EduSahara™ Assignment

Name : Ratio word problems

Chapter : Ratio

Grade : ICSE Grade X

1. Two numbers are in the ratio 1 : 10. If 14 is added to each number, the ratio becomes 10 : 37. Find the numbers.

   (i) 5:50 (ii) 7:70 (iii) 8:80 (iv) 6:60 (v) 4:40

2. The ratio of two numbers is
   5:3
   and their LCM is 105. Find the numbers.

   (i) 30:18 (ii) 45:27 (iii) 40:24 (iv) 35:21 (v) 25:15

3. Find the number which bears the same ratio to $\frac{4}{5}$ that $\frac{6}{8}$ does to $\frac{12}{13}$

   (i) $\frac{13}{20}$ (ii) $\frac{3}{4}$ (iii) $\frac{11}{20}$ (iv) $\frac{13}{18}$ (v) $\frac{13}{22}$

4. The ages of A and B are in the ratio 3 : 4. 7 years hence, their ages will be in the ratio 7 : 9. Find their present ages.

   (i) 42:56 (ii) 36:48 (iii) 48:64 (iv) 39:52

5. The ages of A and B are in the ratio 7 : 6. 9 years ago, their ages were in the ratio 6 : 5. Find their present ages.

   (i) 63:54 (ii) 49:42 (iii) 56:48 (iv) 77:66

6. In a mixture of 300 litres, the ratio of milk and water is 18 : 7. How much water must be added to this mixture to make the ratio 54 : 37?

   (i) 63 (ii) 62 (iii) 65 (iv) 66 (v) 64

7. The ratio of males to females in a committee of 434 members is 15 : 16. How many more ladies should be added to the committee so that the ratio of males to females is 105 : 142?

   (i) 59 (ii) 60 (iii) 61 (iv) 62 (v) 57

8. An employer reduces the number of employees in the ratio of 19 : 14 and increases their wages in the ratio 2 : 3. In what ratio, the wage bill is increased or decreased?

   (i) 19:24 (ii) 18:21 (iii) 19:21 (iv) 19:19

9. The work done by (20x) men in (x) days and work done by (3x + 1) men in (11x) days is in the ratio of 40 : 77 . Find the value of x

   (i) (-1) (ii) 4 (iii) 3 (iv) 1 (v) 2

10. A man reduces his weight in the ratio 19 : 14. What is his weight now, if originally he was 67 kg ?

    (i) $\frac{938}{19}$ kg (ii) $\frac{939}{19}$ kg (iii) $\frac{957}{19}$ kg (iv) $\frac{976}{19}$ kg (v) $\frac{940}{19}$ kg

11. A certain amount has been divided into two parts in the ratio 3 : 4. If the first part is 66, find the total amount.

    (i) 155 (ii) 157 (iii) 153 (iv) 151 (v) 154

12. Two numbers are in the ratio 5 : 3 and their difference is 52. Find the numbers.

(i) 131,78 (ii) 129,78 (iii) 130,75 (iv) 130,80 (v) 130,78

13. Divide ₹20800 into three parts such that the first one is $\frac{2}{1}$ of the second and ratio between second and the third is 2 : 7

(i) ₹6400.00 : ₹3200.00 : ₹3200.00 (ii) ₹6400.00 : ₹11200.00 : ₹3200.00 (iii) ₹6400.00 : ₹3200.00 : ₹11200.00

(iv) ₹11200.00 : ₹6400.00 : ₹3200.00 (v) ₹3200.00 : ₹11200.00 : ₹6400.00

14. Increase 392 in the ratio 8 : 12

(i) 589 (ii) 585 (iii) 587 (iv) 591 (v) 588

15. Divide ₹16800 among A,B,C so that A shall receive $\frac{1}{6}$ of what B and C together recieve and B may receive $\frac{3}{11}$ of what A and C receive

(i) ₹10800.00 : ₹2400.00 : ₹3600.00 (ii) ₹2400.00 : ₹3600.00 : ₹3600.00 (iii) ₹3600.00 : ₹10800.00 : ₹2400.00

(iv) ₹2400.00 : ₹10800.00 : ₹3600.00 (v) ₹2400.00 : ₹3600.00 : ₹10800.00

16. A bag contains ₹480 in the form of five-rupee, two-rupee and one-rupee coins in the ratio 5 : 6 : 3. Find the number of coins of each type

(i) 62 , 67 , 36 (ii) 59 , 72 , 41 (iii) 58 , 77 , 36 (iv) 61 , 77 , 31 (v) 60 , 72 , 36

17. The sides of a triangle are in the ratio $\frac{1}{8} : \frac{1}{3} : \frac{1}{7}$ and its perimeter is 1818 cm.

Find the lengths of the sides of the triangle

(i) 373 cm : 1008 cm : 437 cm (ii) 373 cm : 1013 cm : 432 cm (iii) 378 cm : 1008 cm : 432 cm

(iv) 383 cm : 1008 cm : 427 cm (v) 383 cm : 1003 cm : 432 cm

18. In an examination, the ratio of passes to failures was 3 : 2.
Had 35 less appeared and 5 less passed, the ratio of passes to failures would have been 23 : 10.
How many students appeared for the examination?

(i) 200 (ii) 210 (iii) 195 (iv) 205 (v) 190

19. In a company, the number of engineers to managers is in the ratio 9 : 5 . After a year, when 5 engineers and 10 managers left, the ratio between engineers to managers is 161 : 88 . Find the number of engineers and managers at the beginning?

(i) 1260 (ii) 1270 (iii) 1250 (iv) 1280 (v) 1240

20. What number must be added to each term of the ratio 144 : 192 to make it 15 : 17 ?

(i) 216 (ii) 217 (iii) 215 (iv) 219 (v) 214

21. What quantity must be added to each of the terms of the ratio 90 : 81 to make it 18 : 17 ?

(i) 69 (ii) 71 (iii) 72 (iv) 73 (v) 75

Assignment Key

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