

BHARAT SCHOOL OF BANKING

Ratio and proportion

1 If $P : Q : R = 2 : 3 : 4$, Then $P / Q : Q / R : R / P = ?$

- A. 8: 9: 24
- B. 7: 9: 24
- C. 4: 6: 15
- D. 8: 11: 24
- E. None of these

2: If $2P = 3Q = 4R$, Then $P : Q : R = ?$

- A. 2: 3: 5
- B. 2: 3: 4
- C. 3: 5: 6
- D. 1: 2: 3
- E. None of these

3: If $P : Q = 2 : 3$, $Q : R = 4 : 5$ and $R : S = 6 : 7$, then $P : S = ?$

- A. 18: 25
- B. 17: 35
- C. 16: 35
- D. 8: 11
- E. None of these

4: Rama distributes his pencil among his four friends Rakesh, Rahul, Ranjan, and Rohit in the ratio $1/2 : 1/3 : 1/4 : 1/5$. What is the minimum number of pencils that the person should have?

- A. 66
- B. 64
- C. 72
- D. 77
- E. None of these

5: Two numbers are respectively 40% and 60% more than third number. Find the ration of two numbers ?

- A. 8: 7
- B. 7: 9
- C. 9: 11
- D. 8: 13
- E. None of these

6: Rs 1210 were divided among three person P, Q, R so that $P : Q = 5 : 4$ and $Q : R = 9 : 10$. Then R gets the amount.

- A. 450
- B. 400

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- C. 500
- D. 375
- E. None of these

7: Share Rs.4200 among joy, sanjay and bijoy in the ration 2 : 4 : 6.Find the amount received by sanjay.

- A. 1200
- B. 1300
- C. 1400
- D. 1500
- E. None of these

8 :Find the mean proportional between given two number that is 64 and 49.

- A. 45
- B. 52
- C. 54
- D. 56
- E. None of these

9: What number has to be added to each term of 3 : 5 to make the ratio 5 : 6 .

- A. 7
- B. 6
- C. 8
- D. 5
- E. None of these

10:Rs. 385 were divided among P , Q , R in such a way that P had Rs 20 more than Q and R had Rs 15 more than P . How much was R's share?

- A. 156
- B. 145
- C. 152
- D. 150
- E. None of these

Answers with Explanation:-

1. $P : Q : R = 2 : 3 : 4$.

Let $P = 2k$,

$Q = 3k$,

$R = 4k$.

Then,

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$$P / Q = 2k / 3k = 2 / 3 ,$$

$$Q / R = 3k / 4k = 3 / 4$$

$$R / P = 4k / 2k = 2 / 1.$$

$$\text{SO, } P / Q : Q / R : R / P = 2 / 3 : 3 / 4 : 2 / 1 = 8 : 9 : 24.$$

2. Let $2P = 3Q = 4R = k$,

Then ,

$$P = k / 2,$$

$$Q = k / 3 ,$$

$$R = k / 4.$$

$$\text{SO, } P : Q : R = k / 2 : k / 3 : k / 4 = 6 : 4 : 3.$$

3. (C)

4. Rakesh : Rahul : Ranjan : Rohit = $1 / 2 : 1 / 3 : 1 / 4 : 1 / 5$

Step 1: At First we need to do is LCM of 2,3,4 and 5 is 60.

Step 2: Then pencil are distributed in ratio among friends,

$$\text{Rakesh} = (1 / 2 \times 60) = 30.$$

$$\text{Rahul} = (1 / 3 \times 60) = 20.$$

$$\text{Ranjan} = (1 / 4 \times 60) = 15.$$

$$\text{Rohit} = (1 / 5 \times 60) = 12.$$

$$\text{Step 3: Total number of pencils are } (30 \times x + 20 \times x + 15 \times x + 12 \times x) = 77 \times x.$$

For minimum number of pencils $x = 1$.

The person should have atleast 77 pencils.

5. Step 1: Let the third number is A

Then first number is 140% of A = $140 \times A / 100 = 7A / 5$ and second number is 160% of B = $160 \times B / 100 = 8B / 5$.

Step 2: now ratio of first and second number is $7A / 5 : 8B / 5 = 35A : 40B = 7 : 8$.

$$6. P : Q = 5 : 4, Q : R = 9 : 10 = (9 \times 4 / 9) : (10 \times 4 / 9) = 4 : 40 / 9.$$

$$\text{So, } P : Q : R = 5 : 4 : 40 / 9 = 45 : 36 : 40$$

$$\text{Sum of ratio terms is } = (45 + 36 + 40) = 121.$$

$$\text{R share of amount is Rs } (1210 \times 40 / 121) = \text{Rs. } 400.$$

7. Amount received by sanjay.

$$4 / 12 \times 4200 = 1400 = (\text{related ratio} / \text{sum of ratio}) \times \text{Total amount}$$

So, the Amount received by sanjay is 1400.

8. The mean proportion of two numbers is

$$\text{Root of } 64 \text{ and } 49 \text{ is } \sqrt{8 \times 7} = 8 \times 7 = 56.$$

So, the mean proportional is 56.

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9. Let the number to be added x , Then

$$3 + x / 5 + x = 5 / 6$$

$$6(3 + x) = 5(5 + x)$$

$$x = (25 - 18) = 7$$

So, the number to be added is 7.

10. Let Q gets Rs x . Then We can say P gets Rs $(x + 20)$ and R gets Rs $(x + 35)$.

$$x + 20 + x + x + 35 = 385$$

$$3x = 330$$

$$x = 110.$$

$$R's \text{ share} = Rs(110 + 35) = Rs 145.$$

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