# CARTESIAN PLANE

Cartesian coordinates can be used to pinpoint where we are on a map or graph.

The Cartesian coordinate plane of x and y works well with many simple situations in real life. For instance, if you are planning where to place different pieces of furniture in a room, you can draw a two-dimensional grid representing the room and use an appropriate unit of measurement. Choose one direction to be x, and the other (perpendicular) direction to be y, and define a location as your starting point (i.e., the zero coordinate on both axes). You can specify any position in the room with two numbers, in the format (x, y), so (3, 5) would be 3 meters in the x-direction and 5 meters in the y-direction, from your chosen (0, 0) point.

Using Cartesian Coordinates we mark a **point** on a graph by **how far along** and **how far up** it is:
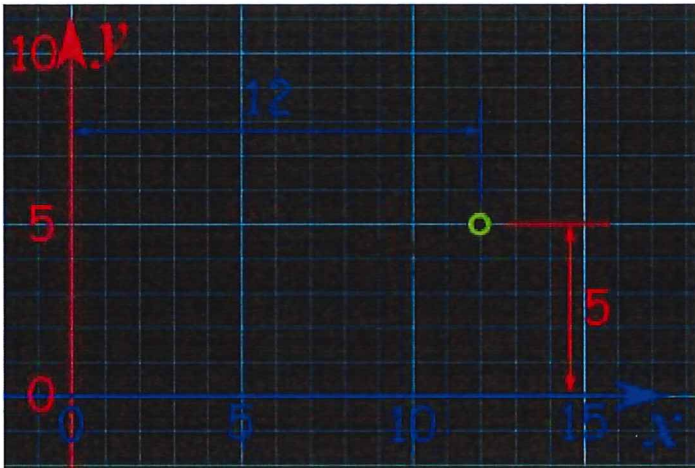
The point **(12,5)** is 12 units along, and 5 units up.

X and Y Axis

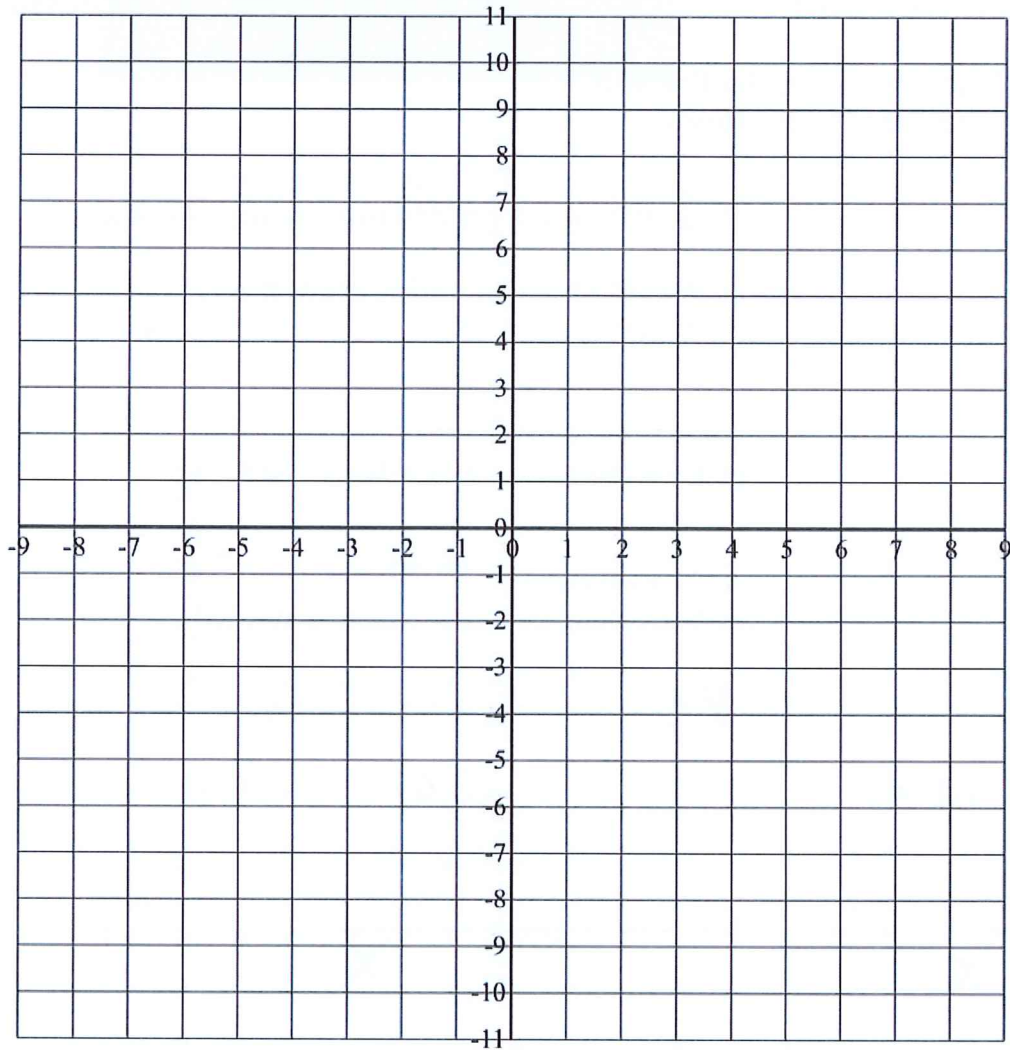The *left-right* (**horizontal**) direction is commonly called **X**.

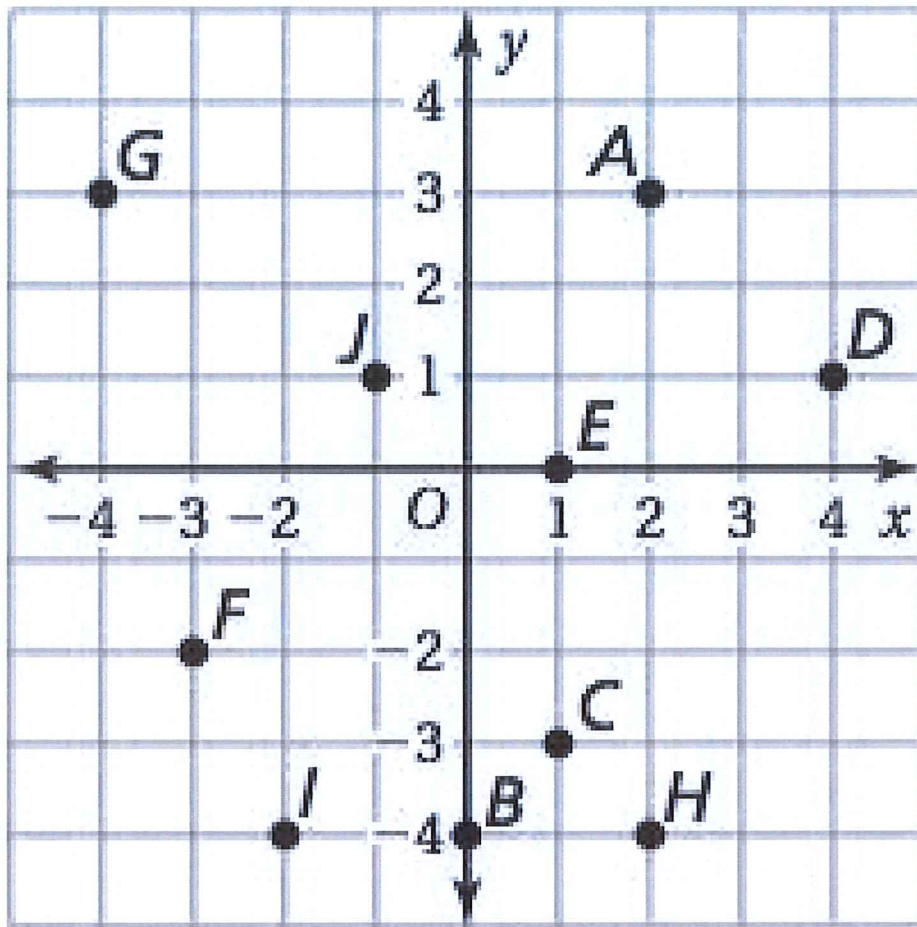The *up-down* (**vertical**) direction is commonly called **Y**.

Put them together on a graph ...

Plotting Coordinate Points (A)

Plot the coordinate points below.

(-4, 10)	(7, -9)	(0, 9)	(-8, 6)	(-4, -6)	(6, 5)	(-3, -1)	(5, 5)
(-5, 6)	(-3, -6)	(-1, -6)	(5, 9)	(8, 6)	(1, 5)	(-4, 9)	(2, 8)

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A = (,)	B =
C =	D =
E =	F =
G =	H =
I =	J =