Plotting Points in the Coordinate Plane

The Coordinate Plane:

The vertical axis is also called the **y-axis**.

The **origin**, at (0, 0), is the point where the axes intersect.

(4, 3)

Each point is named by an **ordered pair**.

The horizontal axis is also called the **x-axis**.
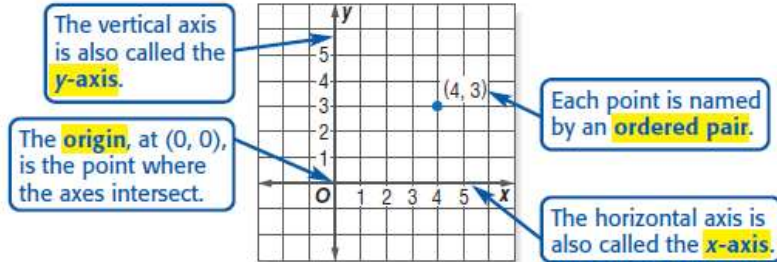
Each point in the coordinate plane is an ordered pair where it is (location on the x-axis, location on the y-axis). The point is located at the intersection of these two locations.
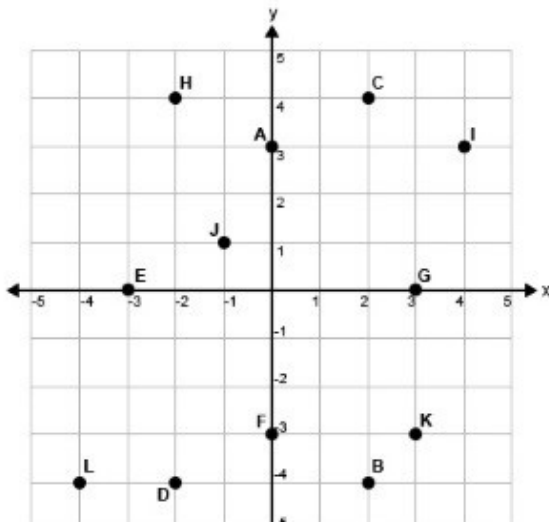
Quadrants in the Coordinate Plane:

y-axis

quadrant II   quadrant I

origin

(0,0)

-5 -4 -3 -2 -1   1 2 3 4 5   x-axis

quadrant III   quadrant IV
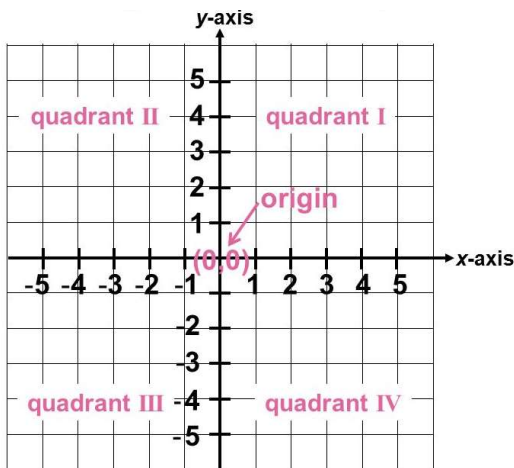
Example 1:

Name the ordered pair for each point and the quadrant in which the point lies.
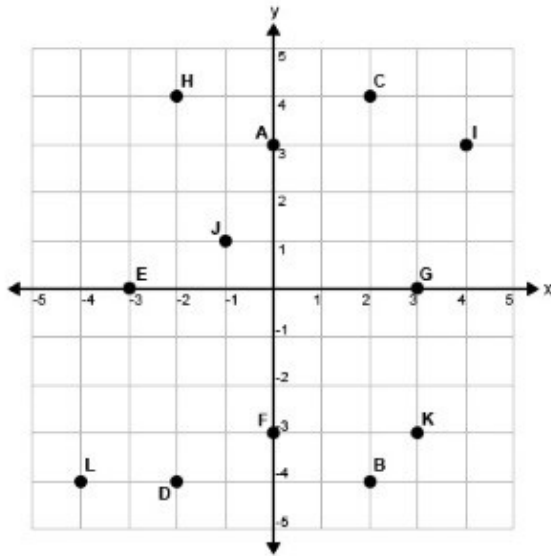
A

Point A is aligned with 0 on the x-axis and 3 on the y-axis. So, the coordinates of A are $(0, 3)$.
Point A is not in a quadrant. It is on the y-axis.

$A(0, 3)$; on the *y*-axis

Example 2:

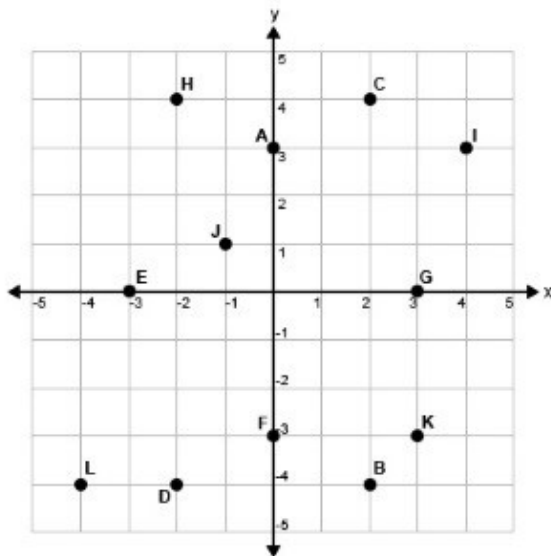Name the ordered pair for each point and the quadrant in which the point lies.

B

Point B is aligned with 2 on the x-axis and -4 on the y-axis. So, the coordinates of B are $(2, -4)$.
Point B is in quadrant IV.

$B(2, -4)$; Quadrant IV

Example 3:

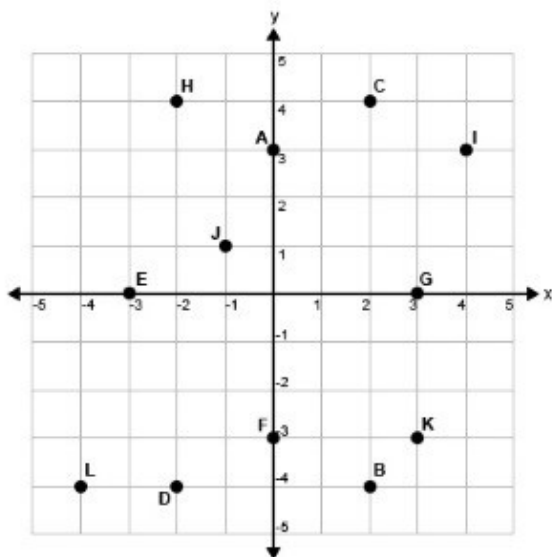Name the ordered pair for each point and the quadrant in which the point lies.

C

Point C is aligned with 2 on the x-axis and 4 on the y-axis. So, the coordinates of C are $(2, 4)$.
Point C is in quadrant I.

$C(2, 4)$; Quadrant I

Example 4:

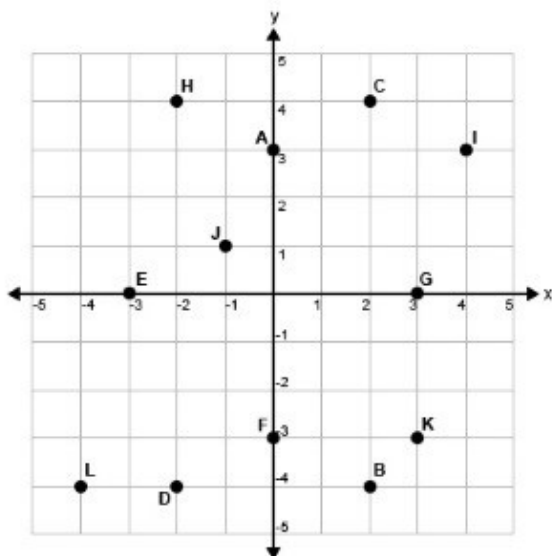Name the ordered pair for each point and the quadrant in which the point lies.

D

Point D is aligned with -2 on the x-axis and -4 on the y-axis. So, the coordinates of D are
$(-2, -4)$. Point D is in quadrant III.

$D(-2, -4)$; Quadrant III

Example 5:

Name the ordered pair for each point and the quadrant in which the point lies.
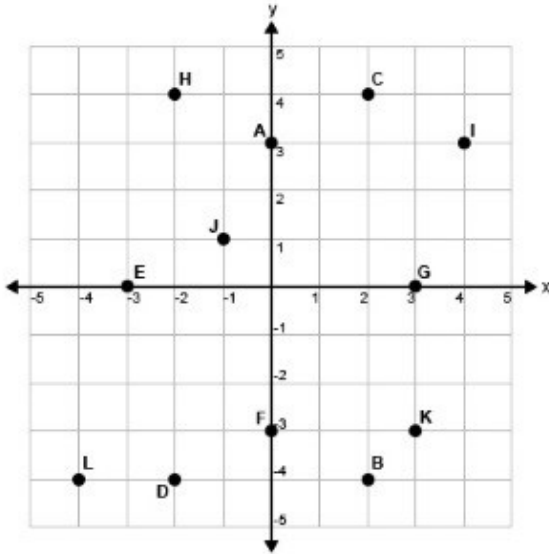
E

Point E is aligned with -3 on the x-axis and 0 on the y-axis. So, the coordinates of D are $(-3, 0)$.
Point E is not in a quadrant. Point E lies on the x-axis.

$E(-3, 0)$; on the x-axis

Example 6:

Name the ordered pair for each point and the quadrant in which the point lies.
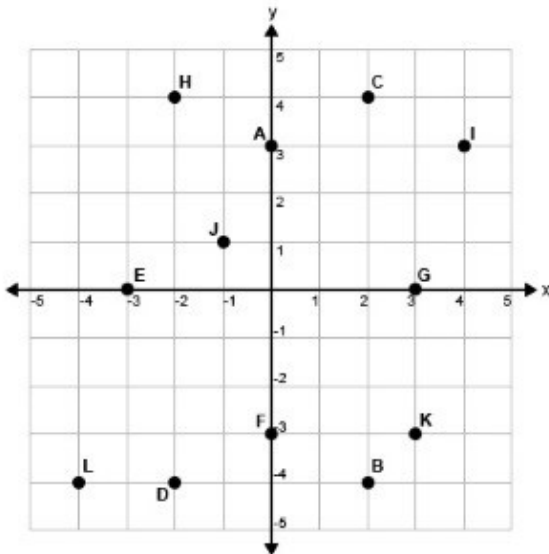
F

Point F is aligned with 0 on the x-axis and -3 on the y-axis. So, the coordinates of F are $(0, -3)$.
Point F is not in a quadrant. Point F is on the y-axis.

$F(0, -3)$; on the y-axis

Example 7:

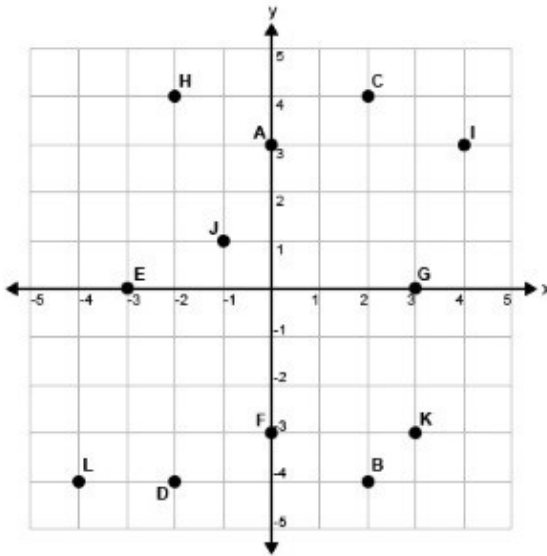Name the ordered pair for each point and the quadrant in which the point lies.

G

Point G is aligned with 3 on the x-axis and 0 on the y-axis. So, the coordinates of G are $(3,0)$.
Point G is not in a quadrant. Point G lies on the x-axis.

$G(3,0)$; on the x-axis

Example 8:

Name the ordered pair for each point and the quadrant in which the point lies.

Point H is aligned with -2 on the x-axis and 4 on the y-axis. So, the coordinates of H are
$(-2,4)$. Point H is in quadrant II.
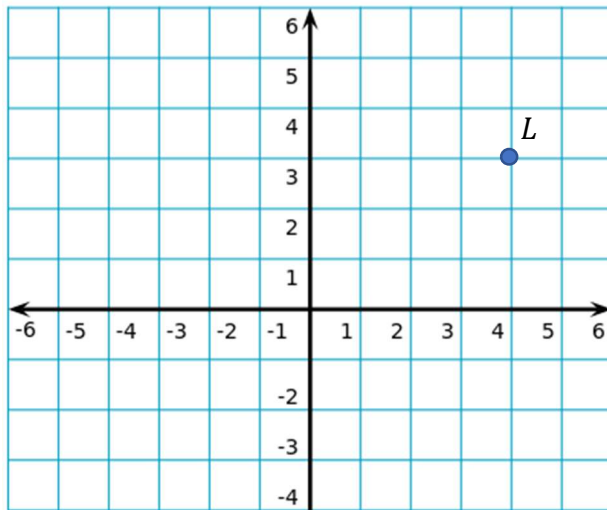
$H(-2,4)$; Quadrant II

Example 9:

Plot the following points on the coordinate plane.

$L(4,3)$

This means we need to align L with 4 on the x-axis and 3 on the y-axis.

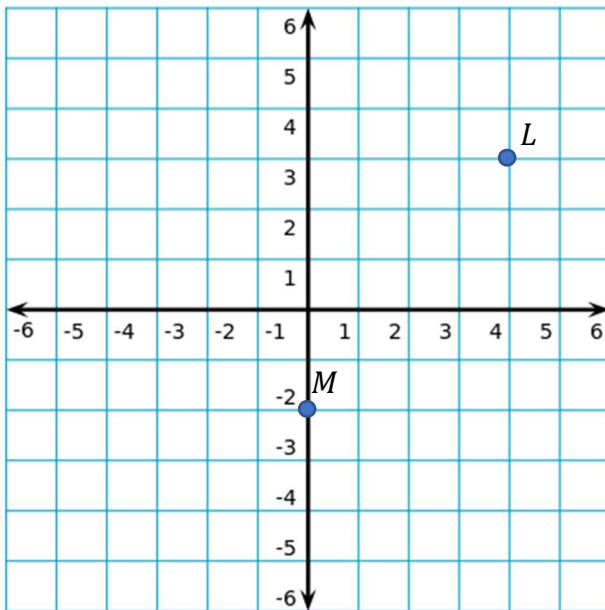Example 10:

Plot the following points on the coordinate plane.

$M(0, -2)$

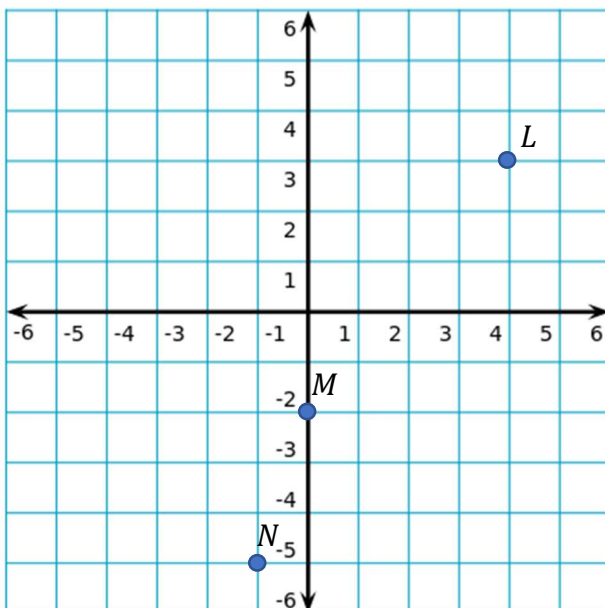This means we need to align M with 0 on the x-axis and -2 on the y-axis.

Example 11:

Plot the following points on the coordinate plane.

$N(-1, -5)$

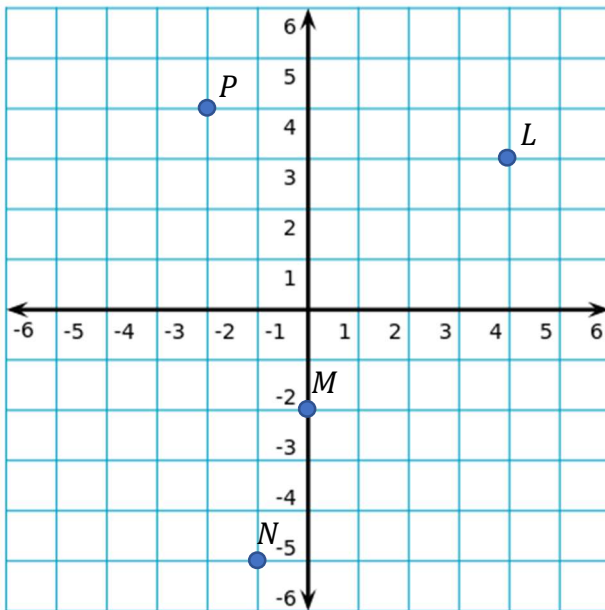This means we need to align N with -1 on the x-axis and -5 on the y-axis.

Example 12:

Plot the following points on the coordinate plane.

$P(-2, 4)$

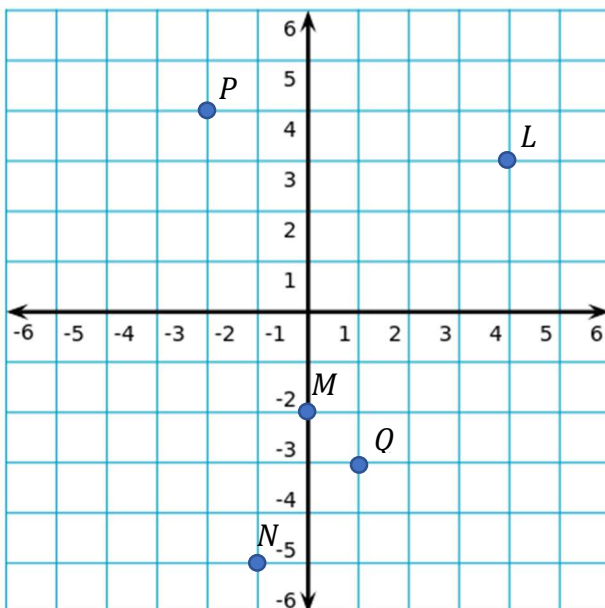This means we need to align P with -2 on the x-axis and 4 on the y-axis.

Example 13:

Plot the following points on the coordinate plane.

$Q(3, -1)$

This means we need to align Q with 1 on the x-axis and -3 on the y-axis.

Example 14:

Plot the following points on the coordinate plane.

$R(4, 0)$

This means we need to align R with 4 on the x-axis and 0 on the y-axis.