

MATHS

Ratio & Proportion Worksheet for MAH MCA CET 2025

For students preparing for MCA Entrance Exam.

1. The ratio of the ages of A and B, four years ago, was 4 : 5. Eight years from now, the ratio of the ages of A and B will be 11 : 13. What is the sum of their present ages?
- 80 years
 - 96 years
 - 72 years
 - 76 years
2. If x is subtracted from each of 23, 39, 32 and 56, the numbers so obtained in this order are in proportion. What is the mean proportional between $(x + 4)$ and $(3x + 1)$?
- 15
 - 10
 - 12
 - 14
3. The prices of two articles are in the ratio 4 : 5. If the price of the first article is increased by $x\%$ and that of the other is decreased by 30%, then the new prices of A and B will be in the ratio 10 : 7. The value of x is:
- 24.5
 - 22.5
 - 25
 - 20
4. A sum of Rs. x is divided among A, B and C such that the ratio of shares of A and B is 7:12 and that of B and C is 8:5. If the difference in the shares of A and C is Rs. 214, then the value of x is:
- 11556
 - 11128
 - 11770
 - 11342
5. What is the ratio of the mean proportional between 4.8 and 10.8 and the third proportional to 0.4 and 2.4?
- 2:1
 - 3:2
 - 1:2
 - 2:3
6. If $a : b = 3 : 2$ then $(5a + 2b) : (3a + 4b)$ is equal to:
- 16:15
 - 8:7
 - 19:17
 - 17:14
7. If $a : b = 2 : 5$, $c : b = 3 : 4$, then $a : b : c$ is equal to:
- 6 : 15 : 20
 - 8 : 20 : 15
 - 2 : 5 : 4
 - 2 : 5 : 3
8. If $(5a - 3b) : (4a - 2b) = 2 : 3$, then $a : b$ is equal to:
- 3 : 4
 - 2 : 3
 - 5 : 8
 - 5 : 7
9. A sum of Rs. 4360 was to be divided among A, B, C and D in the ratio of 3 : 4 : 5 : 8, but it was divided in the ratio of $\frac{1}{3} : \frac{1}{4} : \frac{1}{5} : \frac{1}{8}$ by mistake. As a result:
- A received Rs. 956 more
 - B received Rs. 318 more
 - D received Rs. 1144 less
 - C received Rs. 132 less

10. Two numbers are in the ratio 3:4. On increasing each of them by 30, the ratio becomes 9:10. The numbers are:

- A. 30,40
- B. 15,20
- C. 12,16
- D. 18,24

11. The ratio of incomes of A and B is 2 : 3 and that of their expenditure is 1 : 2. If 90% of B's expenditure is equal to the income of A, then what is the ratio of the savings of A and B?

- A. 1 : 1
- B. 9 : 8
- C. 8 : 7
- D. 3 : 2

12. In an examination, the success to failure ratio was 5 : 2. Had the number of failures been 14 more, then the success to failure ratio would have been 9 : 5. The total number of candidates who appeared for the examination was :

- A. 210
- B. 196
- C. 126
- D. 203

13. Three numbers are in the ratio $\frac{1}{2} : \frac{2}{3} : \frac{3}{4}$. The difference between the greatest and smallest number is 27. The smallest number is

- A. 81
- B. 40
- C. 72
- D. 54

14. Three numbers are in the ratio $\frac{1}{2} : \frac{2}{3} : \frac{3}{4}$. The difference between the greatest and smallest number is 27. The average of the three number is:

- A. 40
- B. 81
- C. 69
- D. 54

15. If $a:b:c = 1:3:5$, what is the value of $\frac{4a-b+2c}{3(a+b+c)}$?

- A. $\frac{8}{27}$
- B. $\frac{10}{27}$
- C. $\frac{11}{27}$

D. $\frac{1}{3}$

16. Rs. 8000 is distributed among A, B and C such that they receive notes of Rs. 500, Rs. 200 and Rs. 100 respectively. The amounts received by them are in the ratio 15:2:3. What was the ratio of the numbers of notes of Rs. 500, Rs 200 and Rs 100?

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

17. What is the ratio between the fourth proportional of 3, 4, 9 and the mean proportional between 2 and 98?

- A. 7 : 8
- B. 7 : 6
- C. 8 : 7
- D. 6 : 7

18. Three partners A, B and C share profit and losses in the ratio 3:4:7. If the profit for the year before charging 30% tax is Rs. 1,10,166. What is B's share of profit after tax?

- A. Rs.9442.80
- B. Rs.31476
- C. Rs.22033.20
- D. Rs. 24673.10

19. In an office of 1200 employees, the ratio of urban to rural members of staff is 8 : 7. After joining some new employees, out of which 20 are rural, the ratio becomes 5 : 4. The number of new urban employees is:

- A. 100
- B. 85
- C. 76
- D. 108

20. Rs 4,06,736 is divided among A, B and C such that the ratio between A and B is 2 : 3 and B and C is 1 : 2. The share of C is:

- A. Rs 73,952
- B. Rs 1,10,928
- C. Rs 2,64,796
- D. Rs 2,21,856

21. A, B and C are partners. They share profits in the ratio of 5 : 3 : 6. If A earns rs 1,92,380 as his share of profit, then the share of C is:

- A. 2,30,856
- B. 1,15,428
- C. 82,449
- D. 1,60,317

22. Rs 15,000 was invested by A and B together to start a small business. They got a profit of Rs 2,000 at the end of the year. B took his profit share of Rs 600, How much did A invest?

- A. 9,000
- B. 2,000
- C. 10,500
- D. 10,000

23. A, B and C are partners in a firm sharing profit in the ratio of 3:4:5. If they set aside 4% of the profits as emergency fund and shared the rest of the profit and B gets his share of profit as Rs. 1,81,400, the amount of profit set aside for emergency fund is:

- A. Rs. 27848
- B. Rs.18140
- C. Rs.22675
- D. Rs.24500

24. A, B, and C started a business by investing Rs. 55,000, Rs. 65,000 and Rs. 75,000 respectively. A is a working partner and gets 20% of the profit as a working allowance and remaining is distributed in the proportion of their investment. If the money received by C is Rs. 27,000 what is total profit?

- A. Rs. 85500
- B. Rs.87750
- C. Rs.76850
- D. Rs.70200

25. The ratio of the income of A to that of B is 5:7. A and B save Rs. 4000 and Rs. 5000 respectively. If the expenditure of A is equal to $66\frac{2}{3}\%$ of the expenditure of B, then the total income of A and B is:

- A. Rs. 25,200
- B. Rs. 24,000
- C. Rs. 26,400
- D. Rs. 28,800

26. If $(a+b) : (b+c) : (c+a) = 7 : 6 : 5$ and $a+b+c = 27$, then what will be the value of $\frac{1}{a} : \frac{1}{b} : \frac{1}{c}$?

- A. 3:6:4
- B. 3:2:4

- C. 4:3:6
- D. 3:4:2

Q27. When x is added to each of 2,3,30 and 35, then the numbers obtained in this order, are in proportion. What is the mean proportional between $(x+7)$ and $(x-2)$?

- A. 7
- B. 4
- C. 6
- D. 5

Q28. The ratio of investment by A to that by B is a business is 14:15 and the ratio of their respective profits at the end of a year is 2:5. If A invested the money for 3 months, then for how much time (in months) B invested his money?

- A. 7
- B. 6
- C. 5
- D. 9

Q29. One year ago, the ratio of the age (in years) of A to that of B was 4:3. The ratio of their respective ages, 3 years from now, will be 6:5. What will be the ratio of respective ages of A and B, 9 years from now?

- A. 7:6
- B. 10:9
- C. 9:8
- D. 8:7

30. What is the ratio of the third proportional to 0.4 and 0.8, to the mean proportional between 13.5 and 0.24?

- A. 5:4
- B. 7:8
- C. 8:9
- D. 9:10

Answer Key

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

