Parent Functions

A "function" describes the relationship between values. It is written as "$f(x)$," which is pronounced "f of x."

We already know some functions:

$$y = mx + b$$
$$y = |x|$$

The parent function is the original function. For instance, $y = x$ (also written as $y = \frac{1}{1}x + 0$) is the parent function for all lines in the form $y = mx + b$.

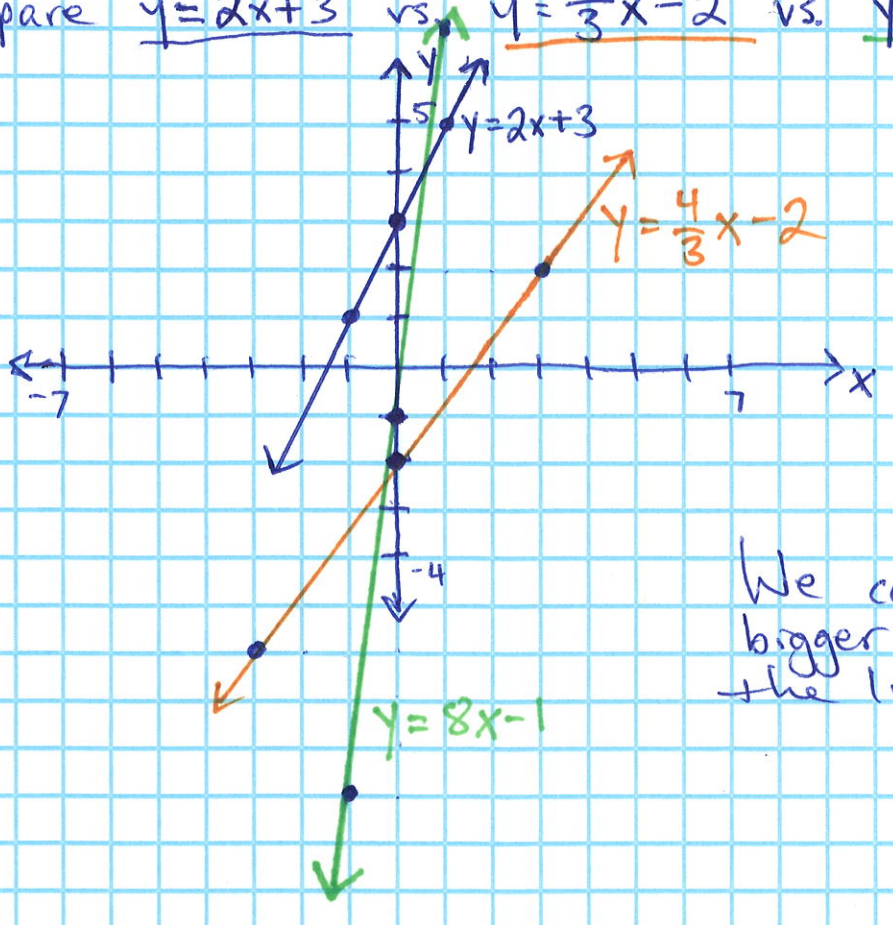
$y = |x|$ is the parent function of all absolute values.

With $y = mx + b$, we know that b tells us how far up or down on the y-axis the line is. Thus, b tells us about a line's vertical (up/down) movement.

m tells us how steep a line is. The BIGGER m is, the STEEPER the line. The SMALLER m is, the FLATTER. Look at the following graph for an example.

How m affects graphs:

Compare $y=2x+3$ vs. $y=\frac{4}{3}x-2$ vs. $y=8x-1$



We can see that the bigger m is, the steeper the line is.