$

$$= \frac{40}{100} \times 60 = 24$$

Number of students who like carrom

$$= 15\% \text{ of } 60$$

$$= \frac{15}{100} \times 60 = 9 \text{ Ans.}$$

Number of students who like other games

$$= 60 - (24 + 9)$$

$$= 60 - 33 = 27 \text{ Ans.}$$

Q. 9. Multiple Choice Questions :

(i) The ratio of 6 km to 600 m is :

(a) 1:100

(b) 10:1

(c) 1:10

(d) 100:1.

(ii) Percentage of 3:4 is :

- (a) 75%                      (b) 50%  
(c) 25%                      (d) 100%.

(iii) Ratio of 200 paise to ₹ 3 is :

- (a) 2 : 3                      (b) 3 : 2  
(c) 200 : 3                  (d) 3 : 200.

(iv) There are 48 girls out of 80 students.  
Percentage of girls is :

(a) 50%                      (b) 80%

(c) 75%                      (d) 60%.

(v) Conversion of 3 : 5 into percentage is :

(a) 30%                      (b) 50%

(c) 60%                      (d) 80%.

Ans. (i) (b) 10 : 1              (ii) (a) 75%

(iii) (a) 2 : 3                  (iv) (d) 60%

(v) (c) 60%.