Chapter 12: Percentage

Practice Set 30 | Q 1 | Page 64
Solve the following.
Shabana scored 736 marks out of 800 in her exams. What was the percentage she scored?

SOLUTION

Marks obtained by Shabana = 736

Total marks = 800

Suppose the marks obtained by Shabana be x %. Let us write in two forms, the ratio of the number of marks obtained to the total marks, obtain an equation and solve it.

Then, we have

$$\frac{x}{100} = \frac{736}{800}$$

$$\Rightarrow \frac{x}{100} \times 100$$

$$\Rightarrow \frac{736}{800} \times 100$$

$$\Rightarrow x = 92$$

∴ Shabana scored 92% marks in her exams.

Practice Set 30 | Q 2 | Page 64

Solve the following.
There are 500 students in the school in Dahihanda village. If 350 of them can swim, what percent of them can swim and what percent cannot?

SOLUTION

Total number of students in the school = 500

Number of students who can swim = 350

Suppose the students who can swim be x %. Let us write in two forms, the ratio of the number of students who can swim to the total number of students in the school, obtain an equation and solve it. Then, we have

$$\frac{x}{100} = \frac{350}{500}$$

$$\Rightarrow \frac{x}{100} \times 100 = \frac{350}{500} \times 100$$

$\Rightarrow x = 70$

∴ Percentage of students who can swim is 70%.

Now, percentage of students who can not swim = (100 − 70)% = 30%

Practice Set 30 | Q 3 | Page 64

Solve the following.
If Prakash sowed jowar on 75% of the 19500 sq m of his land, on how many sq m did he actually plant jowar?

SOLUTION

Suppose Prakash planted jowar in x sq m of his land. Let us write in two forms, the ratio of area of land in which jowar is planted to the total area of the land, obtain an equation and solve it. Then, we have

$$\frac{x}{19500} = \frac{75}{100}$$

$$\Rightarrow \frac{x}{19500} \times 19500$$

$$= \frac{75}{100} \times 19500$$

$\Rightarrow x = 14625$

∴ Prakash planted jowar in 14625 sq m of his land.

Practice Set 30 | Q 4 | Page 64

Solve the following.
Soham received 40 messages on his birthday. Of these, 90% were birthday greetings. How many other messages did he get besides the greetings?
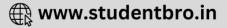
SOLUTION

Total number of messages received by Soham on his birthday = 40

Percentage of birthday greeting messages = 90%

So, percentage of other messages besides the greetings = (100 − 90)% = 10%

Suppose the number of other messages besides the greetings be x. Let us write in two forms, the ratio of the number of other messages besides greetings to the total number of messages received on birthday, obtain an equation and solve it. Then, we have

$$\frac{x}{40} = \frac{10}{100}$$

$$\Rightarrow \frac{x}{40} \times 40 = \frac{10}{100} \times 40$$

$$\Rightarrow x = 4$$

∴ Soham received 4 other messages besides the greetings on his birthday.

Practice Set 30 | Q 5 | Page 64
Solve the following.
Of the 5675 people in a village 5448 are literate. What is the percentage of literacy in the village?

SOLUTION

Total number of people in a village = 5675

Number of literate people in a village = 5448

Suppose percentage of literacy in the village is x %. Let us write in two forms, the ratio of the number of literate people to the total number of people in the village, obtain an equation, and solve it. Then, we have

$$\frac{x}{100} = \frac{5448}{5675}$$

$$\Rightarrow \frac{x}{100} \times 100 = \frac{5448}{5675} \times 100$$

$$\Rightarrow x = 96$$

∴ Percentage of literacy in the village is 96%.

Practice Set 30 | Q 6 | Page 64
Solve the following.
In the elections, 1080 of the 1200 women in Jambhulgaon cast their vote, while 1360 of 1700 in Wadgaon cast theirs. In which village did a greater proportion of women cast their votes?

SOLUTION

Total number of women in Jambhulgaon = 1200

Number of women in Jambhulgaon who cast their vote = 1080

Total number of women in Wadgaon = 1700

Number of women in Wadgaon who cast their vote = 1360

Suppose x % women cast their votes in Jambhulgaon and y % women cast their votes in Wadgaon.

Let us find the ratio of number of women who cast their vote to the total number of women in each case. We then write those ratios in two forms, obtain equations and solve them. Then, we have

$$\frac{x}{100} = \frac{1080}{1200} \text{ and } \frac{y}{100} = \frac{1360}{1700}$$

$$\Rightarrow \frac{x}{100} \times 100 = \frac{1080}{1200} \times 100 \text{ and}$$

$$\frac{y}{100} \times 100 = \frac{1360}{1700} \times 100$$

$\Rightarrow$ x = 90 and y = 80

∴ 90% women cast their votes in Jambhulgaon and 80% women cast their votes in Wadgaon.

∴ A greater proportion of women cast their votes in Jambhulgaon.