## Exercise 10.1



**1.** Name the quadrants in which the following points lie.

(*i*) (2, 5) (*ii*) (– 3, 2) (*iii*) ( – 2, – 5) (*iv*) (2, – 3)

(*v*) (0, – 5) (*vi*) (– 3, – 9) (*vii*) (3, 3) (*viii*) (– 8, 4)

(*ix*) (4, 0)

**2.** (*i*) Plot a point A on the graph paper whose abscissa is 4 and ordinate is 3.

(*ii*) Plot a point B on the graph paper whose abscissa is – 2 and ordinate is 4.

(*iii*) Plot a point C on the graph paper whose abscissa is – 3 and ordinate is 3.5.

(*iv*) Plot a point D on the graph paper whose abscissa is zero and ordinate is 4.

**3.** (*i*) A point P is on the $x$-axis and 2 units from the origin. State its abscissa and ordinate.

(*ii*) A point M is on the $y$-axis. State its abscissa and ordinate if M is 3 units from the origin.

**4.** Plot the following points on the graph paper and indicate in which quadrant or on which coordinate axis these points lie:

(*i*) (– 2, 0) (*ii*) (0, 5) (*iii*) (0, 0) (*iv*) (3, –2)

(*v*) (– 5, –1) (*vi*) (0, –3/2)

**5.** Plot the points $(x, y)$ given in the following table on the plane, choosing suitable units of distance on the axes.

| $x$ | – 3 | – 1 | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|
| $y$ | 5 | 3 | – 6 | 4 | – 5 | 0 | 4 | – 1 |

6. In each of the following sketch the line segment $\overline{AB}$:

   (*i*) A = (–3, –2), B = (4, 1) (*ii*) A = (– 2, 3), B = (5, 1)

   (*iii*) A = (–2, 4), B = (5, 4) (*iv*) A = (3, –1), B = (3, 6)

7. Plot the points P(6, 6) ,Q(4, 4) and R(–1, –1) in the cartesian plane and check whether they are collinear.

8. Let A = (– 5, 3), B = (6, 0) and C (5 ,5). Plot the points A, B and C and draw the triangle ABC.

9. Plot the points A(–5, –2), B(1, –2), C(6, 4) and D(0, 4). Join the points to get AB, BC, CD and DA. Name the figure so obtained. [*CBSE* 2011]

10. Plot the points A(0, 4), B(–3, 0), C(0, –4) and D(3, 0). Name the figure obtained by joining the points A, B, C, D. Also, name the quadrants in which the sides AB and AD lie. [*CBSE* 2011]

## Answers

1. (*i*) First (*ii*) Second (*iii*) Third (*iv*) Fourth (*v*) *y*-axis
   (*vi*) Third (*vii*) First (*viii*) Second (*ix*) *x*-axis

3. (*i*) Abscissa = 2, ordinate = 0

   (*ii*) Abscissa = 0, ordinate = 3



4. (*i*) On the –ve side of *x*-axis. (*ii*) On the *y*-axis.

   (*iii*) On both the *x*-axis and *y*-axis called origin.

   (*iv*) (3, –2) lies in quadrant IV. (*v*) (–5, –1) lies in quadrant III.

   (*vi*) $(0, \frac{-3}{2})$ lies on the –ve side of *y*-axis.

7. Yes, P,Q, R are collinear.

9. Figure so obtained is a parallelogram

10. Figure ABCD is a rhombus. Side AB lies in II quadrant and AD lies in I quadrant.