# Coordinate Geometry

### **TRY** YOURSELF

#### SOLUTIONS

**1.** (i) The position of lily sapling can be written as (9, 2).

(ii) The position of hibiscus sapling can be written as (4, 7).



**2.** Given, *A*(3, 4) and *B*(-2, 5)

Abscissa of A = 3 and abscissa of B = -2

 $\therefore \text{ Abscissa of } A - \text{ Abscissa of } B = 3 - (-2) = 3 + 2 = 5$ 

**3.** (i) In point (3, 0), *y*-coordinate is zero, so it lies on *x*-axis.

(ii) In point (0, 4), *x*-coordinate is zero, so it lies on *y*-axis.

4. Since, (x + 3, 6) = (3, y + 1)

So, their corresponding abscissa and ordinates are equal.  $\therefore$  x + 3 = 3 and 6 = y + 1

 $\Rightarrow x = 3 - 3 = 0 \text{ and } y = 6 - 1 = 5$ 

 $\therefore \quad \text{Coordinate } (x, y) = (0, 5)$ 

5. Since the ordinate of any point on *x*-axis is zero.

 $\therefore$  The ordinate of *C*(3, *a* – 5) is zero.

*i.e.*,  $a - 5 = 0 \implies a = 5$ 

6. (i) Ordered pair of the type (-, +) lies in II quadrant. Thus the point (-3, 2) lies in quadrant II.

(ii) Ordered pair of the type (-, -) lies in III quadrant. Thus, the point (-2, -7) lies in quadrant III.

(iii) Ordered pair of the type (+, -) lies in IV quadrant. Thus, the point (3, -4) lies in quadrant IV.

(iv) Ordered pair of the type (+, +) lies in I quadrant. Thus, the pair (8, 3) lies in quadrant I.

7. Point *A* lies on *x*-axis at a distance of 5 units from origin along +ve direction of *x*-axis. So, *x*-coordinate of A = 5 and *y*-coordinate of A = 0.

 $\therefore$  The coordinates of *A* are (5, 0).

Point *B* lies in I<sup>st</sup> quadrant.

Perpendicular distance of *B* from *y*-axis is 5 units.

So, the *x*-coordinate of B = 5.

Also, perpendicular distance of *B* from *x*-axis is 3 units. So, the *y*-coordinate of B = 3

 $\therefore$  The coordinates of *B* are (5, 3).

Similarly, *x*-coordinate of C = -2 and *y*-coordinate of C = 4.

 $\therefore$  The coordinates of *C* are (-2, 4).

As point *D* lies on *y*-axis at a distance of 3 units from origin along negative direction of *y*-axis.

So, *x*-coordinate of D = 0 and *y*-coordinate of D = -3.

 $\therefore$  The coordinates of *D* are (0, -3).

8. Here *P* lies in quadrant I, *Q* lies in quadrant-II, *R* lies in quadrant-III, *S* lies in quadrant-IV.

(i) Also abscissa of a point is its distance from *y*-axis.

So, abscissa of P = 1, abscissa of Q = -3.

Abscissa of R = -8 and abscissa of S = 8

(ii) As ordinate of a point is its distance from *x*-axis.

So, ordinate of P = 3, ordinate of Q = 5.

Ordinate of R = -5, ordinate of S = -7

(iii) Coordinates of *P* are (1, 3)

Coordinates of Q are (-3, 5)

Coordinates of *R* are (-8, -5)

Coordinates of S are (8, -7)

9. (i) *x*-coordinate of A = 3 and *y*-coordinate of A = 0.

Therefore, the coordinates of A are (3, 0).

(ii) *x*-coordinate of B = 0 and *y*-coordinate of B = 2.

Therefore, the coordinates of B are (0, 2).

(iii) *x*-coordinate of C = -4 and *y*-coordinate of C = 0

Therefore, the coordinates of C are (-4, 0).

(iv) *x*-coordinate of D = 0 and *y*-coordinate of D = -3.5. Therefore, the coordinates of D are (0, -3.5).

**10.** (i) *x*-coordinate of A = -4 and *y*-coordinate of A = 3

 $\therefore$  The coordinates of *A* are (-4, 3)

*x*-coordinate of C = 6 and *y*-coordinate of C = 0.

 $\therefore$  The coordinates of *C* are (6, 0)

*x*-coordinate of D = -3 and *y*-coordinate of D = -4

 $\therefore$  The coordinates of *D* are (-3, -4)

*x*-coordinate of F = 6 and *y*-coordinate of F = -3

- $\therefore$  The coordinates of *F* are (6, -3).
- (ii) Abscissa of B = 5.
- (iii) The point identified by the coordinates (3, -6) is *E*.

**11.** Let *X'OX* and *Y'OY* be the coordinate axes. Then the given points can be plotted as given below.

#### MtG 100 PERCENT Mathematics Class-9



**12.** Let *X'OX* and *Y'OY* be the coordinate axes. Then the given points can be plotted as given below.

D(2, 2)

3

4 5 6

C(5, -4)

2

B(0, -3)

The figure thus formed is a quadrilateral.

E(-3, 2

-2

A(-6,





Here it is clear that points *P* and *R* lie on *y*-axis.

**14.** Let *X*′*OX* and *Y*′*OY* be the coordinate axes. Then the

given points can be plotted as given below :



 $\therefore$  The coordinates of the vertex *C* are (-2, -4).

**15.** Let *X'OX* and *Y'OY* be the coordinate axes. Then the

given points can be plotted as given below.



Thus, from the graph it is clear that the amount after 12 years is  $\gtrless$  360.

## mtg BEST SELLING BOOKS FOR CLASS 9













































Visit www.mtg.in for complete information