EXERCISE 8B PAGE: 97

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 × 12/100
= 30
Remaining mangoes = 250 – 30 = 220
We know that
Mangoes crushed = 10% of 220
We can write it as
= 220 × 10/100
= 22
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 × 90)/ 100
= 54

Correct answers of the questions Ram got = 80% of 60
We can write it as
= 60 × 80/100
= 48

Percentage of Ram's correct answers to Chandra's correct answers = 48/54 × 100
So we get
= 800/9 %
= 88 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 × 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 × 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

Therefore, 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 × 100)/ 26
We get
= 250/13
= 19 3/13 %

7. (i) 6 ¼ % of what number is 375?
(ii) 0.2% of a number is 5. Find the number.
(iii) 30 is 16 2/3% of a number. Find the number.
Solution:

(i) Consider x as the number
6 ¼ % of x = 375
By further calculation
25/ (4 × 100) of x = 375
So we get
1/16 x = 375
Here
x = (375 × 16)/ 1 = 6000

So the number is 6000.

(ii) Consider x as the number
0.2% of x = 5

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

So the number is 2500.

(iii) Consider x as the number
16 2/3% of x = 30
By further calculation
50/ (3 × 100) of x = 30
So we get
1/6 of x = 30
Here
x = 30 × 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 × x = 5000
By further calculation
x = 5000 × 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 × 300
= 90
Number of girls = 70% of 300
We can write it as
= 70/100 × 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 × 100
We get
= 200/3%
= 66 2/3%

10. Kumar bought a transistor for ₹ 960. He paid 12 ½ % 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 ½ % of ₹ 960
We can write it as
= 25/ (2 × 100) × 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% of x = 45 kg
So we get
20/100 × x = 45
Here
x/5 = 45
x = 45 × 5 = 225

Hence, the quantity of ore is 225kg.