

CHAPTER 7

RATIO AND PROPORTION

More Questions for Practice

1. Find the ratio in the *simplest form*:
(a) 300 : 90 (b) 160 : 400 (c) 100 : 1000.
2. Find the ratio of:
(a) 3 minutes to 180 seconds (b) 10 hours to 1 day (c) 2 kg to 750 g.
3. A man earns ₹ 1,500 per week and saves ₹ 500 per week. Find the ratio of:
(a) his savings to income (b) his income to expenditure
(c) his expenditure to savings.
4. The population of a village is 5,400. If the number of males is 2,475, find the ratio of males to females.
5. A bullock cart travels 72 km in 8 hours and a car travels 162 km in 2 hours. Find the ratio of their speeds.
6. The angles of a triangle are in the ratio 7 : 3 : 5. Find the measure of the three angles of the triangle.
7. A factory produces cars in red, blue, white and green in the ratio 7 : 5 : 3 : 1. Out of a production of 24,000 cars produced, how many cars are white?
8. A woman gives ₹ 2,28,000 to her two daughters in the ratio of their ages. If the daughters are of ages 35 years and 22 years, how much will the elder daughter get?
9. In a mixture of 60 litres, the ratio of milk and water is 7 : 3. What amount of water is there in the mixture?
10. In a test match, a cricketer took 5 wickets for 80 runs in the first innings and 4 wickets for 50 runs in the second innings. In which innings, did he give a better performance?
11. Daily incomes of three labourers A, B and C are in the ratio 3 : 4 : 5. If A's daily income is ₹ 120, what are the daily incomes of B and C?
12. B is a point between A and C such that AB : BC is 7:13. If AC = 60 cm, how long is BC?
13. An alloy contains only zinc and copper in the ratio of 7 : 9. If the weight of the zinc in the alloy is 10.5 kg, find the weight of the alloy.
14. Which of the following is *true* (T)?
(a) $2 : 5 = 5 : 2$ (b) $3 : 4 = 15 : 20$ (c) $2 : 7 = 6 : 21$ (d) $5 : 2 = 7 : 4$
15. In which of the following, the four numbers, in the given order, are in proportion?
(a) 3, 9, 2, 6 (b) 10, 14, 14, 18 (c) 10, 30, 2, 6 (d) 1; 2, 2, 1
16. Find x , if the following four numbers, in the given order, are in proportion:
(a) 25, x , x , 16 (b) 15, x , 40, 8 (c) 12, 16, x , 4
17. 10 kg sugar cost ₹ 320. Find the cost of 7 kg of sugar.

18. 15 notebooks cost ₹ 600. How many notebooks can be bought for ₹ 200? What will be the cost of 25 notebooks?
19. A train travels 231 km in 3 hours. How long will it take to travel 385 km?
20. Write each of the following ratios as a percentage:
 (a) 3 : 10 (b) 2 : 5 (c) 21 : 50 (d) 20 : 25
21. Write each of the following percentages as a ratio:
 (a) 15% (b) 22.5% (c) 68% (d) 235%
22. A man covers 16 km at a speed of 40 km/h by bus and 4 km at a speed of 16 km/h by an Auto. Find his average speed for the whole journey.
23. Using the concept of ratio and proportion, solve the following problems:
 (a) For every 20 oranges, 3 oranges are spoiled. How many spoiled oranges will be there in a lot of 100 oranges?
 (b) 12 books weight 1 kg 500 g. Find the weight of 16 books.
24. In a class, the ratio of the number of boys to that of the number of girls is 5 : 4. If the number of girls is 12, find the number of boys in the class.

ANSWERS

1. (a) 10 : 3 (b) 2 : 5 (c) 1 : 10 2. (a) 1 : 1 (b) 5 : 12 (c) 8 : 3
 3. (a) 1 : 3 (b) 3 : 2 (c) 2 : 1 4. 11 : 13 5. 1 : 9 6. 84° , 36° , 60°
 7. 4,500 cars 8. ₹ 1,40,000 9. 18 litres 10. second innings.
 11. ₹ 160 and ₹ 200 respectively. 12. 39 cm 13. 24 kg
 14. (b), (c) 15. (a), (c) 16. (a) 20 (b) 3 (c) 3 17. ₹ 245
 18. 5 notebooks; ₹ 1000 19. 5 hours 20. (a) 30% (b) 40% (c) 42% (d) 80%
 21. (a) 3 : 20 (b) 9 : 40 (c) 17 : 25 (d) 47 : 20
 22. 31 km/h (approx) 23. (a) 15 oranges (b) 2 kg 24. 15 boys.