

Ratio and Proportion

1. If $p : Q = 8 : 15$ and $Q : R = 3 : 2$, then find $P : Q : R$
 a) $8 : 15 : 7$ b) $7 : 15 : 8$ c) $8 : 15 : 10$ d) $10 : 15 : 8$ e) None of the above
2. If $p : Q = 8 : 15$, and $Q : R = 5 : 8$, $R : S = 4 : 5$, then $P : S$ is equal to
 a) $4 : 15$ b) $2 : 15$ c) $3 : 19$ d) $7 : 15$ e) None of the above
3. If $A : B = 2 : 3$, $B : C = 5 : 7$ and $C : D = 3 : 10$, then What is $A : D$ equal to ?
 a) $1 : 7$ b) $2 : 7$ c) $1 : 5$ d) $5 : 1$
4. Find the 4 th proportional to 4, 16 and 7.
 a) 28 b) 29 c) 22 d) 25 e) None of the above
5. Calculate the 3 rd proportional to 15 and 30.
 a) 55 b) 15 c) 65 d) 60 e) None of the above
6. Find the mean proportional between 9 and 64
 a) 25 b) 24 c) 27 d) 35 e) Nonve of the above
7. What is the mean proportional between $(15 \pm \sqrt{200})$ and $(27 - \sqrt{648})$?
 a) 4 b) $14\sqrt{7}$ c) $3\sqrt{5}$ d) $3\sqrt{5}$
8. What will be the duplicate ratio of $2 : 7$?
 a) $4 : 49$ b) $49 : 4$ c) $4 : 14$ d) $8 : 343$ e) None of the above
9. Find the sub- duplicate ratio of $81 : 64$.
 a) $8 : 9$ b) $4 : 9$ c) $9 : 8$ d) $7 : 8$ e) None of the above
10. Find the triplicate ratio of $7 : 5$
 a) $125 : 343$ b) $343 : 125$ c) $344 : 125$ d) $343 : 126$ e) None of the above
11. Calculate the sub-triplicate ratio of $512 : 729$
 a) $9 : 8$ b) $4 : 9$ c) $7 : 8$ d) $8 : 9$ e) None of the above
12. What will be the inverse ratio of $17 : 19$?
 a) $19 : 17$ b) $18 : 17$ c) $17 : 18$ d) $19 : 5$ e) None of the above
13. Find the compound ratio of $2 : 7$, $5 : 3$ and $4 : 7$.
 a) $147 : 40$ b) $40 : 147$ c) $147 : 30$ d) $30 : 147$ e) None of the above
14. If $A : B = 3 : 4$ and $B : C = 8 : 9$, then find the value of $A : B : C$.
 a) $3 : 4 : 5$ b) $1 : 2 : 3$ c) $7 : 12 : 17$ d) $6 : 8 : 9$
15. If $a : b = b : c$, then ratio $a^4 : b^4$ is equal to
 a) $ac : b^2$ b) $a^2 : c^2$ c) $c^2 : a^2$ d) $b^2 : ac$
16. If $a : b = 3 : 5$ and $b : c = 4 : 7$ then $a : c$ is equal to
 a) $11 : 35$ b) $35 : 11$ c) $35 : 12$ d) $12 : 35$ e) None of the above
17. If $4a = 5b$ and $7b = 9c$, then $a : b : c$ is equal to
 a) $45 : 36 : 28$ b) $44 : 33 : 28$ c) $28 : 36 : 45$ d) $36 : 28 : 45$ e) None of the above
18. If $\frac{a}{7} = \frac{b}{9} = \frac{c}{11}$ then find $a : b : c$
 a) $11 : 9 : 7$ b) $9 : 7 : 11$ c) $7 : 9 : 11$ d) $11 : 7 : 9$ e) None of the above
19. If 30 % of A = 20 % of B, then find the value of $A : B$.
 a) $1 : 3$ b) $3 : 2$ c) $3 : 1$ d) $2 : 3$ e) None of the above
20. If $P : Q : R = 2 : 3 : 4$, then find $\frac{P}{Q} : \frac{Q}{R} : \frac{R}{P}$

- a) 8 : 9 : 24 b) 9 : 8 : 24 c) 24 : 8 : 9 d) 8 : 24 : 9 e) None of the above

21. In a certain school, the ratio of boys to girls is 7 : 5. If there are 2400 students in the school, then how many girls are there in the school?
a) 500 b) 700 c) 800 d) 1000
22. One-half of a certain number is equal to 65% of the 2nd number. Find the ratio of 1st to 2nd number.
a) 10 : 13 b) 8 : 13 c) 13 : 8 d) 13 : 10 e) None of the above
23. The ratio between two numbers is 3 : 4. If each number is increased by 3, the ratio becomes 4 : 5. Find the difference between the numbers
a) 3 b) 9 c) 2 d) 7 e) None of the above
24. From each of two given numbers, half the smaller number is subtracted. After such subtraction, the larger number is 4 times as large as the smaller number. What is the ratio of the numbers?
a) 5:2 b) 1 : 4 c) 4 : 1 d) 4 : 5
25. Two numbers are in the ratio of 4 : 7. If 5 is subtracted from each, the ratio becomes 1 : 2. Find the greater numbers?
a) 15 b) 40 c) 20 d) 35
26. Two numbers are in the ratio 2 : 3. If 9 is added to each number, they will be in the ratio 3 : 4. What is the product of the two numbers?
a) 360 b) 480 c) 486 d) 512
27. The total number of students in a school is 2140. If the number of girls in the school is 1200, then what is the ratio of the total number of boys to the total number of girls in the school?
a) 26 : 25 b) 47 : 60 c) 18 : 13 d) 31 : 79 e) None of the above
28. The total weight of Sanjay and Suresh is 120 kg. If Sanjay weighs 30 kg more than Suresh, then what is the ratio of the weight of Suresh to that of Sanjay?
a) 0.4 b) 0.6 c) 0.3 d) 0.25 e) None of the above
29. In a school, the ratio of boys and girls is 4 : 5. When 100 girls leave the school, the ratio becomes 6 : 7. How many boys are there in the school?
a) 1800 b) 1200 c) 1000 d) 1500 e) None of the above
30. In a class, the number of boys and girls is in the ratio of 4 : 5. If 10 more boys join the class, the ratio of numbers of boys and girls becomes 6:5. How many girls are there in the class?
a) 20 b) 30 c) 25 d) Couldn't be determined e) None of the above
31. The total number of students in a school is 8670. If the number of boys in the school is 4545, then what will be the ratio of the total number of boys to the total number of girls in the school?
a) 303 : 275 b) 275 : 303 c) 11: 12 d) 12 :11 e) None of the above
32. A truck covers a distance of 640 km in 10 h. A car covers the same distance in 8 h. What is the respective ratio of the speed of the truck to that of car?
a) 3 : 4 b) 1 : 2 c) 5 : 6 d) 6 : 7 e) None of the above
33. A certain distance is covered at a certain speed. If half of this distance is covered in double the time, the ratio of the two speeds is
a) 4 : 1 b) 1 :4 c) 2 : 1 d) 1: 2
34. The speeds of three cars are in the ratio of 2 : 3 : 4. Find the ratio between the time taken by these cars to cover the same distance.
a) 2 : 3 : 4 b) 4 : 3 : 2 c) 4 : 3 : 6 d) 6 : 4 : 3 e) None of the above

35. A person distributes his pens among four friends A , B , C and D in the ratio $\frac{1}{3} : \frac{1}{4} : \frac{1}{5} : \frac{1}{6}$. What is minimum number of pens that the person should have?
a) 75 b) 45 c) 57 d) 65
36. Divide Rs 990 into 3 parts in such a way that half of the first part, one-third of the second part and one-fifth of the third part are equal
a) 198. 494, 298 b) 198. 297, 495 c) 200. 300. 490 d) 196. 298. 496
37. A bag contains Rs 1, 50 paise and 25 paise coins in the ratio of 8 : 9 : 11. If the total money in the bag is Rs 366, then find the number of 25 paise coins.
a) 264 b) 364 c) 241 d) 245 e) None of the above
38. Amit and Sudesh have invested in the ratio of 4 : 7. If both invested a total amount of Rs 49500, then find the investment of Sudesh.
a) Rs. 31500 b) Rs.1800 c) Rs.31000 d) Rs.18500 e) None of the above
39. If a sum Rs 1664 is divided between P and Q in the ratio of $\frac{1}{3} : \frac{1}{5}$, then find P 's share
a) 1085 b) 1015 c) 1040 d) None of the above
40. The marks of 3 students A , B and C are in the ratio 10 : 12 : 15. If the maximum marks of the paper are 100, then the marks of B cannot be in the range of
a) 20 - 30 b) 40 - 50 c) 70 - 80 d) 80 - 90
41. A sum of Rs 7000 is divided among A , B and C in such a way that the shares of A and B are in the ratio 2 : 3 and those of B and C are in the ratio 4 : 5. The share of B is
a) Rs 1600 b) Rs 2000 c) Rs 2400 d) Rs 3000
42. A sum of Rs 300 is divided among P , Q and R in such a way that Q gets Rs 30 more than P and R gets Rs 60 more than Q . Then ratio of their shares is
a) 2 : 3 : 5 b) 3 : 2 : 5 c) 2 : 5 : 3 d) 5 : 3 : 2
43. A sum of money is divided amongst A , B , C and D in the ratio of 3 : 7 : 9 : 13. If the share of B is Rs 4872, then what will be the total amount of money of A and C together?
a) Rs 8352 b) Rs 6998 c) Rs 9784 d) Rs 7456 e) None of the above