CHAPTER 9
APPLICATIONS OF PERCENTAGE

1 Kelly requires 36 % to pass. She gets 196 marks and falls short by 20 marks. Find the maximum numbers she could have got.

Solution:

Tanya had scored 20 marks more, she could have scored 36%.

Now, 20 marks more than 196 marks.

Therefore, 196 + 20 = 216

Let maximum marks be x, then 36% of m = 216

⇒ 36/100 × m = 216

⇒ m = 216 × 100/36

⇒ m = 600

Thus, the maximum marks she could have got were 600.

2. In an examination, 460 students appeared. Out of these students; 23 % got first division, 62 % got second division and the remaining just passed. Assuming that no student failed; find the number of students who just passed.

Solution:

Since, the percentage of first division = 23 %

And, the percentage of second division = 62 %

Therefore, percentage of those who just passed = (100 – 23 – 62) %

= (100 – 85) %

= 15 %

Therefore, the percentage of those who just passed = 15 % of 460

= 15/100 × 460

= 6900/100

= 69

3. In a survey of 100 students, 60% of students liked Science, and the rest of the students liked Arts. How many number of students liked Science?

Solution:

Total Number of Students Participated in the Survey = 100

60% of Students liked Science = 60/100*100

= 60

Therefore, 60 Students Liked Science.

4. The Price of a Good increase from $18 to $20. Express the Percentage Increase of the Good?

Solution:

Increased Price = $20 – $18

= $2

Percentage Increase = (Increased Value/Original Price)*100

= ($2/$18)*100

= 100/9

= 11.11%

Thus, the Price of Good increases by 11.11%

5. Father’s Weight is 30 % more than that of his son. What Percent is Son’s Weight Less than Father’s Weight?

Solution:

Let Son’s Weight be 100 Kg

Father’s weight is 30% more than son’s i.e. 130 Kg

If Father’s Weight is 130kg then Son’s weight is 100kg

If Father’s Weight is 1 kg then Son’s Weight is 130/100

If Father’s Weight is 100kg then Son’s Weight is (100/130*100) Kg

Thus, Son’s Weight is 23.08 % less compared to his father.

6. What number is 30% of 90?

Solution:

Let the number to be m

30% of m = 90

30/100*m = 90

m = (90*100)/30

= 9000/30

= 300

Therefore, the number is 300.

7. Komali and her sister enjoyed dinner in a restaurant, and the bill was $75.50. If she wants to leave 15% of the total bill as her tip, how much should she leave?

Solution:

Total Bill = $75.50

From the given data Komali wants to leave 15% of Bill as tip = 15% of 75.50

= (15/100)*75.50

= $11.325

Thus, Komali has to leave $11.325 as a tip in the restaurant.

8. One serving of rice has 110 mg of sodium, which is 10% of the recommended daily amount. What is the recommended daily amount of sodium in total?

Solution:

Let total daily amount of sodium required = m

From given data 10% of m = 110 mg

10/100*m = 110

m = (110*100)/10

= 1100

Therefore, daily amount of sodium required in total is 1100 mg.

9. Cierra is making muffins from a mix and each muffin had 240 calories and 80 calories are fat. What Percent of Total Calories is Fat?

Solution:

Fat Calories Percent = 80/240*100

= 8000/240

= 33.33%

Thus, 33.33% Percent of Total Calories is Fat.

10. Kiara requires 30% to pass. She gets 180 marks and falls short by 20 marks. Find the maximum numbers she could have got(round to the nearest)?

Solution:

To get 30% kiara should score 180+20 = 200 Marks

Let the maximum numbers = m

30% of m = 200

30/100*m = 200

m = (200*100)/30

= 666

Therefore, Kiara Should have got 666 Marks.

11. If the tax rate is 8% what would be sales tax if the price of the truck is $24,000?

Solution:

Tax Rate = 8%

Sales Tax = 8% of $24, 000

= 8/100*24, 000

= 1920

Sales Tax of the Truck is $1920.