

RATIO AND PROPORTION

Instructions

- Each question has four options (A, B, C, D). Choose the correct answer.

Questions

1. The ratio of incomes of A and B is 3:5, and the ratio of their expenditures is 2:3. If A saves 20% of his income, what percentage of his income does B save?

- A) 28%
- B) 30%
- C) 33.33%
- D) 40%

2. A mixture contains milk and water in the ratio 4:1. If 10 liters of water is added, the ratio becomes 2:1. How much milk is in the mixture?

- A) 20 liters
- B) 25 liters
- C) 30 liters
- D) 40 liters

3. The ratio of the number of boys to girls in a class is 5:3. If 4 boys leave and 2 girls join, the ratio becomes 3:2. How many students were initially in the class?

- A) 124
- B) 132
- C) 140
- D) 112

4. A sum of money is divided among A, B, and C in the ratio 2:3:5. If C's share is Rs. 1500 more than A's share, what is the total sum?

- A) Rs. 3000
- B) Rs. 4500
- C) Rs. 5000

D) Rs. 7500

5. Two alloys contain copper and zinc in the ratios 3:2 and 4:1, respectively. In what ratio should they be mixed to obtain an alloy with a copper-to-zinc ratio of 7:3?

A) 2:3

B) 1:1

C) 4:1

D) 1:4

6. The ratio of speeds of two trains is 5:4. If the faster train covers 360 km in 3 hours, how much time will the slower train take to cover 320 km?

A) 3.33 hours

B) 3.6 hours

C) 4 hours

D) 4.5 hours

7. A, B, and C have amounts in the ratio 4:5:6. If A gives Rs. 200 to B and B gives Rs. 300 to C, the new ratio becomes 3:4:5. What is the initial amount with A?

A) Rs. 2000

B) Rs. 1000

C) Rs. 1200

D) Rs. 1600

8. A container has two liquids, X and Y, in the ratio 7:3. If 20 liters of the mixture is removed and replaced with 20 liters of liquid Y, the new ratio becomes 7:5. What is the total capacity of the container?

A) 60 liters

B) 75 liters

C) 90 liters

D) 120 liters

9. The ages of three people A, B, and C are in the ratio 2:3:5. After 5 years, their ages will be in the ratio 5:7:11. What is the current age of A?

- A) 10 years
- B) 12 years
- C) 15 years
- D) 20 years

10. A sum of Rs. 1200 is divided among A, B, and C such that A's share is twice B's, and B's share is thrice C's. How much does B receive?

- A) Rs. 300
- B) Rs. 360
- C) Rs. 450
- D) Rs. 600

11. The ratio of two numbers is 4:5. If their LCM is 180, what is their HCF?

- A) 9
- B) 12
- C) 15
- D) 18

12. A shop sells two types of rice in the ratio 3:2 by weight. If the price per kg of the first type is Rs. 40 and the second type is Rs. 50, what is the average price per kg of the mixture?

- A) Rs. 42
- B) Rs. 44
- C) Rs. 46
- D) Rs. 48

13. The ratio of milk to water in a mixture is 5:2. If 14 liters of the mixture is removed and 6 liters of water is added, the new ratio becomes 3:2. What was the initial quantity of the mixture?

- A) 35.5 liters
- B) 42.5 liters
- C) 49.5 liters
- D) 45.5 liters

14. Three friends invest in a business in the ratio 3:4:5. The total profit is Rs. 4800, and they share it in the same ratio. If the profit is reinvested and the new ratio becomes 4:5:6, what is A's new share?

- A) Rs. 1280
- B) Rs. 1440
- C) Rs. 1600
- D) Rs. 1800