



B.K. BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL



PERIODIC TEST- 2 (2025)

MATHEMATICS

Class : IX

Date : 04-11-2025

Admission No.:

Duration: 1 Hr

Max. Marks: 25

Roll No.:

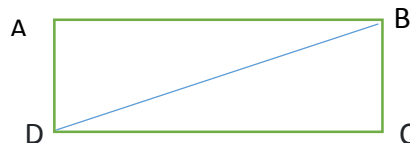
General Instructions:

1. All Questions are compulsory.
2. There are 13 questions.

I. CHOOSE THE CORRECT ALTERNATIVE IN THE FOLLOWING.

5

1. A linear equation in two variables is of the form $ax + by + c = 0$, where
 - a) $a = 0, c = 0$
 - b) $a \neq 0, b = 0$
 - c) $a = 0, b \neq 0$
 - d) $a \neq 0, b \neq 0$
2. Find the value of k , if $x = -5, y = 3$ is a solution of the equation $2x + 3y = k$.
 - a. 1
 - b. -1
 - c. 19
 - d. None of these
3. A diagonal of a parallelogram divides it into two congruent
 - a. Square
 - b. Rectangle
 - c. Rhombus
 - d) None of these
4. Quadrilateral ABCD is rectangle with $\angle ABD = 40^\circ$ then $\angle BDC$ is
 - a. 90°
 - b) 40°
 - c) 50°
 - d) 45°



5. A quadrilateral with exactly one pair of opposite sides parallel to each other is called a:
 - a. Parallelogram
 - b. Rhombus
 - c. Trapezium
 - d. Square

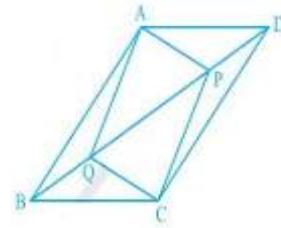
II. Solve the following :

6. Express the following in the form of $ax + by + c = 0$ and write the value of a , b and c . **2**
 - i) $-5x + 3y = 10$
 - ii) $3x + 2 = 0$
 - iii) $2x = -7y$
 - iv) $5x = 6$
7. If $x = 3a + 1$ and $y = 2a - 1$ is a solution of the equation $3x - 2y + 5 = 0$. Find the value of a . **2**
8. Prove that the diagonals of a parallelogram divides it into two congruent triangles. **2**
9. Calculate all the angles of a quadrilateral if they are in the ratio 2:5:4:1. **2**
10. a) The cost of a pen is twice the cost of a note book. Write a linear equation in two variables to represent the above statement.
b) Find four different solution of the equation $x + 2y = 6$ **1+ 2**
11. Draw the graph of the equation. $2x + y = 7$ **3**

12. In parallelogram ABCD, two points P and Q are taken on diagonal BD such that $DP = BQ$. Show

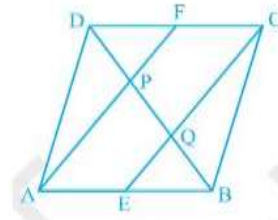
that: (i) $\triangle APD \cong \triangle CQB$ (ii) $AP = CQ$ (iii) $\triangle AQB \cong \triangle CPD$ (iv) $AQ = CP$

3



13. In a parallelogram ABCD, E and F are the mid-points of sides AB and CD, respectively. Show that the line segments AF and EC trisect the diagonal BD.

3



***** ALL THE BEST *****

