Question:1

If $x : y = 3 : 5$, find the ratio $3x + 4y : 8x + 5y$.

Solution:

It is given that

$$x : y = 3 : 5 \Rightarrow \frac{x}{y} = \frac{3}{5}$$

Now, $3x + 4y : 8x + 5y$

$$= \frac{3x + 4y}{8x + 5y}$$

$$= \frac{\frac{3x + 4y}{y}}{\frac{8x + 5y}{y}}$$ {dividing the numerator and the denominator by 'y'}

$$= \frac{3\left(\frac{x}{y}\right) + 4}{8\left(\frac{x}{y}\right) + 5} = \frac{3\left(\frac{3}{5}\right) + 4}{8\left(\frac{3}{5}\right) + 5} = \frac{\frac{9}{5} + 4}{\frac{24}{5} + 5}$$

$$= \frac{\frac{9 + 20}{5}}{\frac{24 + 25}{5}} = \frac{\frac{29}{5}}{\frac{49}{5}} = \frac{29}{49}$$

Question:2

If $x : y = 8 : 9$, find the ratio $(7x - 4y) : 3x + 2y$.

Solution:

It is given that

$x : y = 8 : 9 \Rightarrow \frac{x}{y} = \frac{8}{9}$

Now, $7x - 4y : 3x + 2y$

$$= \frac{7x - 4y}{3x + 2y}$$

$$= \frac{\frac{7x - 4y}{y}}{\frac{3x + 2y}{y}}$$ {dividing the numerator and the denominator by 'y'}

$$= \frac{7\left(\frac{x}{y}\right) - 4}{3\left(\frac{x}{y}\right) + 2} = \frac{7\left(\frac{8}{9}\right) - 4}{3\left(\frac{8}{9}\right) + 2} = \frac{\frac{56}{9} - 4}{\frac{24}{9} + 2}$$

$$= \frac{\frac{56 - 36}{9}}{\frac{24 + 18}{9}} = \frac{20}{42} = \frac{10}{21}$$

Hence, $7x - 4y : 3x + 2y = 10 : 21$.

Question:3

If two numbers are in the ratio 6 : 13 and their l.c.m. is 312, find the numbers.

Solution:

Let the two numbers be 'x' and 'y' such that $x : y = 6 : 13 \Rightarrow \frac{x}{y} = \frac{6}{13}$.

We can assume that the HCF of 'x' and 'y' is a number 'k'.

So, $x = 6k$, and $y = 13k$.

Now, the product of any two numbers 'x' and 'y' is always equal to the product of their LCM and HCF

$\Rightarrow x \times y = 312 \times k$

$\Rightarrow 6k \times 13k = 312 \times k$

$\Rightarrow k = \frac{312}{6 \times 13} = 4$

$\Rightarrow k = 4$

Thus, $x = 6k = 6 \times 4 = 24$, and $y = 13 \times 4 = 52$.

Question:4

Two numbers are in the ratio 3 : 5. If 8 is added to each number, the ratio becomes 2 : 3. Find the numbers.

Solution:

Let the two numbers in ratio be x and y such that

$x : y = 3 : 5$

$= \frac{x}{y} = \frac{3}{5} \Rightarrow x = \frac{3y}{5}.$ ------- 1

Now, 8 is added to each number, which means

$= \frac{x+8}{y+8} = \frac{2}{3}$

$= \frac{\frac{3y}{5} + 8}{y+8} = \frac{2}{3}$ ------ From 1

$= \frac{\frac{3y+40}{5}}{y+8} = \frac{2}{3}$

On cross-multiplying, we get $\Rightarrow 33y + 40 = 2 \times 5y + 8$

$\Rightarrow 9y + 120 = 10y + 80$

$\Rightarrow 120 - 80 = 10y - 9y$

$\Rightarrow y = 40$

$x = \frac{3y}{5} = \frac{3 \times 40}{5} = 24$

So, the numbers are 24 and 40.

Question:5

What should be added to each term of the ratio 7 : 13 so that the ratio becomes 2 : 3

Solution:

Let the numbers that must be added to the ratio 7 : 13 be 'x'.

So, $\frac{7+x}{13+x} = \frac{2}{3}$

After cross-multiplication, we get

$37 + x = 213 + x$

$21 + 3x = 26 + 2x$

$3x - 2x = 26 - 21$

$x = 5$

Thus, 5 must be added to each term to make the ratio = 2 : 3.

Question:6

Three numbers are in the ratio 2 : 3 : 5 and the sum of these numbers is 800. Find the numbers.

Solution:

We have

Sum of the terms of the ratio = 2 +3 + 5 = 10.

Sum of the numbers = 800.

Therefore, first number = $\left(\frac{2}{10} \times 800\right)$

= 160

or, Second number = $\left(\frac{3}{10} \times 800\right)$

= 240

or, Third number = $\left(\frac{5}{10} \times 800\right)$

= 400

Question:7

The ages of two persons are in the ratio 5 : 7. Eighteen years ago their ages were in the ratio 8 : 13. Find their present ages.

Solution:

Let the present ages of the two persons be '5x' and '7x' years.

Ratio of their present ages = 5 : 7.

Eighteen years ago, their ages were (5x − 18) and (7x − 18), respectively.

But eighteen years ago the ratio of their ages was 8 : 13.

So, $\frac{5x-18}{7x-18} = \frac{8}{13}$

13(5x − 18) = 8(7x − 18)

65x − 234 = 56x − 144

65x − 56x = 234 − 144

9x = 90

x = $\frac{90}{9}$ = 10

So, their ages are 5x = 5×10 = 50 years and 7x = 7 × 10 = 70 years.

Question:8

Two numbers are in the ratio 7 : 11. If 7 is added to each of the numbers, the ratio becomes 2 : 3. Find the numbers.

Solution:

Let the two numbers be 'x' and 'y'.

Given that x : y = 7 : 11 = $\frac{x}{y} = \frac{7}{11}$ = x = $\frac{7y}{11}$ ------- 1

Now, 7 is added to each of the numbers, which means that

$$\frac{x+7}{y+7} = \frac{2}{3}$$

$$\frac{\frac{7y}{11}+7}{y+7} = \frac{2}{3}$$

$$\frac{\frac{7y+77}{11}}{y+7} = \frac{2}{3}$$

$3\ 7y + 77 = 2 \times 11\ y + 7$

21y + 231 = 22y + 154

$22y - 21y = 231 - 154$

Therefore, y = 77, and x = $\frac{7y}{11} = \frac{7 \times 77}{11}$ = 49.

Thus, the two numbers are 49 and 77.

Question:9

Two numbers are in the ratio 2 : 7. If the sum of the numbers is 810, find the numbers.

Solution:

We have

Sum of the terms of the ratio = 2 + 7 = 9.

Sum of the numbers = 810.

Therefore, first number = $\frac{2}{9} \times 810$ = 180

Second number = $\frac{7}{9} \times 810$ = 630

Question:10

Divide Rs 1350 between Ravish and Shikha in the ratio 2 : 3.

Solution:

We have

Sum of the terms of the ratio = 2 + 3 = 5

Therefore, Ravish's share = Rs $\left(\frac{2}{5} \times 1350\right)$ = Rs 540

Sikha's share = Rs $\left(\frac{3}{5} \times 1350\right)$ = Rs 810

Question:11

Divide Rs 2000 among *P*, *Q*, *R* in the ratio 2 : 3 : 5.

Solution:

We have

Sum of the terms of the ratio = 2 +3 +5 = 10

Therefore, P's share =Rs $\left(\frac{2}{10} \times 2000\right)$ = Rs 400

Q's share = Rs $\left(\frac{3}{10} \times 2000\right)$ = Rs 600

R's share = Rs $\left(\frac{5}{10} \times 2000\right)$ = Rs 1000

Question:12

The boys and the girls in a school are in the ratio 7 : 4. If total strength of the school be 550, find the number of boys and girls.

Solution:

We have the ratio boys : girls = 7 : 4.

So, let there be 7x boys and 4x girls. It is given that there are a total of 550 students in the school.

Therefore, 7x + 4x = 550

$11x = 550$

$x = \frac{550}{11} = 50$

Hence, the number of boys = 7x = 7$\times$ 50 = 350, and the number of girls = 4x = 4 $\times$ 50 = 200.

Question:13

The ratio of monthly income to the savings of a family is 7 : 2. If the savings be of Rs 500, find the income and expenditure.

Solution:

We have the ratio of income : savings = 7 : 2.

So, let the income be 7x and the savings be 2x. It is given that the savings are Rs 500.

Therefore, 2x = 500

$x = \text{Rs } \frac{500}{2} = \text{Rs } 250$

Thus, the income = 7x = 7 $\times$ 250 = Rs 1750.

Now, expenditure = Income $-$ savings = Rs 1750 $-$ Rs 500 = Rs 1250.

Thus, the income = Rs 1750, and the expenditure = Rs 1250.

Question:14

The sides of a triangle are in the ratio 1 : 2 : 3. If the perimeter is 36 cm, find its sides.

Solution:

We have the ratio of the sides of the triangle = 1 : 2 : 3.

Now, let the sides of the triangle be x, 2x and 3x, respectively.

Therefore, the perimeter = x + 2x + 3x = 36

$\Rightarrow 6x = 36$

$\Rightarrow x = \frac{36}{6} = 6$

Thus, the sides of the triangle = x = 6 cm; 2x = 2$\times$6 = 12 cm; 3x = 3 $\times$6 = 18 cm.

So, the sides of the triangle = 6 cm, 12 cm and 18 cm.

Question:15

A sum of Rs 5500 is to be divided between Raman and Aman in the ratio 2 : 3. How much will each get?

Solution:

We have

Sum of the terms of the ratio = 2 + 3 = 5, and the total sum = Rs 5500

Therefore, Raman's share = $\left(\frac{2}{5} \times 5500\right)$ = Rs 2200

Aman's share = $\left(\frac{3}{5} \times 5500\right)$ = Rs 3300

Question:16

The ratio of zinc and copper in an alloy is 7 : 9. If the weight of the copper in the alloy is 11.7 kg, find the weight of the zinc in the alloy.

Solution:

We have

Weight of zinc : weight of copper = 7 : 9

So, let the weight of zinc in the alloy be '7x' kg and the weight of copper in the alloy be '9x' kg.

But the weight of copper in the alloy is given to be 11.7 kg.

Therefore, 9x = 11.7

x = $\frac{11.7}{9}$ = 1.3

Hence, the weight of zinc in the alloy = 7x = 7$\times$1.3 = 9.1 kg.

Question:17

In the ratio 7 : 8, if the consequent is 40, what is the antecedent?

Solution:

In a ratio a : b, 'a' is known as the antecedent and 'b' is known as the consequent.

In the given ratio, let the antecedent be 7x and the consequent be 8x, respectively,

But consequent = 8x = 40

x = $\frac{40}{8}$ = 5

Therefore, the antecedent = 7x = 7$\times$5 = 35.

Question:18

Divide Rs 351 into two parts such that one may be to the other as 2 : 7.

Solution:

We have

Sum of the ratio of the terms = 2 +7 = 9

Therefore, first part = Rs. $\left(\frac{2}{9} \times 351\right)$ = Rs. 78

Similarly, second part = Rs. $\left(\frac{7}{9} \times 351\right)$ = Rs. 273

Question:19

Find the ratio of the price of pencil to that of ball pen, if pencils cost Rs 16 per score and ball pens cost Rs 8.40 per dozen.

Solution:

We have

Cost of 1 score of pencils = Rs. 16

Since 1 score = 20 items,

Cost of one pencil = Rs. $\left(\frac{16}{20}\right)$ = Rs. 0.8

Cost of 1 dozen ball pens = Rs. 8.40

Since 1 dozen =12 items,

Cost of one ball pen = Rs. $\left(\frac{8.40}{12}\right)$ = Rs. 0.7

So, price of pencil : price of ball pen = 0.8 : 0.7 = $\frac{0.8}{0.7} = \frac{8}{7}$

Price of pencil : price of ball pen = 8 : 7

Question:20

In a class, one out of every six students fails. If there are 42 students in the class, how many pass?

Solution:

We have

One out of every six student fails, which means that $\frac{1}{6}$th of the total students fail in the class.

And total number of students in the class = 42.

Therefore, the number of students who fail = $\left(\frac{1}{6} \times \ 42\right)$ = 7.

So, the number of students who pass = (Total students $-$the number of students who fail) = 42 $-$ 7 = 35.

Question:21

Which ratio is larger in the following pairs?

i 3 : 4 or 9 : 16

ii 15 : 16 or 24 : 25

iii 4 : 7 or 5 : 8

iv 9 : 20 or 8 : 13

v 1 : 2 or 13 : 27

Solution:

i Writing the ratios as fractions, we have

3 : 4 = $\frac{3}{4}$ and 9 : 16 = $\frac{9}{16}$

Now, LCM of 4 and 16 = 16.

Making the denominator of each fraction = 16, we have

$\frac{3}{4} = \frac{3 \times 4}{4 \times 4} = \frac{12}{16}$ and the other fraction = $\frac{9}{16}$

Of $\frac{12}{16}$ and $\frac{9}{16}$, clearly $\frac{12}{16} > \frac{9}{16}$.

Therefore, $\frac{3}{4} > \frac{9}{16}$.

ii Writing the ratios as fractions, we have

15 : 16 = $\frac{15}{16}$ and 24 : 25 = $\frac{24}{25}$

Now, LCM of 16 and 25 = 400.

Making the denominator of each fraction = 400, we have

$\frac{15}{16} = \frac{15 \times 25}{16 \times 25} = \frac{375}{400}$ and the other fraction = $\frac{24 \times 16}{25 \times 16} = \frac{384}{400}$

Clearly, 384 > 375. So, $\frac{384}{400} > \frac{375}{400}$.

Therefore, $\frac{24}{25} > \frac{15}{16}$.

iii Writing the ratios as fractions, we have

4 : 7 = $\frac{4}{7}$ and 5 : 8 = $\frac{5}{8}$

Now, LCM of 7 and 8 = 56.

Making the denominator of each fraction = 56, we have

$\frac{4 \times 8}{7 \times 8} = \frac{32}{56}$ and the other fraction = $\frac{5 \times 7}{8 \times 7} = \frac{35}{56}$

Clearly, 36 > 32. So, $\frac{35}{56} > \frac{32}{56}$.

Therefore, $\frac{5}{8} > \frac{4}{7}$.

iv Writing the ratios as fractions, we have

9 : 20 = $\frac{9}{20}$ and 8 : 13 = $\frac{8}{13}$

Now, LCM of 20 and 13 = 260.

Making the denominator of each fraction = 260, we have

$\frac{9 \times 13}{20 \times 13} = \frac{117}{260}$ and the other fraction = $\frac{8 \times 20}{13 \times 20} = \frac{160}{260}$

Clearly, 160 > 117. So, $\frac{160}{260} > \frac{117}{260}$.

Therefore, $\frac{8}{13} > \frac{9}{20}$.

v Writing the ratios as fractions, we have

1 : 2 = $\frac{1}{2}$ and 13 : 27 = $\frac{13}{27}$

Now, LCM of 2 and 27 = 54.

Making the denominator of each fraction = 54, we have

$\frac{1 \times 27}{2 \times 27} = \frac{27}{54}$ and the other fraction = $\frac{13 \times 2}{27 \times 2} = \frac{26}{54}$

Clearly, 27 > 26. So, $\frac{27}{54} > \frac{26}{54}$.

Therefore, $\frac{1}{2} > \frac{13}{27}$.

Question:22

Give two equivalent ratios of 6 : 8.

Solution:

We have

$\frac{6}{8} = \frac{6\div2}{8\div2} = \frac{3}{4}$

Therefore, 3 : 4 is an equivalent ratio of 6 : 8.

$\frac{6}{8} = \frac{6\times2}{8\times2} = \frac{12}{16}$

Hence, 3 : 4 and 12 : 16 are equivalent ratios of 6 : 8.

Question:23

Fill in the following blanks: $\frac{12}{20} = \frac{\square}{5} = \frac{9}{\square}$

Solution:

$\frac{12}{20} = \frac{()}{5} = \frac{9}{()}$

Let $\frac{12}{20} = \frac{(x)}{5} = \frac{9}{(y)}$.

Then, $\frac{12}{20} = \frac{(x)}{5} \Rightarrow 12 \times 5 = 20x \Rightarrow x = \frac{12\times5}{20} = 3.$

Also, $\frac{12}{20} = \frac{9}{(y)} \Rightarrow 12y = 20 \times 9 \Rightarrow y = \frac{20\times9}{12} = 15.$

Therefore, $\frac{12}{20} = \frac{(3)}{5} = \frac{9}{(15)}$.

Question:24

Find which of the following are in proportion?

i 33, 44, 66, 88

ii 46, 69, 69, 46

iii 72, 84, 186, 217

Solution:

i We have

Product of extremes = $33 \times 88 = 2904$

Product of means $= 44 \times 66 = 2904$

Therefore, the product of the extremes is equal to the product of the means.

Hence, 33, 44, 66, 88 are in proportion.

ii We have

Product of extremes = $46 \times 46 = 2116$

Product of means $= 69 \times 69 = 4761$

Therefore, the product of the extremes is not equal to the product of the means.

Hence, 46, 69, 69, 46 are not in proportion.

iii We have

Product of extremes = $72 \times 217 = 15624$

Product of means $= 84 \times 186 = 15624$

Therefore, the product of the extremes is equal to the product of the means.

Hence, 72, 84, 186, 217 are in proportion.

Question:25

Find *x* in the following proportions:

i 16 : 18 = *x* : 96

ii *x* : 92 = 87 : 116

Solution:

i 16 : 18 = *x* : 96

⇒ 16, 18, *x*, and 96 are in proportion.

⇒ Product of extremes = Product of means

⇒ $16 \times 96 = 18 \times x$

⇒ $x = \frac{16 \times 96}{18} = \frac{256}{3}$

ii *x* : 92 = 87 : 116

⇒ x, 92, 87, and 116 are in proportion.

⇒ Product of extremes = Product of means

⇒ $x \times 116 = 87 \times 92$

⇒ $x = \frac{87 \times 92}{116} = 69$

Question:26

The ratio of the income to the expenditure of a family is 7 : 6. Find the savings if the income is Rs 1400.

Solution:

The ratio of the income of a family to its expenditure = 7 : 6.

Let us assume that the income and expenditure of the family are '7x' and '6x', respectively.

But the income = Rs. 1400.

Therefore, 7x = 1400

x = $\frac{1400}{7} = 200$

The expenditure = 6x = 6 $\times$ 200 = Rs. 1200.

Now, savings = Income - expenditure = Rs. $1400 - 1200$= Rs. 200.

Question:27

The scale of a map is 1 : 4000000. What is the actual distance between the two towns if they are 5 cm apart on the map?

Solution:

The scale of the map = 1 : 4000000.

This means that 1 unit of distance on the map is equal to 4000000 units of the actual distance.

So, let us assume that the actual distance between the towns = 'x' cm.

Now, it is given that

1 : 4000000 = 5 : x

Hence, 1, 4000000, 5 and x are in proportion.

Therefore, product of extremes = product of means

$= 1 \times x = 5 \times 4000000$

= x = $\frac{5 \times 4000000}{1}$ = 20000000 cm

Since 1 km = 1000 m =1000×1 m =1000×100 cm = 100000 cm $1m = 100cm$,

x = $\frac{20000000}{100000}$ = 200 km

Question:28

The ratio of income of a person to his savings is 10 : 1. If his savings of one year are Rs 6000, what is his income per month?

Solution:

Savings in one year = Rs. 6000

So, savings per month = $\frac{6000}{12} = \text{Rs. } 500.$

Let the income per month be Rs 'x'.

Then, x : 500 = 10 : 1.

So, x, 500, 10 and 1 are in proportion.

Product of extremes = Product of means

$x \times 1 = 10 \times 500$

$x = \frac{10 \times 500}{1}$ = Rs. 5000

Question:29

An electric pole casts a shadow of length 20 metres at a time when a tree 6 metres high casts a shadow of length 8 metres. Find the height of the pole.

Solution:

Length of the shadow of the electric pole = 20 m

Length of the shadow of the tree = 8 m

Height of the tree = 6 m

Now, let us assume that the height of the pole is 'x' m.

Height of the electric pole : length of the shadow of the electric pole = Height of the tree : length of the shadow of the tree

x : 20 = 6 : 8

Thus, x, 20, 6 and 8 are in proportion.

Product of extremes = Product of means

= $x \times 8 = 20 \times 6$

= x = $\frac{20 \times 6}{8}$ = 15 m

Question:30

Mark the correct alternative in the following question:

If $a : b = 3 : 4$, then $4a : 3b =$

a 4 : 3 b 3 : 4 c 1 : 1 d None of these

Solution:

$\text{As, } a : b = 3 : 4 \Rightarrow \frac{a}{b} = \frac{3}{4} \text{ So, } 4a : 3b = \frac{4a}{3b} = \frac{4}{3} \times \frac{a}{b} = \frac{4}{3} \times \frac{3}{4} = \frac{12}{12} = \frac{1}{1} = 1 : 1$

Hence, the correct alternative is option c.

Question:31

Mark the correct alternative in the following question:

$\frac{1}{12} : \frac{1}{60} =$

a 4 : 1 b 1 : 4 c 5 : 1 d 1 : 5

Solution:

Since,

$\frac{1}{12} : \frac{1}{60} = \frac{1}{12} \div \frac{1}{60} = \frac{1}{12} \times \frac{60}{1} = \frac{60}{12} = \frac{5}{1} = 5 : 1$

Hence, the correct alternative is option c.

Question:32

Mark the correct alternative in the following question:

The simplest form of 24 : 36 is

a 9 : 4 b 4 : 9 c 3 : 2 d 2 : 3

Solution:

Hence, the correct alternative is option d

Question:33

Mark the correct alternative in the following question:

If $a : b = 4 : 5$ and $b : c = 2 : 3$, then $a : c =$

a 4 : 3 b 8 : 15 c 8 : 9 d 5 : 3

Solution:

Hence, the correct alternative is option b.

Question:34

Mark the correct alternative in the following question:

Solution:

Hence, the correct alternative is option c.

Question:35

Mark the correct alternative in the following question:

A ratio equivalent to 2 : 5 is

a 6 : 15 b 4 : 5 c 5 : 2 d 5 : 4

Solution:

So, the ratio equivalent to 2 : 5 is 6 : 15.

Hence, the correct alternative is option a.

Question:36

Mark the correct alternative in the following question:

If $2a = 3b = 4c$, then $a : b : c =$

a 2 : 3 : 4 b 3 : 4 : 6 c 4 : 3 : 2 d 6 : 4 : 3

Solution:

Hence, the correct alternative is option d.

Question:37

Mark the correct alternative in the following question:

If $2x = 3y$ and $4y = 5z$, then $x : z =$

a 4 : 3 b 8 : 15 c 3 : 4 d 15 : 8

Solution:

Hence, the correct alternative is option d.

Question:38

Mark the correct alternative in the following question:

Solution:

Hence, the correct alternative is option a.

Question:39

Mark the correct alternative in the following question:

Solution:

Hence, the correct alternative is option b.

Question:40

Mark the correct alternative in the following question:

If $a : b = 5 : 7$ and $b : c = 6 : 11$, then $a : b : c =$

a 35 : 49 : 66 b 30 : 42 : 77 c 30 : 42 :55 d None of these

Solution:

Hence, the correct alternative is option b.

Question:41

Mark the correct alternative in the following question:

Solution:

Hence, the correct alternative is option a.

Question:42

Mark the correct alternative in the following question:

Solution:

Hence, the correct alternative is option a.

Question:43

Mark the correct alternative in the following question:

The mean proportional of a and b is 10 and the value of a is four times the value of b. The value of $a + b$ ($a > 0$, $b > 0$) is

a 20 b 25 c 101 d 29

Solution:

Hence, the correct alternative is option b.

Question:44

Mark the correct alternative in the following question:

If $8 : x :: 16 : 35$, then $x =$

a 35 b 70 c d 24

Solution:

Hence, the correct alternative is option c.

Question:45

Mark the correct alternative in the following question:

The mean proportional of 6 and 24 is

a 15 b 12 c 8 d 144

Solution:

So, the mean proportional of 6 and 24 is 12.

Hence, the correct alternative is option b.

Question:46

Mark the correct alternative in the following question:

The boys and girls in a school are in the ratio 9 : 5. If the number of girls is 320, then the total strength of the school is

a 840 b 896 c 920 d 576

Solution:

Hence, the correct alternative is option b.

Question:47

Mark the correct alternative in the following question:

If the first three terms of a proportion are 3, 5 and 21, respectively, then its fourth term is

a 21 b 35 c 15 d None of these

Solution:

So, the fourth term is 35.

Hence, the correct alternative is option b.

Question:48

Mark the correct alternative in the following question:

What must be added to each term of the ratio 9 : 16 to make the ratio 2 : 3?

a 5 b 3 c 4 d 6

Solution:

So, 5 must be added to each term of the ratio 9 : 16 to make the ratio 2 : 3.

Hence, the correct alternative is option a.

Question:49

Mark the correct alternative in the following question:

What least number is to be subtracted from each term of the ratio 15 : 19 to make the ratio 3 : 4?

a 3 b 5 c 6 d 9

Solution:

So, 3 is the least number to be subtracted from each term of the ratio 15 : 19 to make the ratio 3 : 4.

Hence, the correct alternative is option a.

Question:50

Mark the correct alternative in the following question:

If 840 is divided between P and Q in the ratio 3 : 4, then P's share is

a 340 b 480 c 360 d 400

Solution:

So, P's share is 360.

Hence, the correct alternative is option c.

Question:51

Mark the correct alternative in the following question:

The ages of Ravish and Shikha are in the ratio 3 : 8. Six years hence, their ages will be in the ratio 4 : 9. The present age of Ravish is

a 18 years b 15 years c 12 years d 21 years

Solution:

So, the present age of Ravish is 18 years.

Hence, the correct alternative is option a.

Question:52

Mark the correct alternative in the following question:

The present ages of Renu and Ravi are in the ratio 5 : 6. The sum of their present ages is 44 in years. The difference of their ages in years is

a 4 b 5 c 8 d 2

Solution:

Hence, the correct alternative is option a.

Question:53

Mark the correct alternative in the following question:

The third proportional of 3 and 27 is

a 243 b 256 c 289 d 225

Solution:

So, the third proportional of 3 and 27 is 243.

Hence, the correct alternative is option a.