Nishant eAcademy

CBSE Sample Paper Class 9 Mathematics 2021-22

Subject: Mathematics Class: 9 Maximum Marks: 80 Duration: 3 hours

Section A: Objective Type Questions (1 mark each)

1. If a = 5 and b = 3, what is the value of 2a - 3b?

2. Expand $(x + y)^2$.

3. If a triangle has angles in the ratio 2:3:4, what is the measure of the smallest angle?

4. Find the value of 'k' in the equation 5k - 3 = 22.

5. Solve the equation: 2x + 3 = 7.

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

6. If the circumference of a circle is 22 cm, what is its radius?

7. Find the HCF of 36 and 48.

8. Simplify: (3x - 2y) + (4x + 5y).

9. Find the value of 'p' in the equation 3p/5 = 9/10.

10. Solve the equation: 2(3x + 5) = 18.

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

11. The perimeter of a rectangle is 30 cm and its length is twice its breadth. Find its length and breadth.

12. Find the value of 'x' in the equation 3(2x - 1) + 4(3x + 2) = 34.

13. Solve the equation: (2/5)x + 3 = (1/3)x - 2.

14. The sum of two consecutive odd integers is 48. Find the integers.

15. Solve the equation: (x + 3)(2x - 5) = 0.

Section D: Application-Based Questions (6 marks each)

16. The cost of 5 pens and 3 pencils is Rs. 57, while the cost of 2 pens and 4 pencils is Rs. 36. Find the cost of each pen and each pencil.

17. A triangle has sides measuring 6 cm, 8 cm, and 10 cm. Is the triangle a right-angled triangle? Justify your answer.

18. A cylindrical tank has a diameter of 14 cm and a height of 20 cm. Find its volume correct to one decimal place.

19. Find the value of 'a' in the equation (4/a) + (5/2a) = 3/4.

20. A train covers a distance of 240 km in 4 hours. Find its speed in km/h.