

Ratio & proportions

Q1. If $A : B = 7 : 9$ and $B : C = 3 : 5$, then $A : B : C$ is equal to:

- (a) $7 : 3 : 15$ (b) $7 : 9 : 5$ (c) $7 : 9 : 15$ (d) $21 : 35 : 45$

Q2. If $2A = 3B = 4C$, then $A : B : C$ is:

- (a) $2 : 3 : 4$ (b) $3 : 4 : 6$ (c) $4 : 3 : 2$ (d) $6 : 4 : 3$

Q3. If $A : B = 2 : 3$ and $B : C = 3 : 7$, then $A + B : B + C : C + A$ is:

- (a) $4 : 8 : 9$ (b) $4 : 10 : 9$ (c) $5 : 8 : 9$ (d) $5 : 10 : 9$

Q4. If two-third of A is four-fifth of B , then $A : B = ?$

- (a) $10 : 9$ (b) $9 : 10$ (c) $6 : 5$ (d) $5 : 6$

Q5. The ratio of $2^{2.5} : 5^3$ is same as

- (a) $1 : 25$ (b) $5 : 3$ (c) $5 : 6$ (d) $25 : 1$

Q6. A , B and C are three batsman. The ratio of the runs scored by them in a certain match is given below: $A : B = 5 : 3$ and $B : C = 4 : 5$. At the end of the match they scored 564 runs. The number of runs scored by B is:

- (a) 104 (b) 114 (c) 124 (d) 144

Q7. A man ordered 4 pairs of black socks and some pairs of brown socks. The price of a black socks is double that of a brown pair. While preparing the bill the clerk interchanged the number of black and brown pairs by mistake, which increased the bill by 50%. The ratio of the number of black and brown pairs of socks in the original order was:

- (a) $4 : 1$ (b) $2 : 1$ (c) $1 : 4$ (d) $1 : 2$

Q8. There is a ratio of $5 : 4$ between two numbers. If 40 per cent of the first is 12, then 50% of the second number is:

- (a) 24 (b) 20 (c) 12 (d) 18

Q9. Three numbers are in ratio $1/2 : 2/3 : 3/4$. The difference between the greatest and the smallest number is 36. The numbers are

- (a) 72, 96, 108 (b) 72, 84, 96 (c) 72, 84, 108 (d) 60, 72, 96

Q10. Of the three numbers, the ratio of the first and the second is $8 : 9$ and that of the second and third is $3 : 4$. If the product of the first and third number is 2400, then the second number is:

- (a) 55 (b) 45 (c) 40 (d) 30

Q11. The income of A and B are in the ratio 5 : 3. The expenses of A, B and C are in the ratio of 8 : 5 : 2. If C spends Rs. 2000 and B saves Rs. 700, then A saves

- (a) Rs. 1500 (b) Rs. 1000 (c) Rs. 500 (d) Rs. 250

Q12. In a bag, there are three types of coins such as 1 rupee, 50 paise and 25 paise in the ratio of 3 : 8 : 20. Their total value is Rs. 372. The total number of coins is

- (a) 1200 (b) 961 (c) 744 (d) 612

Q13. If there is a reduction in the number of workers in a factory in the ratio 15 : 11 and an increment in their wage in the ratio 22 : 25, then the ratio by which the total wage of the workers should be decreased is

- (a) 3 : 5 (b) 3 : 7 (c) 5 : 6 (d) 6 : 5

Q14. The ratio of the number of boys and girls in a college is 7 : 8. If the percentage increase in the number of boys and girls be 20% and 10% respectively, what will be the new ratio?

- (a) 8 : 9 (b) 17 : 18 (c) 21 : 22 (d) Cannot be determined

Q15. If 40% of a number is equal to two-third of another number, what is the ratio of first number to the second number?

- (a) 2 : 5 (b) 3 : 7 (c) 5 : 3 (d) 7 : 3

Q16. In a bag, there are coins of 25 p, 10 p and 5 p in the ratio of 1 : 2 : 3. If there is Rs. 30 in all, how many 5 p coins are there?

- (a) 50 (b) 100 (b) 150 (c) 200

Q17. The salaries of A, B, and C are in the ratio of 1 : 2 : 3. The salary of B and C together is Rs. 6000. By what percent is the salary of C more than that of A?

- (a) 200% (b) 300% (c) 400% (d) 500%

Q18. A sum of Rs. 427 is to be divided among A, B and C such that 3 times A's share, 4 times B's share and 7 times C's share are all equal. The share of C is :

- (a) 196 (b) 84 (c) 120 (d) 165

Q19. The total number of students in a school was 660. The ratio between boys and girls was 13 : 9. After some days, 30 girls joined the school and some boys left the school and the new ratio between boys and girls became 6 : 5. Find the number of boys who left school?

- (a) 60 (b) 50 (c) 40 (d) 30

Q20. The monthly income of two persons are in the ratio 2 : 3 and their monthly expenses are in the ratio 5 : 9. If each of them saves ₹600 per month, then their monthly incomes are

- (a) Rs. 1500 and Rs. 2250 (b) Rs. 1200 and Rs. 1800
(c) Rs. 1600 and Rs. 2400 (d) Rs. 1400 and Rs. 2,100

Q21. A mixture contains sugar solution and colored water in the ratio of 4 : 3. If 10 liters of colored water is added to the mixture, the ratio becomes 4: 5. Find the initial quantity of sugar solution in the given mixture.

- (a) 10 litres (b) 20 litres (c) 15 litres (d) 25 litres

Partnership

Q22. A and B invest in a business in the ratio 3 : 2. If 5% of the total profit goes to charity and A's share is Rs. 855, the total profit is:

- (a) Rs. 1425 (b) Rs. 150 (c) Rs. 1537.50 (d) Rs. 1576

Q23. A, B and C jointly thought of engaging themselves in a business venture. It was agreed that A would invest Rs. 6500 for 6 months, B, Rs. 8400 for 5 months and C, Rs. 10,000 for 3 months. A wants to be the working member for which, he was to receive 5% of the profits. The profit earned was Rs. 7400. Calculate the share of B in the profit.

- (a) Rs. 1900 (b) Rs. 2660 (c) Rs. 2800 (d) Rs. 2840

Q24. A, B, C subscribe Rs. 50,000 for a business. A subscribes Rs. 4000 more than B and B Rs. 5000 more than C. Out of a total profit of Rs. 35,000, A receives:

- (a) Rs. 8400 (b) Rs. 11,900 (c) Rs. 13,600 (d) Rs. 14,700

Q25. Three partners shared the profit in a business in the ratio 5 : 7 : 8. They had partnered for 14 months, 8 months and 7 months respectively. What was the ratio of their investments?

- (a) 5 : 7 : 8 (b) 20 : 49 : 64 (c) 38 : 28 : 21 (d) None of these

Q26. A starts business with Rs. 3500 and after 5 months, B joins with A as his partner. After a year, the profit is divided in the ratio 2 : 3. What is B's contribution in the capital?

- (a) Rs. 7500 (b) Rs. 8000 (c) Rs. 8500 (d) Rs. 9000

Q27. A and B started a partnership business investing some amount in the ratio of 3 : 5. C joined then after six months with an amount equal to that of B. In what proportion should the profit at the end of one year be distributed among A, B and C?

- (a) 3 : 5 : 2 (b) 3 : 5 : 5 (c) 6 : 10 : 5 (d) Data inadequate

Q28. A, B, C rent a pasture. A puts 10 oxen for 7 months, B puts 12 oxen for 5 months and C puts 15 oxen for 3 months for grazing. If the rent of the pasture is Rs. 175, how much must C pay as his share of rent?

- (a) Rs. 45 (b) Rs. 50 (c) Rs. 55 (d) Rs. 60

Q29. A began a business with Rs. 85,000. He was joined afterwards by B with Rs. 42,500. For how much period does B join, if the profits at the end of the year are divided in the ratio of 3 : 1?

- (a) 4 months (b) 5 months (c) 6 months (d) 8 months

Q30. Aman started a business investing Rs. 70,000. Rakhi joined him after six months with an amount of Rs. 1,05,000 and Sagar joined them with Rs. 1.4 lakhs after another six months. The amount of profit earned should be distributed in what ratio among Aman, Rakhi and Sagar respectively, 3 years after Aman started the business?

- (a) 7 : 6 : 10 (b) 12 : 15 : 16 (c) 42 : 45 : 56 (d) Cannot be determined

Answer key

1	C	7	C	13	D	19	D	25	B
2	D	8	C	14	C	20	C	26	D
3	D	9	A	15	C	21	B	27	C
4	C	10	B	16	C	22	B	28	A
5	D	11	A	17	A	23	B	29	D
6	D	12	B	18	B	24	D	30	B