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 - 1

Section - A

MCQ Type :

1. If the points A(6, 1), B(8, 2), C(9, 4) and D(p, 3) are vertices of a parallelogram, taken in order, then the value of p is :

Ⓐ 7 Ⓑ 9 Ⓒ 5 Ⓓ 8

(Hints : Diagonals of a parallelogram bisect each other)

2. The distance between the points (3, 7) and (8, 9) is :

Ⓐ 11 units Ⓑ 12 units Ⓒ $\sqrt{29}$ units Ⓓ can't be found

(Hints : use distance formula)

3. In what ratio is the segment joining the points A(6, 3) and B(–2, –5) divided by the x-axis ?

Ⓐ 3 : 2 Ⓑ 3 : 5 Ⓒ 2 : 3 Ⓓ 2 : 5

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

4. If the points (1, x), (5, 2) and (9, 5) are collinear, then value of x is :

Ⓐ $\frac{5}{2}$ Ⓑ $-\frac{5}{2}$ Ⓒ –1 Ⓓ 1

(Hints : Use section formula)

5. The end points of diameter of circle are (2, 4) and (–3, –1). Its radius is :

Ⓐ $\frac{5\sqrt{2}}{2}$ units Ⓑ $5\sqrt{2}$ units Ⓒ $3\sqrt{2}$ units Ⓓ $\pm\frac{5\sqrt{2}}{2}$ units

(Hints : Use distance formula o find he diameter)

6. The point which divides the line segment joining the points (7, –6) and (3, 4) in ratio 1 : 2 internally lies in the :

Ⓐ I quadrant Ⓑ II quadrant Ⓒ III quadrant Ⓓ IV quadrant

(Hints : Use section formula)

7. The point which lies on the perpendicular bisector of the line joining the points (–2, –5) and (2, 5) is given by :

Ⓐ (0, 0) Ⓑ (0, 2) Ⓒ (2, 0) Ⓓ (-2, 0)

(Hints : Use mid-point formula)

8. The values of y for which the distance between the points P(2, –3) and Q(10, y) is 10 units are

Ⓐ –9, 5 Ⓑ –9, 3 Ⓒ –9, 2 Ⓓ –9, 6

(Hints : Use distance formula)

9. Two of the vertices of a ABC are A(–1, 4) and B((5, 2) and its centroid is (0, –3). The coordinates of the vertex C are :

Ⓐ (4, 3) Ⓑ (4, 15) Ⓒ (–4, –15) Ⓓ (–15, –4)

(Hints : Use centroid formula)

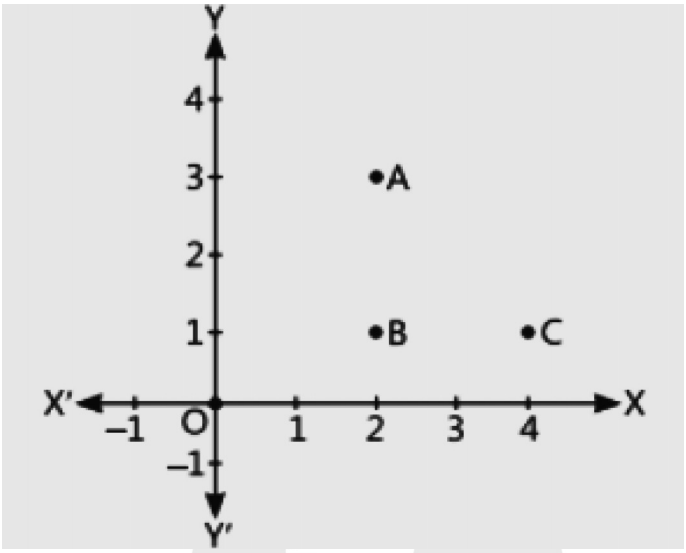
10. The points (–4, 0), (4, 0) and (0, 3) are the vertices of a :

Ⓐ Right triangle Ⓑ Isosceles triangle Ⓒ Equilateral triangle Ⓓ Scalene triangle

(Hints : Find length of three sides using distance formula)

CBQ Type :

11. Alia and Shagun are friends living on the same street in Patel Nagar. Shagun's house is at the intersection of one street with another street on which there is a library. They both study in the same school and that is not far from Shagun's house. suppose the school is situated at the point O, i.e., the origin, Alia's house is at A. Shagun's house is at B and library is at C.



Based on the above information, solve the following questions :

(I) How far is Alia's house from Shagun's house?

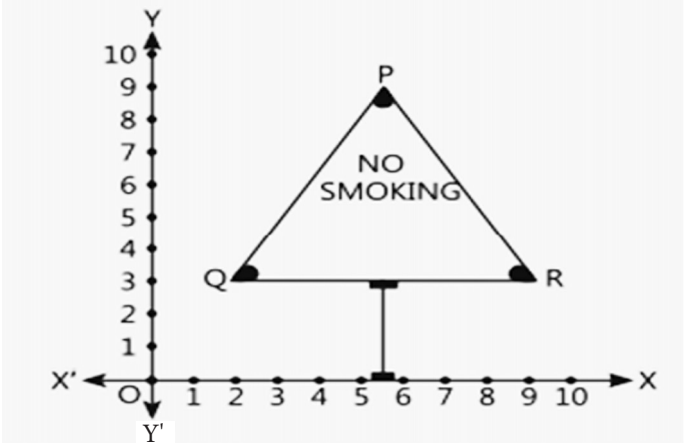
(II) How far is the library from Shagun's house?

(III) A . Show that for Shagun, school is farther compared to Alia's house and library.

OR

(III) B. Show that Alia's house, Shagun's house and library form an isosceles right triangle.

12. All of the persons know that smoking is injurious to health. So, some college students decided to start a campaign. To raise social awareness about hazards of smoking, they started "NO SMOKING" campaign. Some students were asked to prepare campaign banners in the shape of triangle which is as shown in the figure :



Based on the above informattion, solve the following questions :

(I) Find the coordinates of the mid-point of Q and R.

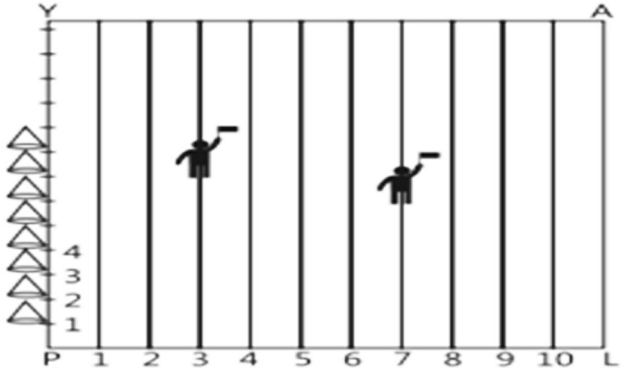
(II) Find the length of the median through Q.

(III) A. Find the point on X-axis, which is equidistant from points Q and R.

OR

(III) B. Find the centroid of the triangle PQR.

13. On Annual Sports Day of a school,parallel lines have been drawn with lime powder at a distance of 1 m from each other in a rectangular shaped school playground. 80 plastic cones have been placed at a distance of 1 m from each other along PY as shown in figure. Pushpendra runs $\frac{1}{4}$th the distance PY on the 3rd line and post a yellow flag. Pankaj runs $\frac{1}{5}$th the distance PY of the 7th line and posts a blue flag.



Based on the above information, solve the following questions :

(I) Find the coordinates of the yellow flag.

(II) What is the distance between both the flags?

(III) A. If Raman has to post a green flag exactly halfway between the line segment joining the two flags, where should he post his flag ?

OR

(III) B. If Raman change this position and post a green flag at a point between the line segment joining the two flags, then find the coordinates of the green flag which divides the line segment internally in the ratio 1 : 2 .

ANSWER

1. Ⓐ
2. Ⓒ
3. Ⓑ
4. Ⓒ
5. Ⓐ
6. Ⓓ
7. Ⓐ
8. Ⓑ
9. Ⓒ
10. Ⓑ

11. (1) 2 units, (II) 2 units.

12. (I) $\left(\frac{11}{2},3\right)$ (II) $\frac{\sqrt{157}}{2}$ (III) A. $\left(\frac{11}{2},0\right)$ (III) B. $\left(\frac{17}{3},5\right)$

13. (I) (3, 20) (II) $4\sqrt{2}$ m (III) A. at 18 m on 5th line. III. B. $\left(\frac{13}{3},\frac{56}{3}\right)$