EduSahara™ Learning Center Assignment

Grade : Class X, ICSE
Chapter : Ratio
Name : Ratio word problems

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1. Two numbers are in the ratio $3 : 10$. If 16 is added to each number, the ratio becomes $61 : 166$. Find the numbers

(i) $48 : 160$ (ii) $42 : 140$ (iii) $51 : 170$

(iv) $39 : 130$ (v) $45 : 150$

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2. The ratio of two numbers is $2 : 3$ and their LCM is 90 . Find the numbers ?

(i) $30 : 45$ (ii) $28 : 42$ (iii) $26 : 39$ (iv) $34 : 51$ (v) $32 : 48$

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3. Find the number which bears the same ratio to $\frac{2}{6}$ that $\frac{2}{3}$ does to $\frac{5}{18}$

(i) $\frac{8}{9}$ (ii) $\frac{7}{10}$ (iii) $\frac{8}{11}$ (iv) $\frac{9}{10}$ (v) $\frac{4}{5}$

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4. The ages of A and B are in the ratio 5 : 8. 6 years hence, their ages will be in the ratio 2 : 3. Find their present ages

(i) $25 : 40$ (ii) $20 : 32$ (iii) $40 : 64$ (iv) $30 : 48$

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

(i) $24 : 28$ (ii) $42 : 49$ (iii) $18 : 21$ (iv) $30 : 35$

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6. In a mixture of 589 litres, the ratio of milk and water is 18 : 13 . How much water must be added to this mixture to make the ratio 342 : 317 ?

(i) 71 (ii) 69 (iii) 73 (iv) 70 (v) 68

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7. The ratio of males to females in a committee of 360 members is 13 : 7 . How many more ladies be added to the committee so that the ratio of males to females is 3 : 2 ?

(i) 29 (ii) 31 (iii) 30 (iv) 32 (v) 27

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8. An employer reduces the number of employees in the ratio of $19 : 8$ and increases their wages in the ratio 3 : 9 . In what ratio, the wage bill is increased or decreased?

(i) $19 : 26$ (ii) $19 : 21$ (iii) $19 : 24$ (iv) $18 : 24$

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9. The work done by (3x) men in (x + 1) days and work done by (2x + 4) men in (2x) days is in the ratio of 9 : 14 . Find the value of x

(i) 4 (ii) 3 (iii) 7 (iv) 5 (v) 6

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10. A man reduces his weight in the ratio $15 : 12$.
What is his weight now, if originally he was 55 kg ?

(i) 42 kg (ii) 43 kg (iii) 46 kg (iv) 44 kg (v) 45 kg

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11. A certain amount has been divided into two parts in the ratio $7 : 3$.
If the first part is 210 , find the total amount

(i) 297 (ii) 301 (iii) 300 (iv) 303 (v) 299

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12. Two numbers are in the ratio $3 : 1$ and
their difference is 42 . Find the numbers

(i) 63,21 (ii) 64,21 (iii) 63,23 (iv) 62,21 (v) 63,18

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13. Divide ₹8600 into three parts
such that the first one is $\frac{6}{5}$ of the second
and ratio between second and the third is 3 : 2

(i) ₹ 2000.00 : ₹ 3600.00 : ₹ 3000.00

(ii) ₹ 3000.00 : ₹ 2000.00 : ₹ 3600.00

(iii) ₹ 3600.00 : ₹ 3000.00 : ₹ 3000.00

(iv) ₹ 3600.00 : ₹ 2000.00 : ₹ 3000.00

(v) ₹ 3600.00 : ₹ 3000.00 : ₹ 2000.00

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14. Increase 520 in the ratio 10 : 18

(i) 933 (ii) 935 (iii) 938 (iv) 937 (v) 936

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15. Divide ₹13200 among A,B,C so that
A shall receive $\frac{3}{8}$ of what B and C together recieve
and B may receive $\frac{6}{5}$ of what A and C receive

(i) ₹ 3600.00 : ₹ 7200.00 : ₹ 2400.00

(ii) ₹ 2400.00 : ₹ 3600.00 : ₹ 7200.00

(iii) ₹ 3600.00 : ₹ 7200.00 : ₹ 7200.00

(iv) ₹ 7200.00 : ₹ 2400.00 : ₹ 3600.00

(v) ₹ 3600.00 : ₹ 2400.00 : ₹ 7200.00

A bag contains ₹1411 in the form of

16. five-rupee, two-rupee and one-rupee coins in the ratio $9 : 12 : 14$.

Find the number of coins of each type

(i) 155 , 199 , 238 (ii) 153 , 204 , 238 (iii) 151 , 209 , 238

(iv) 152 , 204 , 243 (v) 154 , 209 , 233

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17. The sides of a triangle are in the ratio $\frac{1}{5} : \frac{1}{7} : \frac{1}{8}$ and its perimeter is 2620 cm .

Find the lengths of the sides of the triangle

(i) 1125 cm : 795 cm : 700 cm (ii) 1120 cm : 800 cm : 700 cm

(iii) 1125 cm : 800 cm : 695 cm (iv) 1115 cm : 800 cm : 705 cm

(v) 1115 cm : 805 cm : 700 cm

In an examination, the ratio of passes to failures was 5 : 4.

18. Had 205 less appeared and 15 less passed, the ratio of passes to failures would have been 57 : 10.

How many students appeared for the examination?

(i) 540 (ii) 550 (iii) 545 (iv) 535 (v) 530

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19. In a company, the number of engineers to managers is in the ratio 6 : 1 . After a year, when 20 engineers and 15 managers left, the ratio between engineers to managers is 20 : 1 . Find the number of engineers and managers at the beginning?

(i) 130 (ii) 160 (iii) 140 (iv) 120 (v) 150

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20. What number must be added to each term of the ratio $28 : 56$ to make it $13 : 15$?

(i) 154 (ii) 151 (iii) 153 (iv) 156 (v) 155

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21. What quantity must be added to each of the terms of the ratio $40 : 35$ to make it $16 : 15$?

(i) 39 (ii) 40 (iii) 38 (iv) 42 (v) 41

Assignment Key

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