

RATIO AND PROPORTION

1. A sum of money is to be distributed among A, B, C, D in the proportion of 5 : 2 : 4 : 3. If C gets Rs. 1000 more than D, what is B's share? (**Cognizant 2015**)

- A. Rs. 500
- B. Rs. 1500
- C. Rs. 2000
- D. None of these

2. Seats for Mathematics, Physics and Biology in a school are in the ratio 5 : 7 : 8. There is a proposal to increase these seats by 40%, 50% and 75% respectively. What will be the ratio of increased seats?

- A. 2 : 3 : 4
- B. 6 : 7 : 8
- C. 6 : 8 : 9
- D. None of these

3. The sub triplicate ratio of 1:8 is (**Indo MIM 2012**)

- A. 1:2
- B. 1:6
- C. 6:1
- D. 2:1

4. 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

5. The sum of three numbers is 98. If the ratio of the first to second is 2 : 3 and that of the second to the third is 5 : 8, then the second number is (**Times Internet 2015**)

- A. 20
- B. 30
- C. 48
- D. 58

6. 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? **(CVENT 2015)**

- A. 50
- B. 100
- C. 150
- D. 200

7. Two number are in the ratio 3 : 5. If 9 is subtracted from each, the new numbers are in the ratio 12 : 23. The smaller number is:

- A. 27
- B. 33
- C. 49
- D. 55

8. A bag contains 50 P, 25 P and 10 P coins in the ratio 5: 9: 4, amounting to Rs. 206. Find the number of coins of each type respectively. **(Indofarm 2014)**

- A 360, 160, 200
- B 160, 360, 200
- C 200, 360, 160
- D 200, 160, 300

9. Jo's collection contains US, Indian and British stamps. If the ratio of US to Indian stamps is 5 to 2 and the ratio of Indian to British stamps is 5 to 1, what is the ratio of US to British stamps?

- A 10 : 5
- B 15 : 2
- C 20 : 2

D 25 : 2

10. A sum of Rs.312 was divided among 100 boys and girls in such a way that the boy gets Rs.3.60 and each girl Rs. 2.40 the number of girls is (**Zebronics 2015**)

A 35

B 40

C 45

D 50

11. What number has a 5:1 ratio to the number 10?

A 42

B 50

C 62

D 65

12. In a zoo, there are rabbits and pigeons. If heads are counted, there are 340 heads and if legs are counted there are 1060 legs. How many pigeons are there?

A 120

B 150

C 170

D 180

13. 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 (**Declathan Sports India 2015**)

A 84

B 140

C 196

D 240

14. A dog takes 3 leaps for every 5 leaps of a hare. If one leap of the dog is equal to 3 leaps of the hare, the ratio of the speed of the dog to that of the hare is

A 9:5

B 2:3

C 4:7

D 5:6

15. The third proportional to 12 and 18 is

A 24

B 27

C 30

D 33

16. If the ratio of the ages of two friends A and B is in the ratio 3 : 5 and that of B and C is 3 : 5 and the sum of their ages is 147, then how old is B?

A 27 Years

B 75 Years

C 45 Years

D 49 Years

17. Alloy A contains 40% gold and 60% silver. Alloy B contains 35% gold and 40% silver and 25% copper. Alloys A and B are mixed in the ratio of 1:4 .What is the ratio of gold and silver in the newly formed alloy is? (**Honda two wheelers 2015**)

A 20% and 30%

B 36% and 44%

C 25% and 35%

D 49% and 36%

18. The number of oranges in three baskets are in the ratio of 3: 4: 5. In which ratio the no. of oranges in first two baskets must be increased so that the new ratio becomes 5: 4: 3?

A 1:3

B 2:1

C 3:4

D 2:3

19. The inverse ratio of 3:2:1 is

A 1:2:3

B 3:1:2

C 2:3:1

D 2:3:6

20. For any two numbers m, n ; $(m+n) : (m-n) : mn = 7 : 1 : 60$. Find the value of $1/m : 1/n$ (**Amazon 2015**)

A 4:3

B 8:7

C 3:4

D 7:8

21. The triplicate ratio of 1:2 is

A 8:1

B 1:8

C 9:16

D 3:4

22. Pencils, Pens and Exercise books in a shop are in the ratio of 10: 2: 3. If there are 120 pencils, the number of exercise books in the shop is:

A 26

B 36

C 46

D 56

23. A child has three different kinds of chocolates costing Rs.2, Rs.5, Rs.10. He spends total Rs. 120 on the chocolates. what is the minimum possible number of chocolates he can buy, if there must be atleast one chocolate of each kind? (**Eleation 2013**)

A 22

B 19

C 17

D 15

24. 6 men, 8 women and 6 children complete a job for a sum of Rs.950. If their individual wages are in the ratio 4:3:2, the total money earned by the children is (**Maven Workforce 2015**)

A. 190

B. 200

C. 180

D. 220

25. If $a:b = 3:4$ $b:c = 7:9$ $c:d = 5:7$ find $a:d$

A $7/12$

B $5/12$

C $11/12$

D $3/4$

26. If $a:b = 7:5$ $b:c = 9:11$ find $a:c$

A $14/15$

B $63/55$

C $37/55$

D $73/65$

27. The ratio of students in a coaching preparing for B.tech and MBA is 4: 5. The ratio of fees collected from each of B.tech and MBA students is 25: 16. If the total amount collected from all the students is 1.62 lakh, what is the total amount collected from only MBA aspirants?

A Rs. 62,000

B Rs. 72,000

C Rs. 82,000

D None of these

28. Three cats are roaming in a zoo in such a way that when cat A takes 5 steps, B takes 6 steps and C takes 7 steps. But the 6 steps of A are equal to the 7 steps of B and 8 steps of C. what is the ratio of their speeds?

A 140:144:147

B 40:44:47

C 15:21:28

D 252:245:240

29. The incomes of two persons A and B are in the ratio 3 : 4. If each saves Rs.100 per month, the ratio of their expenditures is Rs. 1 : 2. Find their incomes. (**Amazon 2014**)

A Rs. 100 and Rs.150

B Rs. 150 and Rs.200

C Rs.200 and Rs.250

D Rs.250 and Rs.300

30. A, B and C have amounts in the ratio of 3: 4: 5. First B gives $\frac{1}{4}$ th to A and $\frac{1}{4}$ th to C then C gives $\frac{1}{6}$ th to A. Find the final ratio of amount of A, B and C respectively.

A 4:3:5

B 5:4:3

C 3:4:5

D 5:2:5

31. Which of the following could not be the lengths of the sides of a right angled triangle?

A 3, 4, 5

B 5, 12, 13

C 8, 15, 17

D 12, 15, 18

32. Out of 135 applicants for a post, 60 are graduates and 80 have experience. What is the ratio of minimum to maximum number of graduates having experience? (**DI Media House Pvt Ltd 2015**)

A 12:1

B 5:1

C 1:5

D 1:12

33. If $(2a + 3b)/(5a - 3b) = 23/5$, then the value of ba is ?

A 5

B 4

C 20

D 28

34. A man spends Rs. 810 in buying trouser at Rs. 70 each and shirt at Rs. 30 each. What will be the ratio of trouser and shirt when the maximum number of trouser is purchased ?

A 1:3

B 2:1

C 3:2

D 2:3

35. $1:3 = 1\frac{2}{3} : x$. The value of x is

A 1

B 5

C 4

D 7

36. In a class of 39 students the ratio of boys and girls is 2 : 1. Radhika ranks 15th among all the students from top and 8th among girls from bottom. How many boys are there below Radhika ?

A 9

B 17

C 11

D 15

37. There are 209 doctors and nurses in a hospital. If the ratio of the doctors to the nurses is 11 : 8, then how many nurses are there in the hospital?

- A 88
- B 96
- C 108
- D 121

38. A company requires a staff of 12,100. Present employees are 2 400 ladies and 6400 gents. To reach the target how many ladies required to maintain the same ratio?

- A 400
- B 600
- C 900
- D 700

39. If $y/(x - z) = (y + x)/z = x/y$ then find $z : y : x$? (Zamil Ac 2013)

- A 1:2:3
- B 3:2:4
- C 4:3:2
- D 2:3:4

40. Salaries of Karthik, Arun and Akhil were in the ratio 4 : 5 : 6 respectively. If their salaries were increased by 50 per cent, 60 per cent and 50 per cent respectively, what will be the new ratio of the salaries of Akhil, Arun and Karthik ?

- A) 6: 8: 9
- B) 8: 6: 9
- C) 9: 8: 6
- D) 6: 5: 4

41. Total number of students in 3 classes of a school is 333 . The number of students in class 1 and 2 are in 3:5 ratio and 2 and 3 class are 7:11 ratio . What is the strength of class that has highest number of students?

- A 125
- B 155

C 135

D 165

42. A Product is supported each week by the same three Product supporters. Last month the first supporter took 440 calls, the second took 360 calls, and the third took 300 calls. This month the job will consists of 1500 calls. If the three supporters each increase their work proportionately, how many more calls will the second supporter take this month than last month? (**VenturePact LLC 2015**)

A) 131 calls

B) 160 calls

C) 491 calls

D) 600 calls

43. Rs. 7444 is divided among 5 ladies, 3 gents and 3 girls. The ratio of share of a lady, a gents and a girl is 7: 4: 3. What is the share of gents?

A Rs. 1595.14

B Rs. 1793.4

C Rs. 595.14

D Rs. 1551.5

44. On her deathbed, a grand mother called upon his three grand sons and told them to distribute all her assets worth Rs. 52,500 in the ratio of $1/35 : 1/21 : 1/15$ amongst themselves. Find the smallest share amongst the three portions ? (**Apeel Group 2016**)

A Rs. 5422

B Rs. 10,500

C Rs. 12,800

D Rs. 15,000

45. In an exam, a candidate secured 504 marks out of the maximum mark of 'M'. If the maximum mark 'M' is converted into 800 marks, he would have secured 384 marks. What is the value of 'M' ?

A 910

B 1000

C 970

D None of the above

46. In a fort, there are 1200 soldiers. If each soldier consumes 3 kg per day, the provisions available in the fort will last for 30 days. If some more soldiers join, the provisions available will last for 25 days given each soldier consumes 2.5 kg per day. Find the number of soldiers joining the fort in that case ?

A 693

B 741

C 528

D 654

47. What is the equivalent compound ratio of $5:6::7:10::6:5$?

A 7 : 9

B 9 : 7

C 7 : 4

D 7 : 10

48. If $a:b = 3:4$, $b:c = 7:9$, $c:d = 5:7$, find $a:d$?

A. 5:12

B. 7:12

C. 3:11

D. 5:11

49. If $x:y = 1:3$, then find the value of

$(7x+3y):(2x+y)$

A. 14:5

B. 15:5

C. 16:5

D. 17:5

50. The least whole number which when subtracted from both the terms of the ratio 6: 7 to give a ratio less than 16: 21, is (**Greyb Services Pvt Ltd 2013**)

A. 3

B. 4

C. 5

D. 6

51. The greatest ratio out of 2:3, 5:4, 3:2 and 4:5 is?

A. 4:5

B. 3:2

C. 5:4

D. 2:3

52. The smallest ratio out of 1:1, 2:1, 1:3 and 3:1 is?

A. 3:1

B. 1:3

C. 2:1

D. 1:2

53. The fourth proportional to 12, 14 and 18 is?

A. 21

B. 20

C. 22

D. $\frac{28}{3}$

54. The mean proportional between 4 and 9 is? (Unisys 2014)

A. 9

B. 3

C. 6

D. 4

55. The proportion of copper and zinc in the brass is 13:7. How much zinc will there be in 100 kg of brass?

A. 20 kg

B. 35 kg

C. 55 kg

D. 14 kg

56. The ratio of two numbers is 2:3 and the sum of their cubes is 945. The difference of number is? (Lava International 2015)

A. 3

B. 4

C. 5

D. 6

57. The ratio of the number of ladies to gents at a party was 1:2 but when 2 ladies and 2 gents left, the ratio became 1:3. How many people were at the party originally?

A. 36

B. 24

C. 12

D. 6

58. A 70 cm long wire is to be cut into two pieces so that one piece will be $\frac{2}{5}$ th of the other, how many centimeters will the shorter piece be? (**Nipum Planners & Infrastructure 2015**)

A. 10cm

B. 20cm

C. 25cm

D. 30cm

59. 96 is divided into two parts in such a way that seventh part of first and ninth part of second are equal. Find the smallest part?

- A. 38
- B. 40
- C. 42
- D. 48

60. The compound ratio of $\frac{2}{3}$, $\frac{6}{7}$, $\frac{1}{3}$ and $\frac{1}{8}$ is given by?(**Samudra Shipping 2016**)

- A. $\frac{1}{32}$
- B. $\frac{1}{42}$
- C. $\frac{1}{16}$
- D. $\frac{12}{71}$