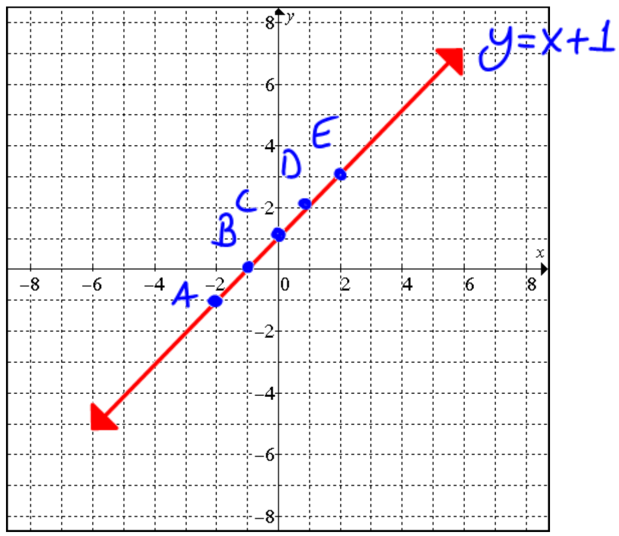
The equation of a line expresses a relationship between x and y values on the coordinate plane. For instance:

- The equation y = x expresses a relationship where every x value has the exact same y value.
- The equation y = 2x expresses a relationship in which every y value is double the x value,
- y = x +1 expresses a relationship in which every y value is 1 greater than the x value.

Since, as we just wrote, every equation is a relationship of x and y values, we can create a **table of values** for any line. In other words, a table of values is simply some of the points that are on the line.

1. Equation: y = x + 1

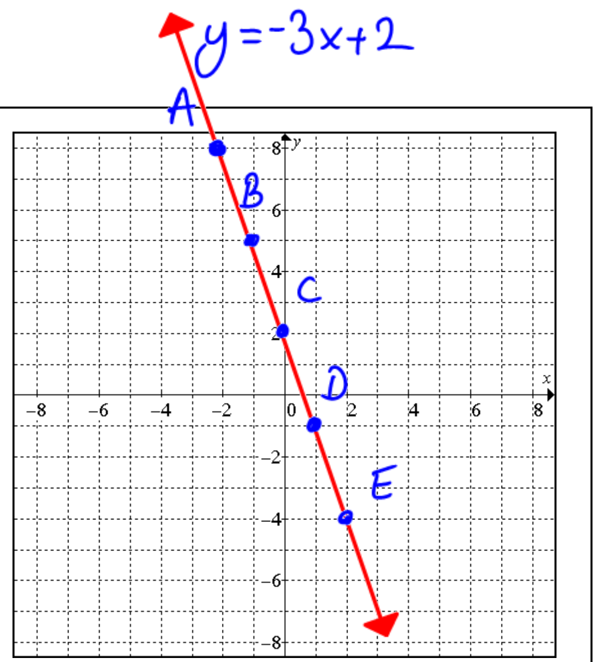
x	$y = x + 1$	y	(x, y)
-2	y = -2 + 1 = -1	-1	A(-2,-1)
-1	= -1 + 1 = 0	0	B(-1,0)
0	= 0 + 1 = 1	1	C(0,1)
1	= 1 + 1 = 2	2	D(1,2)
2	= 2 + 1 = 3	3	E(2,3)



random #s you pick

2. Equation: $y = -3x + 2$

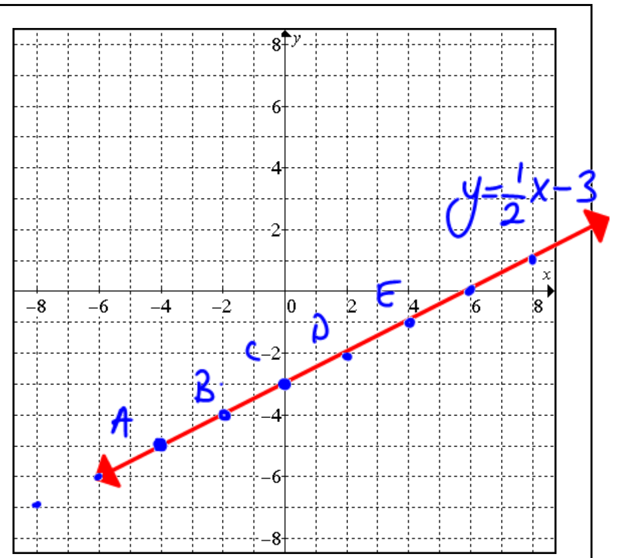
x	$y = -3x + 2$	y	(x, y)
-2	= -3(-2) + 2 = 6 + 2 = 8	8	A(-2,8)
-1	= -3(-1) + 2 = 3 + 2 = 5	5	B(-1,5)
0	= -3(0) + 2 = 0 + 2 = 2	2	C(0,2)
1	= -3(1) + 2 = -3 + 2 = -1	-1	D(1,-1)
2	= -3(2) + 2 = -6 + 2 = -4	-4	E(2,-4)



3. Equation: $y = \frac{1}{2}x - 3$

multiples of your denominator

x	$y = \frac{1}{2}x - 3$	y	(x, y)
-4	$= \frac{1}{2}(-4) - 3$ $= -2 - 3$	-5	$A(-4,-5)$
-2	$= \frac{1}{2}(-2) - 3$ $= -4$	-4	$B(-2,-4)$
0	$= \frac{1}{2}(0) - 3$ $= -3$	-3	$C(0,-3)$
2	$= \frac{1}{2}(2) - 3$ $= 1 - 3$	-2	$D(2,-2)$
4	$= \frac{1}{2}(4) - 3$ $= 2 - 3$ $= -1$	-1	$E(4,-1)$



$$\frac{1}{2} \cdot \frac{-4}{1} = \frac{-4}{2} = -2$$

4. Equation: $y = \frac{1}{3}x + 4$

multiples of 3

x	$y = \frac{1}{3}x + 4$	y	(x, y)
-6	$\frac{1}{3}(-6) + 4 = -2 + 4$	2	$A(-6,2)$
-3	$\frac{1}{3}(-3) + 4 = -1 + 4$	3	$B(-3,3)$
0	$\frac{1}{3}(0) + 4 = 4$	4	$C(0,4)$
3	$\frac{1}{3}(3) + 4 = 1 + 4$	5	$D(3,5)$
6	$\frac{1}{3}(6) + 4 = 2 + 4$	6	$E(6,6)$