

Graphing Linear Functions

In mathematics, any two distinct points in a coordinate system determine a straight line. An equation for which the graph is a straight line is called a **linear equation**.

The graph of a linear equation can be obtained by the following steps:

Let us have a look how to graph $-2x+y=-1$

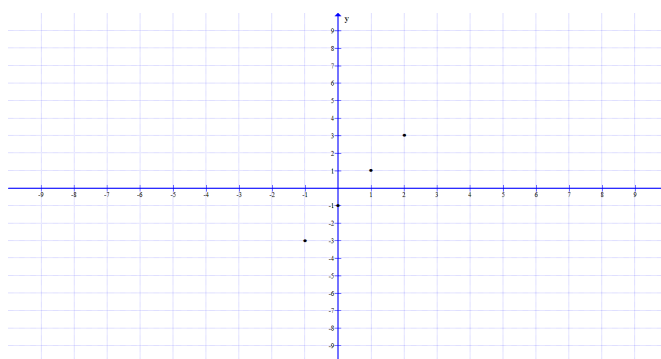
Step 1: Solve for y

$$y=2x-1$$

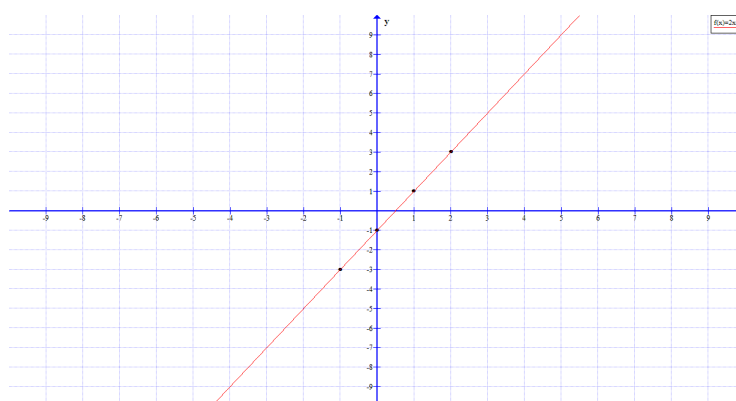
Step 2: Select at least four values for x and find the corresponding values for y. Record each result as an ordered pair (x , y).

x	$y=2x-1$	y	(x, y)
-1	$2(-1)-1$	-3	(-1, -3)
0	$2(0)-1$	-1	(0, -1)
1	$2(1)-1$	1	(1, 1)
2	$2(2)-1$	3	(2, 3)

Step 3: Graph the point associated with the ordered pair obtained in Step 2.



Step 4: Draw the line that contain the points.



Every point on the line has coordinates that make the equation $y = 2x - 1$ true.

Try to find some points that lie on the graph of this line.