

PRACTICES QUESTION PAPER - 3
CLASS-IX
MATHEMATICS

Time: 3 Hrs.

M.M. 80

General Instruction:

1. All questions are compulsory.
2. The paper consists of 40 questions divided into four sections A, B, C and D. Section A comprises of 20 questions of 1 marks each. Section B comprises of 6 question of 2 marks each. Section C comprises of 8 questions of 3 marks each. Section D comprises of 6 question of 4 marks each.
3. There is no over all choice in this question paper. All though internal choices has been provided in some question.

SECTION - A

1. A national number $\frac{5}{7}$ is equivalent to
 - a) $\frac{15}{17}$
 - b) $\frac{25}{27}$
 - c) $\frac{10}{14}$
 - d) $\frac{10}{27}$
2. The zero of the polynomial $p(x) = 2x+5$ is
 - a) 2
 - b) $\frac{2}{5}$
 - c) 5
 - d) $-\frac{5}{2}$
3. The polynomial of type ax^2+bx+c , when $a=0$
 - a) Linear
 - b) Quadratic
 - c) Cubic
 - d) Biquadratic
4. Through which of the following point, the graph of $y = -x$ passes?
 - a) (1, 1)
 - b) (0, 1)
 - c) (-1, 1)
 - d) (0, 0)

or

Find the product without multiplying directly 107×93

25. The total surface area of a cube is 150cm^2 . Find the perimeter of any one of its faces ?
26. Find the ratio of total surface area of a sphere and a hemisphere of same radius ?

or

Find the curved surface area of a cone whose height is 12cm and base radius is 5cm ?

SECTION – C

27. Two coins are tossed simultaneously 500 times and we get
- | | | |
|-----------|---|-----------|
| two heads | = | 105 times |
| one heads | = | 275 times |
| No heads | = | 120 times |

Find the probability of each of these events ?

28. Give the geometric representation of $2x+9=0$ as an equation.
- i) In one variable ii) in two variables
29. Construct a triangle ABC in which $BC=8\text{cm}$ $\angle B=45^\circ$ and $AB-AC=3.5\text{cm}$.
30. Prove that equal chords of a circle subtend equal angles at the centre.

or

If the non parallel sides of a trapezium are equal. Prove that it is cyclic.

31. Draw the graph of following linear equation in two variables $x+y=4$

or

If $x=3k-2$ and $y=2k$ is a solution of equation $4x-7y+12=0$ then find the value of K.

32. ABCD is a rectangle and P, Q, R and S are mid points of the sides AB, BC, CD and DA respectively. Show that the quadrilateral PQRS is a rhombus.

or

In a triangle ABC, D, E and F are respectively mid points of sides AB, BC and AC. Show that $\triangle ABC$ is divided into four congruent triangles by joining D, E and F.

33. Simplify the given expression $(5 + \sqrt{7})(2 + \sqrt{5})$
34. The sides of a triangle shaped sheet are 5cm, 12cm and 13cm. Find the cost of painting on the sheet at the rate of ₹ 30 per cm^2 ?

SECTION-D

35. Given below is the data of students who participated in different activities.

Activity	Sports	Meditation	Yoga	Wacking
No. of Girls	40	35	100	120

Draw the bar graph for the given date.

or

If $x+y+z=0$ show that

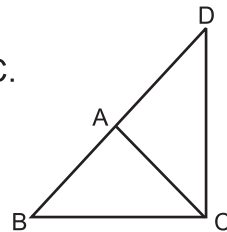
$$x^3 + y^3 + z^3 = 3xyz$$

37. Rationalise the denominator $\frac{5}{\sqrt{3} - \sqrt{5}}$

or

Express 0.3178 is the form of $\frac{p}{q}$ where p and q are _____ and $q \neq 0$.

38. ΔABC is an isosceles triangle in which $AB=AC$. Side BA is produced to D such that $AD=AB$. Show that $\angle BCD$ is a right angle.

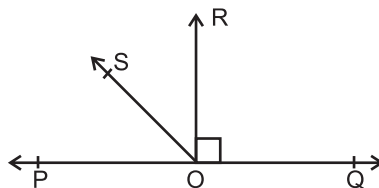


or

Prove that

In a right angle triangle, the hypotenuse is the longest side.

- 39.



In the given figure POQ is a straight line . $RO \perp PQ$. SO is a ray from O then prove that $\angle ROS = \frac{1}{2} (\angle QOS - \angle POS)$

40. A godown measures $40\text{m} \times 25\text{m} \times 15\text{m}$. Find the maximum number of wooden boxes each measuring $1.5\text{m} \times 1.25\text{m} \times 0.5\text{m}$ that can be stored the godown.

or

The value of right circular cone is 9856 cm^3 . If the diameter of base is 20cm . Find

- i) Slant height
- ii) Height of the cone.
- iii) Curved surface area of the cone.