

Grade -VIII
Sub – Mathematics

Time -90 Minutes
Max Marks- 40

General Instructions: Section A consists 1 mark questions

Section B consists 2 mark questions

Section C consists 3 mark questions

Section D consists 4 mark questions

Attempt any 14 questions of section A;

any 8 questions of section B;

any 4 questions of section C,

any 2 questions of section D

Section A

Q1. The value of $(\frac{1}{2}) \div (\frac{3}{5})$ is equal to:

A. $\frac{3}{10}$

B. $\frac{3}{5}$

C. $\frac{6}{5}$

D. $\frac{5}{6}$

Q2. The value of $(\frac{5}{4}) - (\frac{8}{3})$ is:

A. $\frac{17}{12}$

B. $-\frac{17}{12}$

C. $\frac{12}{17}$

D. $-\frac{12}{17}$

Q3. What is the sum of $\frac{2}{3}$ and $\frac{4}{9}$?

A. $\frac{6}{3}$

B. $\frac{6}{9}$

C. $\frac{10}{9}$

D. $\frac{10}{3}$

Q4. The solution of $y/5 = 10$ is:

A. 15

B. 10

C. 50

D. 5

Q5. Solve $2x + 9 = 4$.

A. $X = 6$

B. $X = -\frac{5}{2}$

C. $X = -\frac{3}{2}$

D. $X = -\frac{9}{2}$

Q6. If $\angle A$ and $\angle C$ are two opposite angles of a parallelogram, then:

A. $\angle A > \angle C$

B. $\angle A = \angle C$

C. $\angle A < \angle C$

D. None of the these

Q7. If the two angles of a triangle are 80° and 50° , respectively. Find the measure of the third angle.

A. 50°

B. 60°

C. 70°

D. 80°

Q8. Which of the following will have 6 at unit place?

A. 19^2

B. 11^2

C. 24^2

D. 13^2

Q9. What is the sum of the first four odd natural numbers?

A. 16

B. 17

C. 18

D. 20

Q10. Which of the following is not a perfect cube?

A. 216

B. 1000

C. 243

D. 1331

Q11. What is the cube of $2a$?

A. $2a^3$

B. $4a^3$

C. $8a^3$

D. $16a^3$

Q12. The ratio of 10m to 10 km is:

- A. $\frac{1}{10}$ B. $\frac{1}{100}$ C. $\frac{1}{1000}$ D. 1000

Q13. The percentage of 2:5

- A. 20% B. 50% C. 60% D. 40%

Q14. The multiplicative inverse of 7^{-2} is:

- A. 7^2 B. 7 C. $\frac{1}{7^2}$ D. $\frac{1}{7}$

Q15. The value of $(3^4)^3$ is:

- A. 3 B. 3^{12} C. 3^7 D. None of the above

Section B

Q16. The difference between two whole numbers is 66. The ratio of the two numbers is 2: 5. e Find the two numbers.

Q17. In Parallelogram ABCD $\angle A = 70^\circ$. Find all other angles.

Q18. The diagonals of a rectangle are $2x + 1$ and $3x - 1$, respectively. Find the value of x.

Q19. Find the smallest whole number by which 1008 should be multiplied so as to get a perfect square number. Also, find the square root of the square number so obtained.

Q20. Find the cube root of 13824 by prime factorisation method.

Q21. If the product of any two rational numbers is 2 and one of them is $\frac{1}{7}$, find the other?

Q22. If 72% of 25 students like maths, find out the number of students who do not like mathematics?

Q23. A watch was bought for ₹ 2,700 including 8% VAT. Find its price before the VAT was added.

Q24. Express 4^{-3} as a power with base 2.

Q25. Evaluate $a^2 \times a^3 \times a^{-5}$

Section C

Q26. Using suitable rearrangement and find the sum

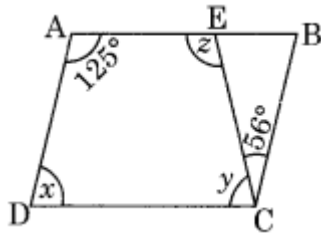
$$-5 + \frac{7}{10} + \frac{3}{7} + (-3) + \frac{5}{14} + \frac{-4}{5}$$

Q27. Find the compound interest on ₹ 48,000 for one year at 8% per annum when compounded half yearly.

Q28 Jane is 6 years older than her younger sister. After 10 years, the sum of their ages will be 50 years. Find their present ages.

Q29. What is the least number that must be subtracted from 3793 so as to get a perfect square? Also, find the square root of the number so obtained.

Q30. In the given figure, ABCD is a parallelogram. Find x, y and z.



Q31. Find the value of x if

$$\left(\frac{125}{27}\right) \times \left(\frac{125}{27}\right)^x = \left(\frac{5}{3}\right)^{18}$$

Section-D

Q32. A shopkeeper bought two phones for Rs. 8,000 each. After selling the phones, there was a loss of 4% on the 1st phone while a profit of 8% on the 2nd phone. Calculate the overall gain or loss per cent on the whole transaction.

Q33. There is a narrow rectangular plot. The length and breadth of the plot are in the ratio of 11:4. At the rate of Rs. 100 per meter it will cost the village panchayat Rs. 75000 to fence the plot. What are the dimensions of the plot?

Q34. ABCD is a parallelogram with $\angle A = 80^\circ$. The internal bisectors of $\angle B$ and $\angle C$ meet each other at O. Find the measure of the three angles of $\triangle BCO$

Q35. 2025 plants are to be planted in a garden in such a way that each row contains as many plants as the number of rows. Find the number of rows and the number of plants in each row.