



CBSE NCERT Based Chapter wise Questions (2025-2026)

Class-X

Subject: MATHEMATICS

Chapter Name : Coordinate Geometry (Chap : 7)

Total : 16 Marks (expected) [MCQ(1+1)-1 Mark, CBQ-(1)-4 Marks]

Level - 2 (Higher Order)

MCQ Type :

1. The coordinates of the point where the line $\frac{x}{a} + \frac{y}{b} = 7$ intersects y-axis are :

(A) (a, 0) (B) (0, b) (C) (0, 7b) (D) (7a, 0)

(Hints : Put x = 0)

2. The area of the triangle OAB, the coordinates of the points A (4, 0), B(0, -7) and O is origin, is :

(A) 11 sq. units (B) 18 sq. units (C) 28 sq. units (D) none of these

(Hints : It is a right-angled triangle right angle at O)

3. The line $\frac{x}{2} + \frac{y}{4} = 1$ intersects the axes at P and Q, the coordinates of the midpoint of PQ are :

(A) (1, 2) (B) (2, 0) (C) (0, 4) (D) (2, 1)

(Hints : P(2, 0) and Q(0, 4))

4. The distance between the lines $2x + 4 = 0$ and $x - 5 = 0$, is :

(A) 9 units (B) 1 unit (C) 5 units (D) 7 units

(Hints : Draw the graph of two lines)

5. If 'a' is any positive integer such that the distance between the points P(a, 2) and Q(3, -6) is 10 units, then the value of 'a' is :

(A) -3 (B) 6 (C) 9 (D) 3

(Hints : Use distance formula)

6. The perimeter of triangle formed by the points (0, 0), (2, 0) and (0, 2) is :

(A) 4 units (B) 6 units (C) $6\sqrt{2}$ units (D) $4 + 2\sqrt{2}$ units

(Hints : Find length of three sides)

7. Two points of line segment are (a, b) and (-a, -b), then the length of the line segment is :

(A) $\sqrt{a^2 + b^2}$ (B) $2\sqrt{a^2 + b^2}$ (C) $\frac{2}{3}\sqrt{a^2 + b^2}$ (D) none of these

(Hints : use distance formula)

8. If the points (a, 0), (0, b) and (1, 1) are collinear, then :

(A) $a^2 + b^2 = ab$ (B) $a + b = ab$ (C) $a + b = a^2b^2$ (D) $a^2 + b^2 = 0$

(Hints : use section formula)

9. The distance between $(\tan \alpha, 0)$ and $(0, 1)$ is :

(A) $\sec^2 \alpha$ (B) $\cot^2 \alpha$ (C) $\sec \alpha$ (D) $\cot \alpha$

(Hints : Use distance formula)

10. The ratio in which the line joining the points (5, 3) and (-1, 6) is divided y-axis is :

(A) 5:3

(B) 2:3

(C) 4:5

(D) 5:1

(Hints : Use section formula and take x-coordinate = 0)

CBQ Type :

11. Social Awareness for No-smoking

To raise social awareness about hazards of smoking, a school decided to start 'No smoking' campaign. 10 students are asked to prepare campaign banners in the shape of a triangle. The vertices of one of the triangle are P(-3, 4), Q(3, 4) and R(-2, -1).



Based on the above information, answer the following questions.

(I) Find the coordinates of centroid of ΔPQR .

(II) If S be the mid-point of line segment joining P and Q, then find the coordinates of S.

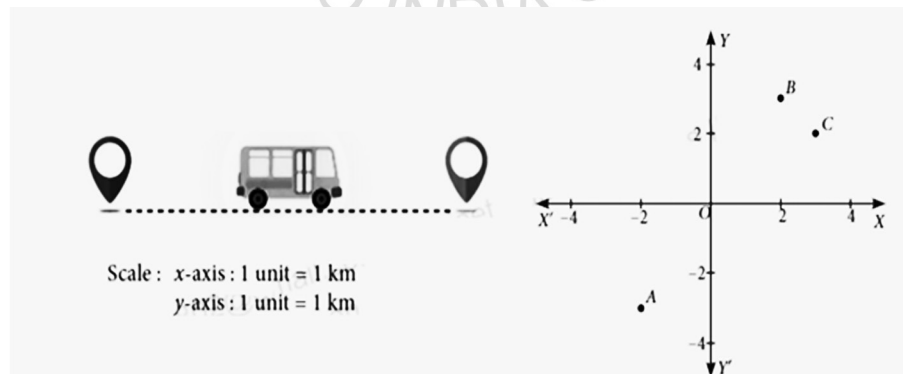
(III) A. If T be the mid-point of line segment joining R and Q and U be the mid-point of line segment joining R and P, then find the coordinates of centroid of ΔSTU .

OR

(III) B. Find the length of TU.

12. Choosing Best Route :

There are two routes to travel from source A to destination B by bus. First bus reaches at B via point C and second bus reaches from A to B directly. The position of A, B and C are represented in the following graph :



Based on the above information, answer the following questions.

(I) Find the distance between A and B.

(II) Find the measure of AC + BC.

(III) A. If the fare for first bus is ₹10/km, then what will be the fare for total journey by that bus ?

OR

(III) B. If the fare for second bus is ₹15/km, then what will be the fare to reach to the destination by this bus ?

13. Spreading Awareness on Plastic :

Use students of residential society undertake to work for the campaign "say no to Plastics". Group A took the region under the coordinates (3, 3), (6, y), (x, 7) and (5, 6) and group B took the region under the coordinates (1, 3), (2, 6), (5, 7) and (4, 4).



Based on the above information, answer the following questions :

(I) If region covered by group A forms a parallelogram, where the coordinates are taken in the given order, then find x and y.

(II) Find the perimeter of the region covered by group A.

(III) A. If the coordinates of region covered by group B, taken in the same order forms a quadrilateral, then find the length of each of its diagonals.

OR

(III) B. If region covered by group B forms a rhombus, where the coordinates are taken in given order, then find the perimeter of this region.

ANSWER

1. ©
2. ©
3. A
4. ©
5. ©

6. ©
7. B
8. B
9. ©
10. ©

11. (I) $\left(\frac{-2}{3}, \frac{7}{3}\right)$

(II) (0, 4)

(III) A. $\left(\frac{-2}{3}, \frac{7}{3}\right)$

(III) B. 3 units.

12. (I) 7.2 km

(II) 8.5 km

(III) A. ₹ 85

(III) B. ₹ 108

13. (I) $x = 8, y = 4$

(II) $2(\sqrt{10} + \sqrt{13})$ units

(III) A. $4\sqrt{2}$ units, $2\sqrt{2}$ units, (III) B. $4\sqrt{10}$ units