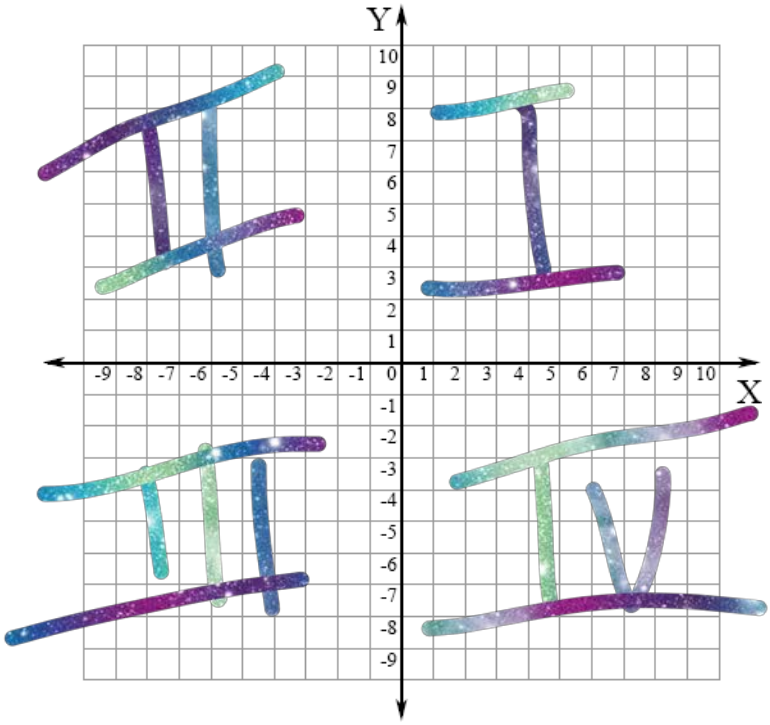
The Coordinate System

- A **coordinate system**, or coordinate plane, is used to locate points in a 2-dimensional plane.
- The horizontal number line is the X-axis.
- The vertical number line is the Y-axis.
- Their intersection is the ORIGIN. (Label)



- The coordinate plane contains four quadrants (I, II, III, IV). Label the quadrants.
- Any point can be located within one of the four quadrants in the coordinate plane using a specific ordered pair of numbers, called its coordinate pair.

(x , y)

- The first number in an ordered pair is the x-coordinate.
- The second number is the y-coordinate.

Example: **(3,2)** **3** is the **x- coordinate**, **2** is the **y-coordinate**.

- A point is defined on the coordinate plane by one, AND ONLY ONE, ordered pair.

Tell what point is located at each ordered pair.

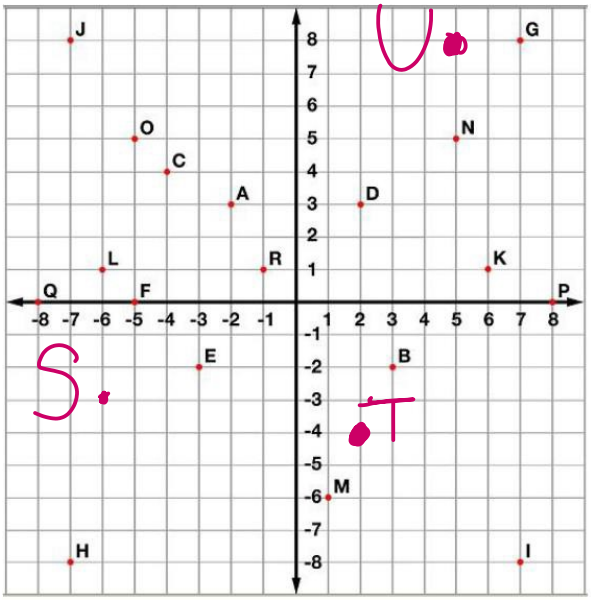
1. (3 , -2) B
2. (2 , 3) D
3. (-5 , 5) O
4. (-7 , -8) H
5. (-4 , 4) C
6. (-5 , 0) F

Write the ordered pair for each given point.

7. E (-3,-2)
8. M (1,-6)
9. P (8,0)
10. G (7,8)
Q (-8,0)
N (5,5)

11.

12.



Plot the following points on the coordinate grid.

13. S (-6,-3)
14. T (2,-4)
15. U (5,8)

Identify the quadrant containing each point.

16. B IV
17. J II
18. I IV
19. D I
20. E

Graph and label the REFLECTION of each point on the coordinate plane

11. $N(-1, 3)$ over x-axis = $(-1, -3)$
12. $V(2, -4)$ over y-axis = $(-2, -4)$
13. $C(4, 0)$ over x-axis = $(4, 0)$
14. $P(-6, 2)$ over y-axis = $(6, 2)$
15. $M(-5, 0)$ over x-axis = $(-5, 0)$

The opposite of zero is zero