EXERCISE 3.1

Write the correct answer in each of the following:

1. Point (–3, 5) lies in the

A. first quadrant
B. second quadrant
C. third quadrant
D. fourth quadrant

Solution:

B. Second Quadrant

Explanation:

(-3,5) is of form (-x,y).

In the point (-3, 5) abscissa is negative and ordinate is positive. So, it lies in the second quadrant.

Hence, (B) is the correct option.

2. Signs of the abscissa and ordinate of a point in the second quadrant are respectively

A. +, +
B. –, –
C. –, +
D. +, –

Solution:

C. –, +

Explanation:

Signs of the abscissa and ordinate of a point in the second quadrant is –, +.

Hence, (C) is the correct option.

3. Point (0, –7) lies

A. on the x –axis
B. in the second quadrant
C. on the y-axis
D. in the fourth quadrant

Solution:

C. on the y-axis

Explanation:

Since the abscissa is 0, Point (0, –7) lies on y-axis.

Hence, (C) is the correct option.

4. Point (– 10, 0) lies

A. on the negative direction of the x-axis
B. on the negative direction of the y-axis
C. in the third quadrant
D. in the fourth quadrant

Solution:

A. on the negative direction of the x-axis

Explanation:

Point (– 10, 0) lies on the negative direction of x-axis.
Hence, (A) is the correct option.

5. Abscissa of all the points on the x-axis is

A. 0
B. 1
C. 2
D. any number

Solution:

D. any number
Explanation:
Abscissa of all the points on the x-axis can be any number.
Hence, (D) is the correct option.

6. Ordinate of all points on the x-axis is

A. 0
B. 1
C. – 1
D. any number

Solution:

A. 0
Explanation:
Ordinate of all the points on the x-axis is 0.
Hence, (A) is the correct option.

7. The point at which the two coordinate axes meet is called the

A. abscissa
B. ordinate
C. origin
D. quadrant

Solution:

C. origin
Explanation**:**
The points at which the two coordinate axes meet is called the origin.
Hence, (C) is the correct option.

8. A point both of whose coordinates are negative will lie in

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

Solution:

C. III quadrant
Explanation**:**
A point whose both of the coordinate are negative will lie in the III quadrant.
Hence, (C) is the correct option.

9. Points (1, – 1), (2, – 2), (4, – 5), (– 3, – 4)

A. lie in II quadrant
B. lie in III quadrant
C. lie in IV quadrant
D. do not lie in the same quadrant

Solution:

D. do not lie in the same quadrant
Explanation:
Points (1, – 1), (2, – 2), (4, – 5) lie in IV quadrant and (– 3, – 4) lie in III quadrant.
Hence, (D) is the correct option.

10. If y coordinate of a point is zero, then this point always lies

A. in I quadrant
B. in II quadrant
C. on x – axis
D. on y – axis

Solution:

C. on x – axis
Explanation:
We know that if y-coordinate of a point, i.e., ordinate is zero, then this point always lies on x-axis.
Hence, (C) is the correct option.

11. The points (–5, 2) and (2, – 5) lie in the

A. same quadrant
B. II and III quadrants, respectively
C. II and IV quadrants, respectively
D. IV and II quadrants, respectively

Solution:

C. on x – axis
Explanation:
(-5,2) is of the form (-x,y) so it lies in the II quadrant.
(2,-5) is of the form (x,-y) so it lies in IV quadrant.
(C) II and IV quadrants, respectively
Hence, (C) is the correct option.

12. If the perpendicular distance of a point P from the x-axis is 5 units and the foot of the perpendicular lies on the negative direction of x-axis, then the point P has

A. x – coordinate = – 5
B. y - coordinate = 5 only
C. y – coordinate = – 5 only
D. y – coordinate = 5 or –5

Solution:

D. y – coordinate = 5 or –5
Explanation:

Perpendicular distance from x-axis = Ordinate = 5
The negative direction of x-axis doesn't decide the sign of the ordinate.
(D) y-coordinate = 5 or -5.
Hence, (D) is the correct option.