



B.K. BIRLA CENTRE FOR EDUCATION

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



PRE-MID TERM 2026-27 MATHEMATICS: SET 2

Class: IX
Date: 23.07.26
Admission no:

Time: 1hr
Max Marks: 25
Roll no:

General Instructions:

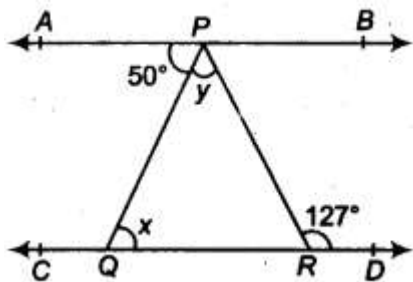
1. This Question Paper has 4 Sections A, B, C and D.
2. Section A has 5 MCQs carrying 1 mark each
3. Section B has 3 questions carrying 02 marks each.
4. Section C has 2 questions carrying 03 marks each.
5. Section D has 2 questions carrying 04 marks each.
6. All Questions are compulsory.

SECTION A

1. What is the degree of $x^2 + 3x^4 - 2$?
(a) 1 (b) 2 (c) 3 (d) None of these 1m
2. Which one of the following is a quadratic polynomial?
(a) $4x+7$ (b) $1000x^2$ (c) $4-x^3$ (d) None of these 1m
3. If a transversal intersect two parallel lines, then corresponding angles so formed are _____
(a) Equal (b) Supplementary (c) Complementary (d) None of these
4. If the sum of two adjacent angles is _____, then the non-common arms of the angles form a line. 1m
(a) 180° (b) 90° (c) 360° (d) None of these
5. If two lines intersect each other, then the _____ angles are equal.
(a) Linear pair (b) Vertically opposite (c) Adjacent (d) None of these

SECTION B

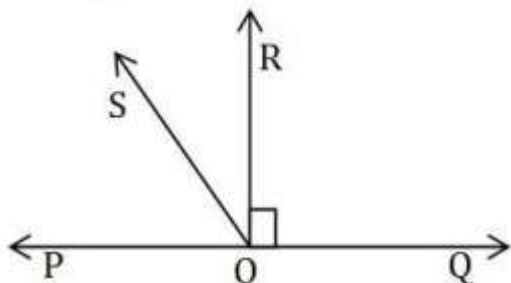
7. Find the values of x and y if $AB \parallel CD$. 2m



8. Find the value of k , if $(x-1)$ is a factor of $3x^3+3x^2-4x+k$ 2m
9. Evaluate by using suitable identities: 2m
- (a) 105^3
- (b) 98^2

SECTION C

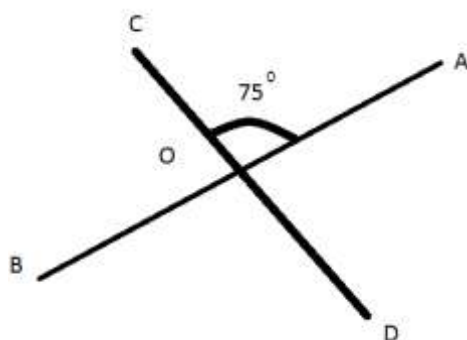
10. In the given figure, PQ is a line. Ray OR is perpendicular to line PQ. OS is another ray lying between rays OP and OR. Prove that $2\angle ROS = (\angle QOS - \angle POS)$ 3m



11. Factorise $x^3 + 13x^2 + 32x + 20$. 3m

SECTION D

12. Two roads AB and CD intersect each other at point O as shown in the figure. One of the angles formed is 75° 4m



the angles formed is 75°

Let angle AOD be x and angle BOD be y , Answer the following:

- (i) Find x .
- (ii) Find y . Also write the statement of the property/theorem used to find the value of y .
- (iii) What will be the sum of x and y ?
- OR

Write the sum of all angles at a point in a plane.

13.

4m

The length, breadth and height of a cuboid are given by the expressions

$2x - 1$, $2x + 2$ and $8x$ respectively.

Answer the following:

(i) Write the area of the base.

(ii) Write down the volume of the cuboid.

(iii) What is the sum of all 12 edges of the cuboid?

OR

What is the perimeter of the base if $x = 2$?

****BEST OF LUCK****