

### EXERCISE 8B

**1. Deepak bought a basket of mangoes containing 250 mangoes. 12% of these were found to be rotten. Of the remaining, 10% got crushed. How many mangoes were in good condition?**

**Solution:**

Number of mangoes = 250

So the rotten mangoes = 12% of 250

We can write it as

$$= 250 \times 12/100$$

$$= 30$$

$$\text{Remaining mangoes} = 250 - 30 = 220$$

We know that

Mangoes crushed = 10% of 220

We can write it as

$$= 220 \times 10/100$$

$$= 22$$

$$\text{So the balance number of mangoes} = 220 - 22 = 198$$

Therefore, 198 mangoes were in good condition.

**2. In a Maths Quiz of 60 questions, Chandra got 90% correct answers and Ram got 80% correct answers. How many correct answers did each give? What percent is Ram's correct answers to Chandra's correct answers?**

**Solution:**

Total number of questions = 60

Correct answers of the questions Chandra got = 90% of 60

We can write it as

$$= (60 \times 90) / 100$$

$$= 54$$

Correct answers of the questions Ram got = 80% of 60

We can write it as

$$= 60 \times 80/100$$

$$= 48$$

Percentage of Ram's correct answers to Chandra's correct answers =  $48/54 \times 100$

So we get

$$= 800/9 \%$$

$$= 88 \frac{8}{9} \%$$

**3. In an examination, the maximum marks are 900. A student gets 33% of the maximum marks and fails by 45 marks. What is the passing mark? Also, find the pass percentage.**

**Solution:**

Maximum marks in the exam = 900

A student got 33% of the maximum marks =  $900 \times 33/100 = 297$

Number of marks by which he failed = 45

So the pass marks =  $297 + 45 = 342$

So the percentage of pass marks =  $(342 \times 100) / 900 = 38\%$

**4. In a train, 15% people travel in first class and 35% travel in second class and the remaining travel in the A.C. class. Calculate the percentage of A.C. class travellers.**

**Solution:**

Consider the number of people as 100

So the number of people in first class = 15

Number of people in second class = 35

So the balance number of people =  $100 - (15 + 35) = 100 - 50 = 50$

So the percentage of A.C class travellers = 50%

**5. A boy eats 25% of the cake and gives away 35% of it to his friends. What percent of the cake is still left with him?**

**Solution:**

Consider total cake = 100

Cake eaten by the boy = 25

Cake given to his friends = 35

So the balance cake =  $100 - (25 + 35) = 100 - 60 = 40$

herefore, he has 40% of the cake with him.

**6. What is the percentage of vowels in the English alphabet?**

**Solution:**

We know that there are 5 vowels in 26 English alphabets

So the percentage of vowels =  $(5 \times 100) / 26$

We get

=  $250/13$

=  $19 \frac{3}{13} \%$

**7. (i)  $6 \frac{1}{4} \%$  of what number is 375?**

**(ii) 0.2% of a number is 5. Find the number.**

**(iii) 30 is  $16 \frac{2}{3}\%$  of a number. Find the number.**

**Solution:**

(i) Consider x as the number

$6 \frac{1}{4} \%$  of x = 375

By further calculation

$25 / (4 \times 100)$  of x = 375

So we get

$1/16 x = 375$

Here

$x = (375 \times 16) / 1 = 6000$

So the number is 6000.

(ii) Consider x as the number

0.2% of x = 5

By further calculation  
 $2/ (10 \times 100)$  of  $x = 5$   
So we get  
 $1/500$  of  $x = 5$   
Here  
 $x = (5 \times 500)/ 1 = 2500$

So the number is 2500.

(iii) Consider  $x$  as the number  
 $16 \frac{2}{3}\%$  of  $x = 30$   
By further calculation  
 $50/ (3 \times 100)$  of  $x = 30$   
So we get  
 $1/6$  of  $x = 30$   
Here  
 $x = 30 \times 6 = 180$

So the number is 180.

**8. The money spent on the repairs of a house was 1% of its value. If the repair costs ₹ 5,000, find the cost of the house.**

**Solution:**

Consider  $x$  as the cost of house  
So the cost of repairs = 1% of  $x$   
We can write it as  
 $1\%$  of  $x = 5000$   
So we get  
 $1/100 \times x = 5000$   
By further calculation  
 $x = 5000 \times 100/1$   
 $x = 5, 00, 000$

Therefore, the cost of house is ₹ 5, 00, 000.

**9. In a school, out of 300 students, 70% are girls and 30% are boys. If 30 girls leave and no new boy is admitted, what is the new percentage of girls in the school?**

**Solution:**

Number of children in a school = 300  
Number of boys = 30% of 300  
We can write it as  
 $= 30/100 \times 300$   
 $= 90$   
Number of girls = 70% of 300  
We can write it as  
 $= 70/100 \times 300$   
 $= 210$   
Number of girls left = 30

Number of girls after leaving 30 girls =  $210 - 30 = 180$

Number of children in the school =  $180 + 90 = 270$

So the percentage of girls now =  $180/270 \times 100$

We get

$$= 200/3\%$$

$$= 66 \frac{2}{3}\%$$

**10. Kumar bought a transistor for ₹ 960. He paid  $12 \frac{1}{2}\%$  cash money. The rest he agreed to pay in 12 equal monthly installments. How much will he pay each month?**

**Solution:**

Price of transistor Kumar bought = ₹ 960

Amount paid in cash =  $12 \frac{1}{2}\%$  of ₹ 960

We can write it as

$$= 25/(2 \times 100) \times 960$$

$$= ₹ 120$$

So the balance amount =  $960 - 120 = ₹ 840$

Number of installments = 12

So the amount of each installment =  $840/12 = ₹ 70$

**11. An ore contains 20% zinc. How many kg of ore will be required to get 45 kg of zinc?**

**Solution:**

In an ore

Zinc = 20%

Consider x as the quantity of ore

We can write it as

$$20\% \text{ of } x = 45 \text{ kg}$$

So we get

$$20/100 \times x = 45$$

Here

$$x/5 = 45$$

$$x = 45 \times 5 = 225$$

Hence, the quantity of ore is 225kg.

