📘 **Class 10 Maths** – Chapter 7: Coordinate Geometry

🎯 25 Most Repeated Board & Sample Questions

🔵 Section A: Multiple Choice Questions (MCQs)

Q1. What is the distance between points A(3, 4) and B(0, 0)? (CBSE 2020)
a) 5 units b) 7 units c) √13 units d) √25 units

Q2. The coordinates of the midpoint of segment joining A(2, 3) and B(6, 7) are: (CBSE 2021)
a) (3, 5) b) (4, 5) c) (5, 4) d) (3, 4)

Q3. What is the distance between the points (1, 2) and (4, 6)? (CBSE 2019)
a) 5 b) √18 c) √25 d) 6

Q4. The centroid of triangle with vertices (0, 0), (6, 0), (0, 6) is: (CBSE 2022)
a) (2, 2) b) (3, 2) c) (2, 3) d) (1, 1)

Q5. The point which divides the line segment joining A(−1, 2) and B(3, 6) in ratio 1:1 is: (CBSE 2023)
a) (2, 4) b) (1, 3) c) (0, 4) d) (1, 5)

🟠 Section B: Short Answer Type Questions

Q6. Find the distance between the points (7, −4) and (3, 2). (CBSE 2022)

Q7. Find the coordinates of a point which divides the line joining A(1, −2) and B(3, 4) in the ratio 2:1. (CBSE 2021)

Q8. Find the coordinates of the midpoint of line joining (−2, 5) and (4, −3). (CBSE 2018)

Q9. Find the coordinates of the centroid of a triangle with vertices A(1, 2), B(4, 6), C(7, 2). (CBSE 2019)

Q10. Prove that A(2, 3), B(4, 7), and C(6, 11) lie on a straight line. (CBSE 2017)

🟡 Section C: Long Answer Type Questions

Q11. Prove that A(3, 2), B(−2, −3), and C(2, 3) form a right triangle. (CBSE 2017)

Q12. Find the coordinates of the point dividing AB where A(−1, 7), B(4, −3) in 3:2 ratio. (CBSE 2020)

Q13. Show that A(−2, −1), B(4, 0), C(3, 3), and D(−3, 2) are vertices of a parallelogram. (CBSE 2023)

Q14. Find the length of the median from vertex A of triangle with A(1, 2), B(−1, 3), C(4, 5). (CBSE 2022)

Q15. Find a point P on the line joining A(2, −1) and B(5, 8) such that AP/PB = 3/4. (CBSE 2020)

🟢 Section D: Competency-Based Questions

Q16. A car moves from A(2, 3) to B(10, 7). Find the distance covered. (CBSE Sample)

Q17. A person moves from (0, 0) to a tower at (3, 4). Find the distance. (CBSE 2023)

🔴 Section E: Miscellaneous & Frequent Questions

Q18. Find the area of triangle with vertices (−2, −3), (3, 2), (4, −1). (CBSE 2021)

Q19. Show that (1, 5), (2, 3), (3, 1) lie on a line. (CBSE 2019)

Q20. If centroid of △ABC is (2, 3), and A(1, 2), B(3, 6), find coordinates of C. (CBSE 2020)

Q21. Find the length of line between (−3, 7) and (2, −1). (CBSE 2022)

Q22. If A(1, 2), B(4, y), C(x, 6) and centroid is (3, 4), find x and y. (CBSE 2023)

Q23. Find a point on x-axis equidistant from (2, −5) and (−2, 9). (CBSE 2016)

Q24. Find the ratio in which x-axis divides AB with A(1, −5), B(−4, 5). (CBSE 2021)

Q25. Find the area of triangle formed by A(2, 3), B(−4, 7), C(5, −2). (CBSE 2020)

✅ Answer Key:

1. a) 5 units

2. b) (4, 5)

3. c) $\sqrt{25}$

4. a) (2, 2)

5. b) (1, 3)

6. $\sqrt{52} \approx 7.21$

7. (5/3, 2/3)

8. (1, 1)

9. (4, 3.33)

10. Slopes equal ⇒ Collinear

11. Right triangle (Use distance & Pythagoras)

12. (1.4, 3)

13. Midpoints of diagonals same ⇒ Parallelogram

14. Midpoint of BC = (1.5, 4) ⇒ Distance ≈ 2.5

15. P = (3.29, 0.29)

16. $\sqrt{80} \approx 8.94$ units

17. 5 units

18. Area = 13 units²

19. Slopes equal ⇒ Collinear

20. C = (2, 1)

21. $\sqrt{89} \approx 9.43$

22. x = 5, y = 4

23. x = 0

24. Ratio = 1:2

25. Area = 11 units²
