



Bal Bharti School, Bahadurgarh
Academic Session (2019 -20)
Half Yearly Examination
Subject: Mathematics

CLASS VIII

Duration: - 3 hours

Date: 25.09.19

M.M. 80

General Instructions:-

1. All questions are compulsory.
2. The question paper consists of 30 questions divided into four sections A, B, C and D. Section A consists of 6 questions of 1 mark each. Section B consists of 6 questions of 2 marks each. Section C consists of 10 questions of 3 marks each whereas Section D consists of 8 questions of 4 marks each.
3. Calculations should be done separately on right hand side of the answer sheet.
4. There is no overall choice. However, an internal choice has been provided in 1 question of three marks and two questions of four marks each. Attempt only one of the alternatives in all such questions.
5. Write the same question number as it is given in the question paper.

SECTION – A (1×6 = 6 marks)

- Q.1. Which is the smaller rational number - $\frac{-5}{8}$, $\frac{-7}{18}$
- Q.2. The following letters are written on a slip: A, E, I, O, U .
 If one letter is chosen randomly, what is the probability of getting a vowel?
- Q.3. Find the number of diagonals in a hexagon.
- Q.4. Express 100 as the sum of 10 odd numbers.
- Q.5. Find the value of $(0.8)^3$
- Q.6. If $467y8$ is exactly divisible by 3, then find the least value of y.

SECTION – B (2×6=12 marks)

- Q.7. An angle of a parallelogram exceeds its adjacent angle by 40° , find the measure of all the angles.
- Q.8. Solve the equation: - $\frac{8x+3}{2x+5} = 3$
- Q.9. Write the next two numbers in the following series –
 a) 1, 8, 27, 64, _____, _____.
 b) 16, 27, 38, _____, _____.
- Q.10. Represent $(-3\frac{2}{3})$ on number line.
- Q.11. If $5^2 + x^2 + (30)^2 = (31)^2$, then find the value of x.
- Q.12. Replace a, b, c, d by suitable numerals in the following-

$$\begin{array}{rcccc} 6 & a & b & 5 \\ + & d & 5 & 8 & c \\ \hline 9 & 3 & 5 & 1 \end{array}$$

SECTION – C (3×10=30 marks)

- Q.13. In a square ABCD, $AC = (2x+3)$ cm, $BD = (3x-5)$ cm. Find the value of x and then find the value of AC and BD.
- Q.14. Find the sum of measures of all interior angles of a polygon with 7 sides.
- Q.15. Verify: - $(x \div y) \div z \neq x \div (y \div z)$ by taking $x = \frac{1}{2}$, $y = \frac{2}{3}$, $z = \frac{3}{5}$.

Q.16. Find the greatest 5- digit number which is a perfect square.

Q.17. Divide the sum of $\frac{65}{12}$ and $\frac{8}{3}$ by their difference.

Q.18. Construct a quadrilateral $ABCD$ in which $AB = 5\text{cm}$, $BC = 4\text{cm}$, $\angle A = 90^\circ$, $\angle B = 70^\circ$, $\angle C = 150^\circ$

Q.19. Evaluate:- $\sqrt[3]{216 \times (-343)}$

Q.20. Radhika has a total of ₹ 590 as currency notes in the denominations of ₹ 50, ₹ 20 and ₹ 10. The ratio of the numbers of ₹ 50 notes and ₹20 notes is 3:5. If she has a total of 25 notes, how many notes of each denomination she has?

Or

Half of a herd of deer are grazing in the field and three fourths of the remaining deer are playing nearby. The rest 9 are drinking water from the pond. Find the number of deer in the herd.

Q.21. Solve: - $5x + \frac{7}{2} = \frac{3}{2}x - 14$.

Q.22. The number of students in a hostel, speaking different languages is given below-

Language	Hindi	Bengali	Punjabi	Marathi	Tamil
No. of Students	35	5	10	4	6

Display this data in a pie- chart.

SECTION – D (4×8=32 marks)

Q.23. Is 1188 a perfect cube? If not, by which smallest natural number should 1188 be divided so that the quotient is a perfect cube?

Q.24. Present ages of Anshu and Raju are in the ratio of 4:5. Eight years from now, the ratio of their ages will be 5:6. Find the present ages.

Q.25. Solve: - $0.36(6+m) = 0.4(8-m)$

Q.26. Construct a rhombus $ABCD$ in which $AB = 4.2\text{ cm}$ and one diagonal is 6.5 cm .

Q.27. A welfare association collected ₹ 24336 as a donation from the residents of a colony. If each resident paid as many rupees as there are residents, find the number of residents.

Or

Find the cost of erecting a fence around a square field whose area is 90000 m^2 if the cost of fencing is ₹40 per metre.

Q.28. A fruit- seller has three types of fruits weighing $19\frac{1}{3}\text{ kg}$ in total. If $8\frac{1}{9}\text{ kg}$ of these is apples, $3\frac{1}{6}\text{ kg}$ is oranges and the rest are mangoes, what is the weight of mangoes?

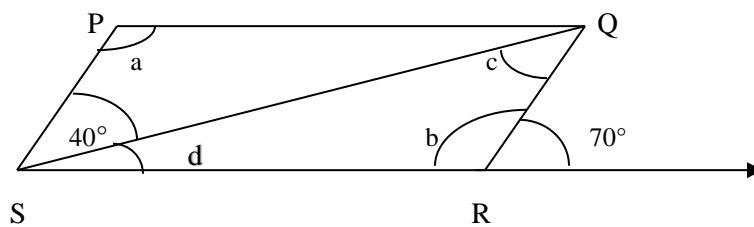
Q.29. In an examination, 35 students scored the following marks (out of 50):-

41,32,35,21,11,47,42,00,05,18,25,24,29,38,30,04,14,24,34,44,48,08,34,39,11,13,27,26,43,03, 33,36,38,41,48

For this data –

- Make a frequency distribution table using the class intervals 0-10, 10-20 and so on.
- Represent the data by means of a histogram.

Q.30. PQRS is a parallelogram. Find the measurement of $\angle a$, $\angle b$, $\angle c$ and $\angle d$.



Or

The perimeter of a parallelogram is 140 cm. If one of the sides is greater than the other side by 10 cm, find the lengths of all the sides of parallelogram.