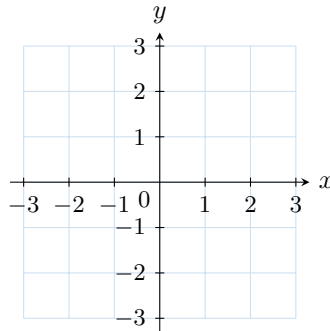


# COORDINATE GEOMETRY

## A COORDINATE PLANE

### Definition Coordinate Plane

A **coordinate plane** is a grid formed by two number lines that intersect at their zero point, called the **origin**.



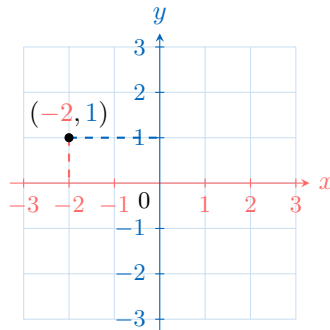
Coordinate plane

- The horizontal number line is called the **x-axis**.
- The vertical number line is called the **y-axis**.

### Definition Coordinates of a Point

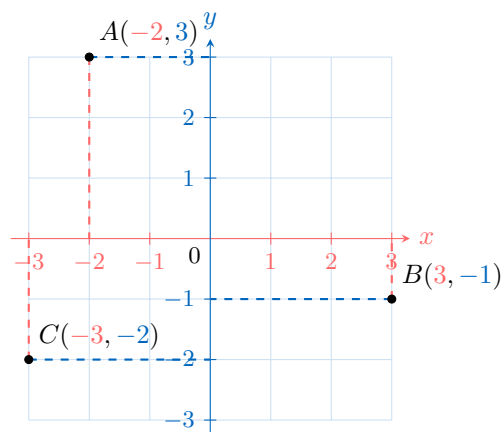
The **coordinates of a point** are a pair of numbers, written as  $(x, y)$ , where:

- The **x-coordinate** indicates the horizontal position along the x-axis, with positive numbers to the right of the origin and negative numbers to the left.
- The **y-coordinate** indicates the vertical position along the y-axis, with positive numbers above the origin and negative numbers below.



**Ex:** Plot these points on a coordinate plane:

$A(-2, 3)$ ,  $B(3, -1)$ , and  $C(-3, -2)$



## B TABLE OF POINTS

### Definition Table of Points

A **table of points** lists the coordinates of points in a coordinate plane. In such a table:

- The first row represents the **x-coordinates**.
- The second row represents the **y-coordinates**.

Each column pairs an x-coordinate with a y-coordinate to form a point, such as  $(x, y)$ .

Ex:

$x$	-2	1	2
$y$	-3	3	-1

 $\rightarrow (-2, -3), (1, 3), (2, -1) \rightarrow$ 