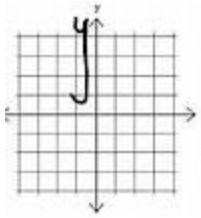
Which axis is which?



X

To find the slope when given two sets of points: $\frac{Y2-Y1}{X2-X1}$

Midpoint Formula: $\frac{X1+X2}{2}, \frac{Y1+Y2}{2}$

Standard formula : X + Y =C

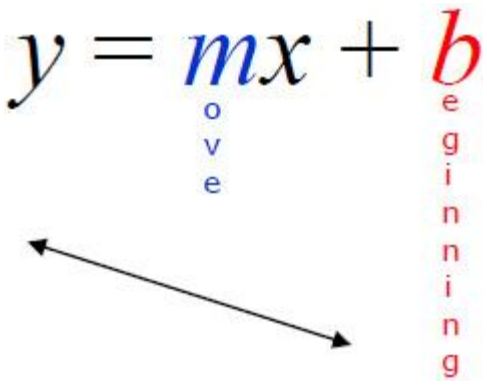
Slope Formula: Y=MX + B

also known as $\frac{Rise}{Run}$, $m = \frac{\text{change in y-value}}{\text{change in x-value}}$

Lines can go in any direction. The numbers in the equation are used to tell you what direction the line should go.

There are two important numbers in this form of a line: one number represents the **slope**, and the other number represents the **y-intercept**.

Slope formula is : Y= MX+B



Use these tricks to help you:

- y-intercept = b which stands for the beginning
- slope = m which stands for the move

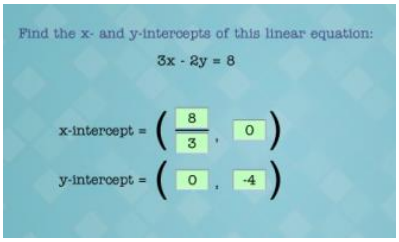
The little tricks will be especially helpful when you have to graph a line with the slope intercept form. You will plot the "beginning" point first on the graph, and then you will move the right number of places to make the "move." Simply connect the dots and you have graphed your line!

Use these examples to better understand the slope and the y-intercept:

$y = 3x + 1$	$y = 5x - 4$	$y = x + 6$	$y = -2x + 7$
y-int = 1	y-int = –4	y-int = 6	y-int = 7
Slope = 3	Slope = 5	Slope = 1	Slope = –2

The y-intercept of this line is the value of y at the point where the line crosses the y axis.

x- and y-Intercepts



- an *x*-intercept is a point on the graph where *y* is zero, and
- a *y*-intercept is a point on the graph where *x* is zero.

More specifically,

- an *x*-intercept is a point in the equation where the *y*-value is zero, and
- a *y*-intercept is a point in the equation where the *x*-value is zero.