CBSE Test Paper 04

CH-3 Coordinate Geometry

1. Which of the following point does not lie on the line y=2x+3?
   a. (-5, -7)
   b. (-1, 1)
   c. (3, 9)
   d. (3,7)
2. The point (0, 9) lies
   a. on the positive direction of y-axis
   b. in quadrant III
   c. on the positive direction of x-axis
   d. in quadrant IV
3. The points A(-2,3), B(-2,-4) and C(5,-4) are the vertices of the square ABCD, then the co-ordinates of the vertex D are:
   a. (5, 3)
   b. (3, 3)
   c. (0, 0)
   d. (3, -4)
4. The point whose ordinate is 6 and which point lies on the y-axis ?
   a. (0, 6)
   b. (6, 6)
   c. none of these
   d. (6, 0)
5. The points in which the abscissa and the ordinate have different signs will lie in
   a. quadrant IV only
   b. quadrants I and III
   c. quadrants II and IV
   d. quadrant II only
6. Fill in the blanks:

   A point lie on _____ quadrant, whose both coordinates are negative.

7. Fill in the blanks:

   The x-coordinate is also called the _____.

8. Without plotting the points indicate the quadrant in which they will lie, if abscissa is -5 and ordinate is -3.

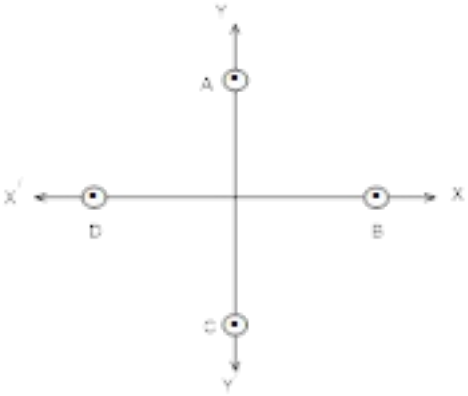
9. Write the Co-ordinates of a point which lies on the x-axis and is at a distance of 4 units to the right of origin. Draw its graph.

10. Draw the graph of the equation: $y = 3$

11. Which of the following points lie on the y-axis?
    A(1, 1), B(3, 0), C(0, 3), D(0, 0), E(–5, 0), F(0, –1), G(9, 0), H(0, –8).

12. Which of the following points lie on the x-axis?
    A(1, 1), B(3, 0), C(0, 3), D(0, 0), E(–5, 0), F(0, –1), G(9, 0), H(0, –8).

13. In fig. write the Co-ordinates of the points and if we join the points write the name of fig. formed. Also write Co-ordinate of intersection point of AC and BD.



14. Three vertices of a square are A(-1, -9), B(3, -1) and C(-5, 3). Plot the points. Then find the co-ordinates of the missing vertex D.

15. Plot the points P (1, 0), Q (4, 0) and S (1, 3). Find the coordinates of the point R such that PQRS is a square.

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Solution

1. (d) (3,7)

   Explanation: Let us put x=3 in the give equation,

   Then, y=2(3)+3

   y=6+3=9

   So, the point will be (3,9)

   For x=3, y=9. But in the given option, y=7

   So, the given point (3,7) will not lie on the line y=2x+3.
2. (a) on the positive direction of y-axis

   Explanation: Any point P in co-ordinate plane is written as P(x,y)

   when the value of x-coordinate is equal to zero then the point P lies on y axis

   Since,here x=0 so,point lies on y-axis

   And the value of y is positive so,

   Points lies in the positive direction of y-axis
3. (a) (5, 3)

   Explanation:

   Let A(—2,3), B(—2,4), C(5,—4) be the three vertices of the square ABCD.

   Clearly, abscissa of D = abscissa of C = 5

   And,ordinate of D = ordinate of A = 3

   So, the coordinates of the 4th vertex of ABCD i.e. D are (5,3).
4. (a) (0, 6)

   Explanation:

   Since the ordinate or y-corrdinate of a point is 6 and this point lies on y-axis.

   And the abscissa or x-corrdinate of a point lying on y-axis is 0.

   Therefore, the coordinate of the point is (0,6).
5. (c) quadrants II and IV

   Explanation:

   In 2nd quadrant and 4th quadrant sign of abscissa and ordinate both is opposite i.e, one is negative and other is positive.

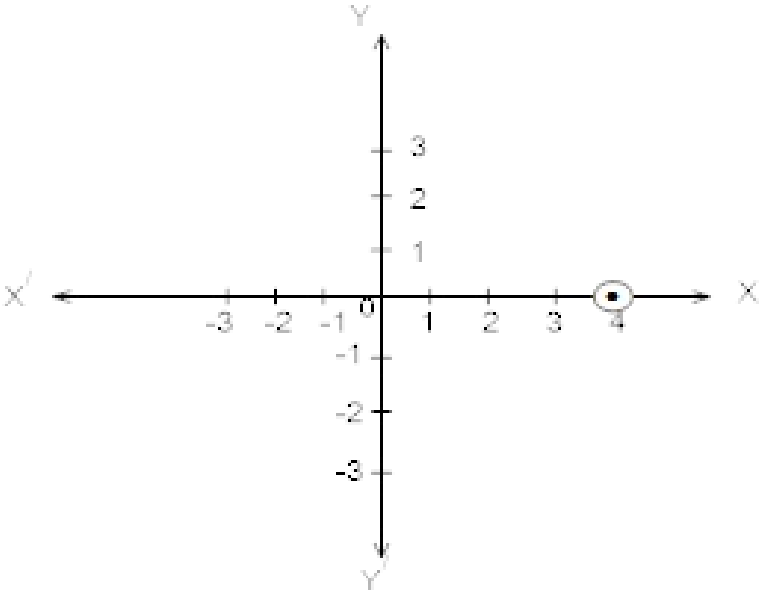
In 2nd quadrant sign of co-ordinate are (—,+),
And in 4th quadrant sign of co-ordinate are (+,—)

6. IIIrd

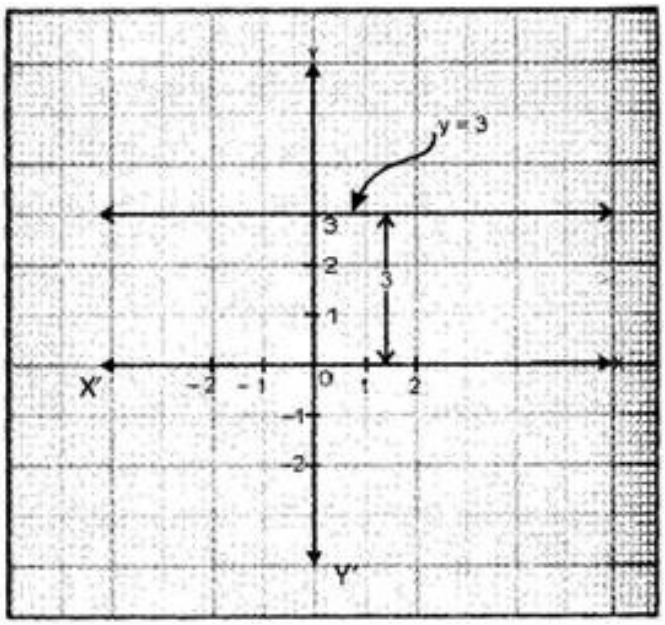
7. abscissa

8. In the point (-5, -3) abscissa and ordinate both are negative, so it lies in the third quadrant.

9. The point will be (4, 0).



10. Given equation is y = 3. The value of y is constant, therefore the graph of y = 3 is a straight line parallel to x-axis (horizontal line) at a distance of 3 units above the x-axis.

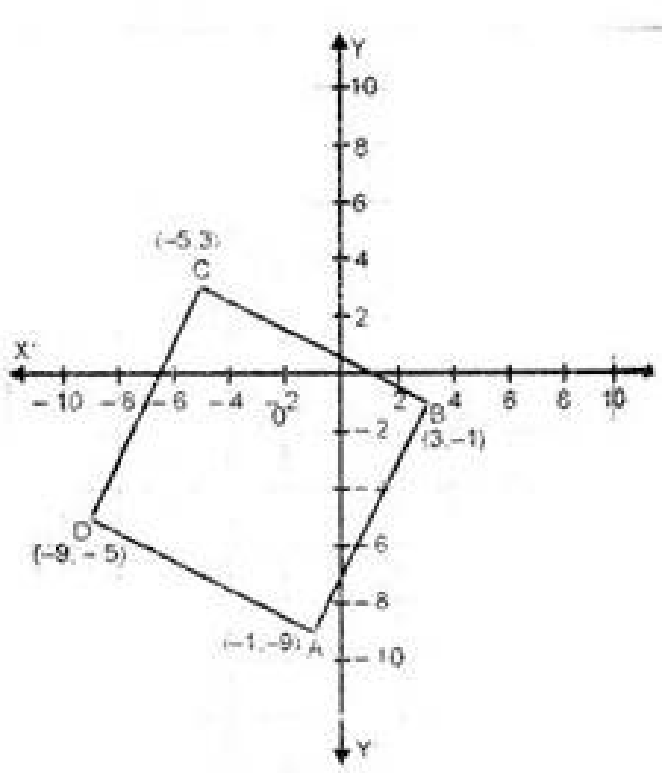


11. A point lies on y-axis if x-coordinate is zero. Hence C, D, F and H points lie on y-axis.

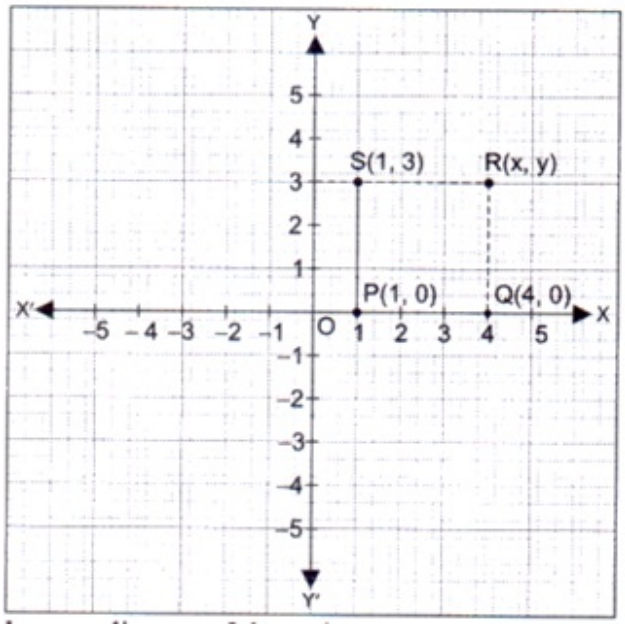
12. A point lies on x-axis if the y-coordinate is zero. Hence B, D, E and G points lie on the x-axis.

13. i. The Co-ordinate of point A is (0, 2), B is (2, 0), C is (0, -2) and D is (-2, 0).
    ii. If we joined them we get square.
    iii. Co-ordinate of intersection point of AC and BD is (0, 0).

14. Plot the points A, B and C. Join AB and BC. Since each angle of a square is 90^{o}. Hence, to complete the square draw perpendicular at A and C. The intersecting point of these perpendiculars is D. The coordinates of D are (-9, -5).



15. Plot the points P(1, 0), Q(4, 0) and S(1,3) in the cartesian plane. As we know all the sides of a square are equal and each angle is of 90° measure.
Therefore, the abscissa of the vertex R is 4 and its ordinate is 3.



Hence, the coordinate of the point R are (4, 3).