EduSahara™ Assignment

Name : Ratio word problems

Chapter : Ratio

Grade : ICSE Grade X

1. Two numbers are in the ratio 4 : 14. If 16 is added to each number, the ratio becomes 22 : 57. Find the numbers.

   (i) 28:98 (ii) 32:112 (iii) 36:126 (iv) 24:84 (v) 20:70

2. The ratio of two numbers is
   1:5
   and their LCM is 60. Find the numbers.

   (i) 11:55 (ii) 14:70 (iii) 12:60 (iv) 10:50 (v) 13:65

3. Find the number which bears the same ratio to $\frac{5}{8}$ that $\frac{5}{9}$ does to $\frac{425}{648}$

   (i) $\frac{7}{17}$ (ii) $\frac{11}{17}$ (iii) $\frac{9}{17}$ (iv) $\frac{3}{5}$ (v) $\frac{9}{19}$

4. The ages of A and B are in the ratio 1 : 2. 6 years hence, their ages will be in the ratio 6 : 11. Find their present ages.

   (i) 29:58 (ii) 28:56 (iii) 30:60 (iv) 32:64

5. The ages of A and B are in the ratio 9 : 10. 5 years ago, their ages were in the ratio 8 : 9. Find their present ages.

   (i) 63:70 (ii) 36:40 (iii) 45:50 (iv) 27:30

6. In a mixture of 527 litres, the ratio of milk and water is 11 : 20. How much water must be added to this mixture to make the ratio 187 : 412?

   (i) 71 (ii) 72 (iii) 69 (iv) 74 (v) 73

7. The ratio of males to females in a committee of 580 members is 10 : 19. How many more ladies should be added to the committee so that the ratio of males to females is 50 : 107?

   (i) 51 (ii) 47 (iii) 46 (iv) 49 (v) 48

8. An employer reduces the number of employees in the ratio of 19 : 17 and increases their wages in the ratio 5 : 6. In what ratio, the wage bill is increased or decreased?

   (i) 95:100 (ii) 95:105 (iii) 95:102 (iv) 94:102

9. The work done by (2x + 1) men in (18x) days and work done by (2x + 1) men in (10x + 1) days is in the ratio of 12 : 7 . Find the value of x

   (i) 5 (ii) 1 (iii) 2 (iv) 3 (v) (-1)

10. A man reduces his weight in the ratio 17 : 12. What is his weight now, if originally he was 66 kg ?

    (i) $\frac{793}{17}$ kg (ii) $\frac{809}{17}$ kg (iii) $\frac{792}{17}$ kg (iv) $\frac{794}{17}$ kg (v) $\frac{826}{17}$ kg

11. A certain amount has been divided into two parts in the ratio 5 : 8. If the first part is 155, find the total amount.

    (i) 400 (ii) 402 (iii) 406 (iv) 403 (v) 404

12. Two numbers are in the ratio 3 : 1 and their difference is 60. Find the numbers.

(i) 90,30 (ii) 90,32 (iii) 90,27 (iv) 89,30 (v) 91,30

13. Divide ₹21200 into three parts such that the first one is $\frac{3}{8}$ of the second and ratio between second and the third is 6 : 5

(i) ₹3600.00 : ₹9600.00 : ₹9600.00 (ii) ₹3600.00 : ₹9600.00 : ₹8000.00 (iii) ₹3600.00 : ₹8000.00 : ₹9600.00

(iv) ₹9600.00 : ₹8000.00 : ₹3600.00 (v) ₹8000.00 : ₹3600.00 : ₹9600.00

14. Increase 690 in the ratio 10 : 17

(i) 1176 (ii) 1174 (iii) 1172 (iv) 1171 (v) 1173

15. Divide ₹32000 among A,B,C so that A shall receive $\frac{7}{13}$ of what B and C together recieve and B may receive $\frac{1}{4}$ of what A and C receive

(i) ₹11200.00 : ₹6400.00 : ₹14400.00 (ii) ₹11200.00 : ₹6400.00 : ₹6400.00

(iii) ₹14400.00 : ₹11200.00 : ₹6400.00 (iv) ₹11200.00 : ₹14400.00 : ₹6400.00

(v) ₹6400.00 : ₹14400.00 : ₹11200.00

16. A bag contains ₹2280 in the form of five-rupee, two-rupee and one-rupee coins in the ratio 18 : 5 : 14. Find the number of coins of each type

(i) 361 , 105 , 275 (ii) 360 , 100 , 280 (iii) 362 , 95 , 280 (iv) 358 , 105 , 280 (v) 359 , 100 , 285

17. The sides of a triangle are in the ratio $\frac{1}{4} : \frac{1}{7} : \frac{1}{9}$ and its perimeter is 1651 cm.

Find the lengths of the sides of the triangle

(i) 824 cm : 463 cm : 364 cm (ii) 814 cm : 473 cm : 364 cm (iii) 824 cm : 468 cm : 359 cm

(iv) 819 cm : 468 cm : 364 cm (v) 814 cm : 468 cm : 369 cm

18. In an examination, the ratio of passes to failures was 3 : 1.
Had 10 less appeared and 5 less passed, the ratio of passes to failures would have been 17 : 5.
How many students appeared for the examination?

(i) 130 (ii) 125 (iii) 115 (iv) 120 (v) 110

19. In a company, the number of engineers to managers is in the ratio 2 : 1 . After a year, when 15 engineers and 15 managers left, the ratio between engineers to managers is 5 : 1 . Find the number of engineers and managers at the beginning?

(i) 40 (ii) 50 (iii) 70 (iv) 80 (v) 60

20. What number must be added to each term of the ratio 256 : 272 to make it 29 : 30 ?

(i) 211 (ii) 208 (iii) 207 (iv) 209 (v) 206

21. What quantity must be added to each of the terms of the ratio 135 : 120 to make it 21 : 20 ?

(i) 181 (ii) 178 (iii) 179 (iv) 180 (v) 183

Assignment Key

1) (i)	2) (iii)	3) (iii)	4) (iii)	5) (iii)	6) (ii)
7) (v)	8) (iii)	9) (iii)	10) (iii)	11) (iv)	12) (i)
13) (ii)	14) (v)	15) (i)	16) (ii)	17) (iv)	18) (iv)
19) (v)	20) (ii)	21) (iv)			