$$f(x) = \frac{2x}{5-3x}$$

domain

$x \neq ?$

$5 - 3x \neq 0$

$-3x \neq -5$

$x \neq 5/3$

9.6 (one assignment) Graphing lines

3 methods for graphing lines

1. Plot some points
2. Graph the intercepts (x- & y-intercepts)
3. Using the slope-intercept form $y = mx + b$

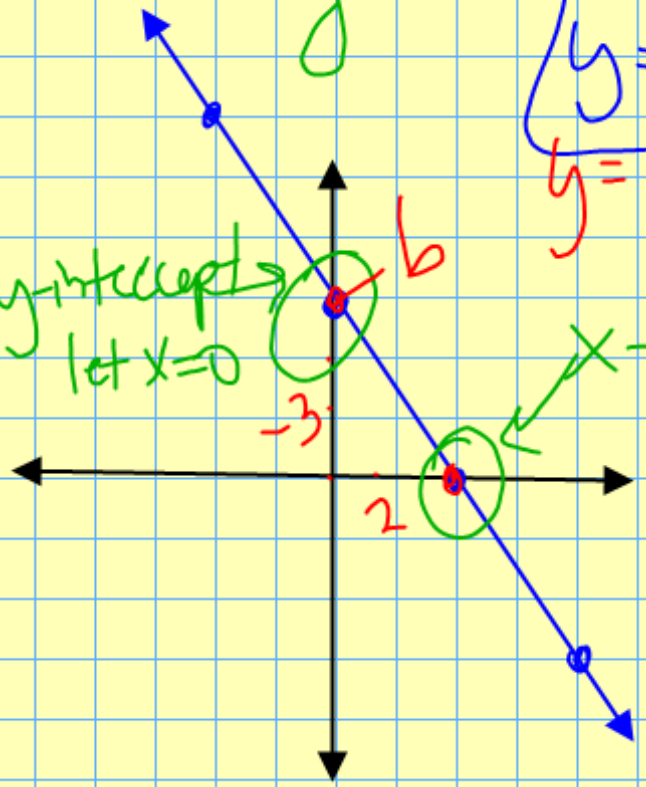
$3x + 2y = 6$

$\frac{2y}{2} = \frac{-3x + 6}{2}$

$y = \frac{-3x}{2} + 3$

$y = mx + b$

x	y
-2	6
-4	9
0	3
2	0
4	-3



$\text{Slope} = \frac{\text{rise}}{\text{run}}$

6

$5x - 2y = 10$ let $y = 0$

find the value of the x intercept

$5x = 10$ $x = 2$

$5y + 7x = 23$

$7x = 23$

$x = 23/7$

find the X-intercept

let $y = 0$

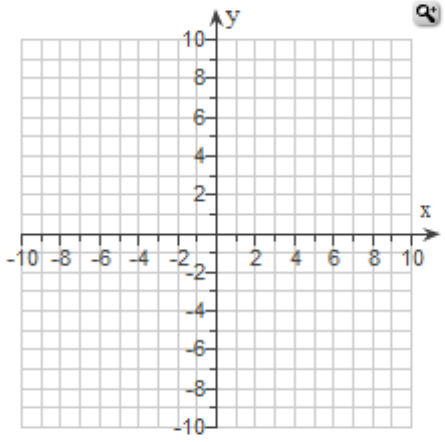
Ex. Score: 0 of 1 pt **HW Score:** 0% (0 of 16 pts) **0 of 16** c

Plot the intercepts to graph the equation.

$5x - 3y = 15$

Use the graphing tool to graph the equation. Use the intercepts when drawing the line. If only one intercept exists, use it and another point to draw the line.

Click to enlarge graph

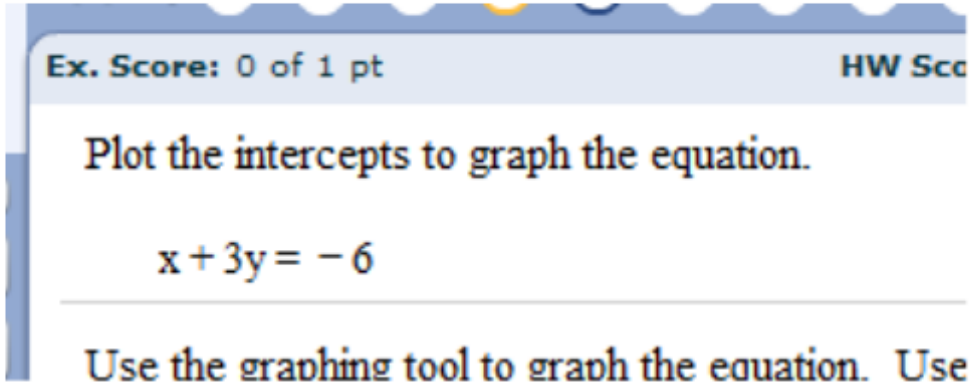


$5x - 3y = 15$

$-3y = 15$

$5x = 15$

x	y
0	-5
3	0



X-intercept $x = -6 \rightarrow (-6, 0)$

y-int. $y = -2$ $(0, -2)$

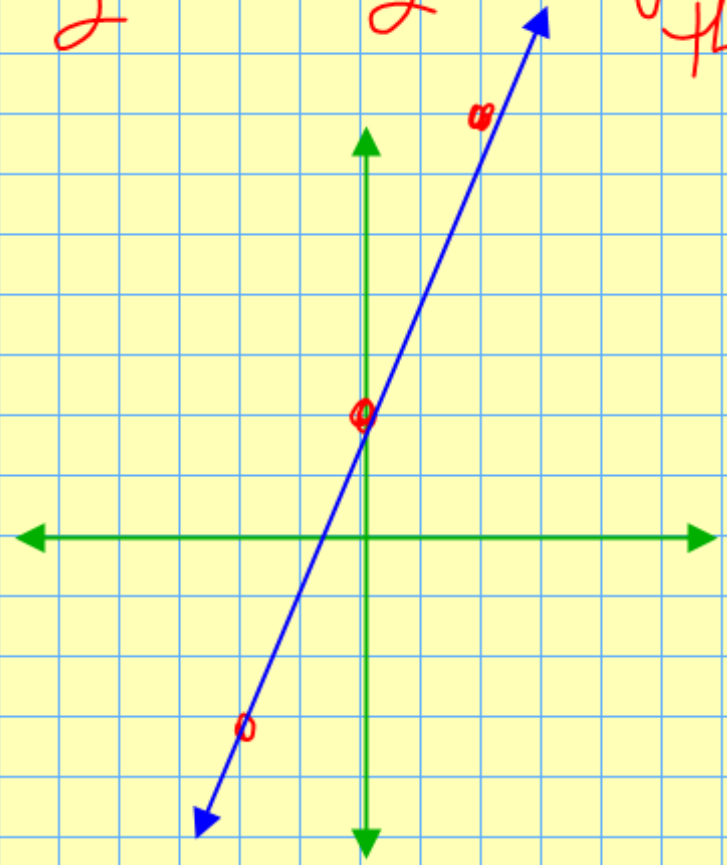
$3y = -6$

If my equation is in standard form

$$\left.\begin{cases} qx + py = r \\ 3x - 2y = 6 \end{cases}\right\} \text{x-\& y-intercept}$$

$y = \frac{5}{2}x + 2$

graph using the slope int. form



① $b = 2$

② $m = \frac{5}{2}$

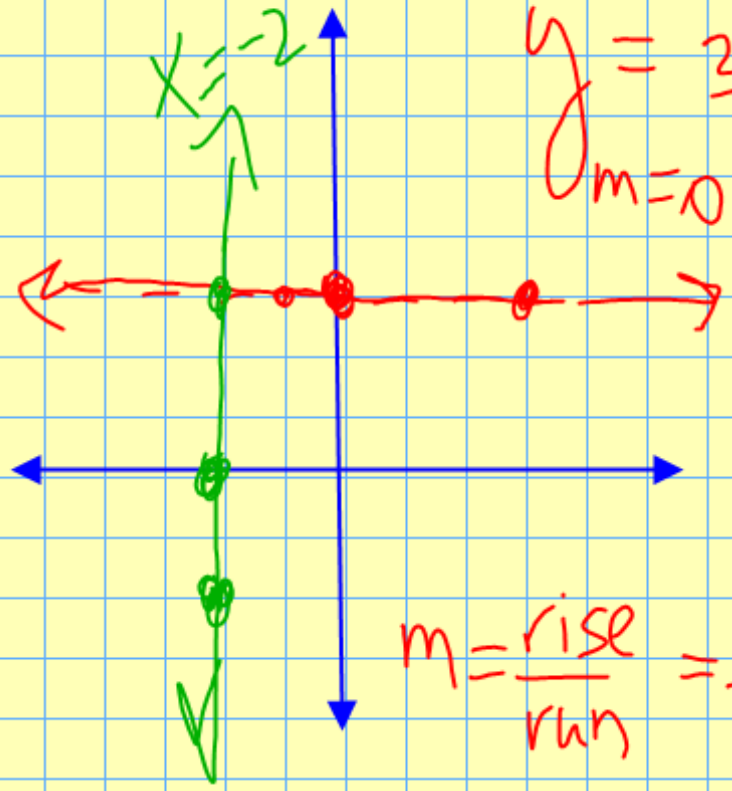
find the slope of

$m = \frac{2}{3}$

$2x - 3y = 5$

$\frac{-3y}{-3} = \frac{-2x}{-3} + \frac{5}{-3}$

$y = \frac{2}{3}x - \frac{5}{3}$



$y = 3$

$m = 0$

x	y
-1	3
0	3
5	3

$m = \frac{\text{rise}}{\text{run}} = \frac{0}{3} = 0$

$x = -2$

x	y
-2	
-2	
-2	
-2	

$m = \frac{\text{rise}}{\text{run}} = \frac{2}{0}$