



# Nishant eAcademy

## CBSE Sample Paper Class 10 Mathematics 2020-21

Subject: Mathematics Class: 10 Maximum Marks: 80 Duration: 3 hours

Section A: Objective Type Questions (1 mark each)

1. The roots of the quadratic equation  $x^2 - 5x + 6 = 0$  are: (a) 2, 3 (b) 3, 2 (c) -2, -3 (d) -3, -2
2. In a circle, the measure of a central angle is: (a) 90 degrees (b) 180 degrees (c) 360 degrees (d) 45 degrees

Section B: Short Answer Type Questions (2 marks each)

3. Find the value of  $k$  for which the system of equations  $3x + ky = 9$  and  $2x - 3y = 7$  has a unique solution.
4. If the radius of a circle is doubled, what will be the effect on its circumference?

Section C: Long Answer Type Questions (4 marks each)

5. Solve the pair of linear equations  $2x + 3y = 8$  and  $4x - 5y = 7$  by the substitution method.
6. Find the area of a trapezium whose parallel sides are 12 cm and 18 cm, and the distance between them is 8 cm.

Section D: Very Long Answer Type Questions (6 marks each)

7. Prove that the tangents drawn at the ends of a diameter of a circle are parallel.
8. Find the value of ' $p$ ' if the polynomial  $x^3 + 3x^2 - 4x - p$  is exactly divisible by  $x + 1$ .