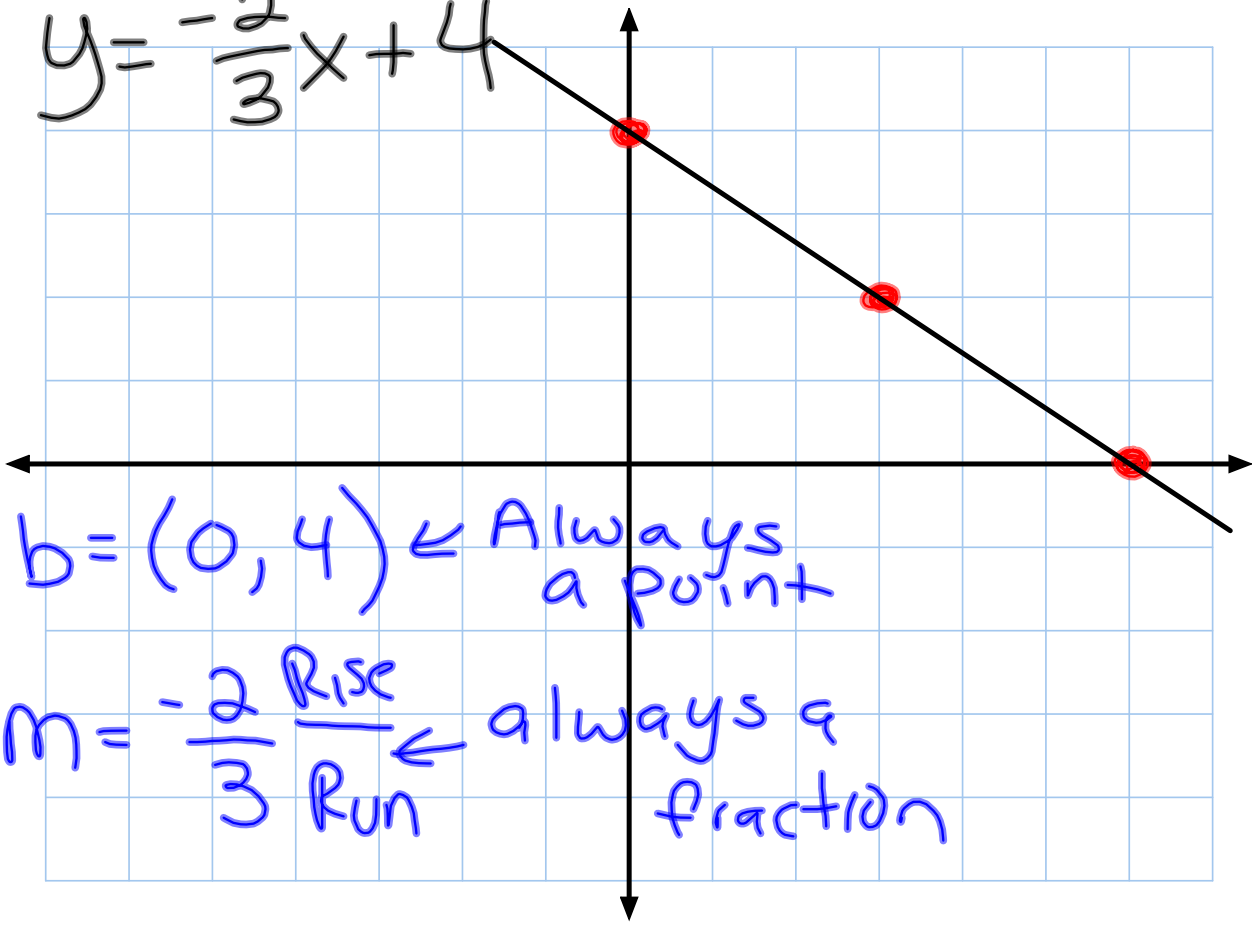
$y = -\frac{2}{3}x + 4$



$b = (0, 4)$ ← Always a point

$m = \frac{-2}{3}\frac{\text{Rise}}{\text{Run}}$ ← always a fraction

$Ax + By = C$

Intercept form

Standard form

$y = mx + b$

Slope-Intercept

$$2x + 3y = 12$$

$y = 0$

$2x + 3(0) = 12$

$x = 6$

$\frac{2x}{2} = \frac{12}{2}$

$(6, 0)$

$x = 6$

$x \quad y$

$x = 0$

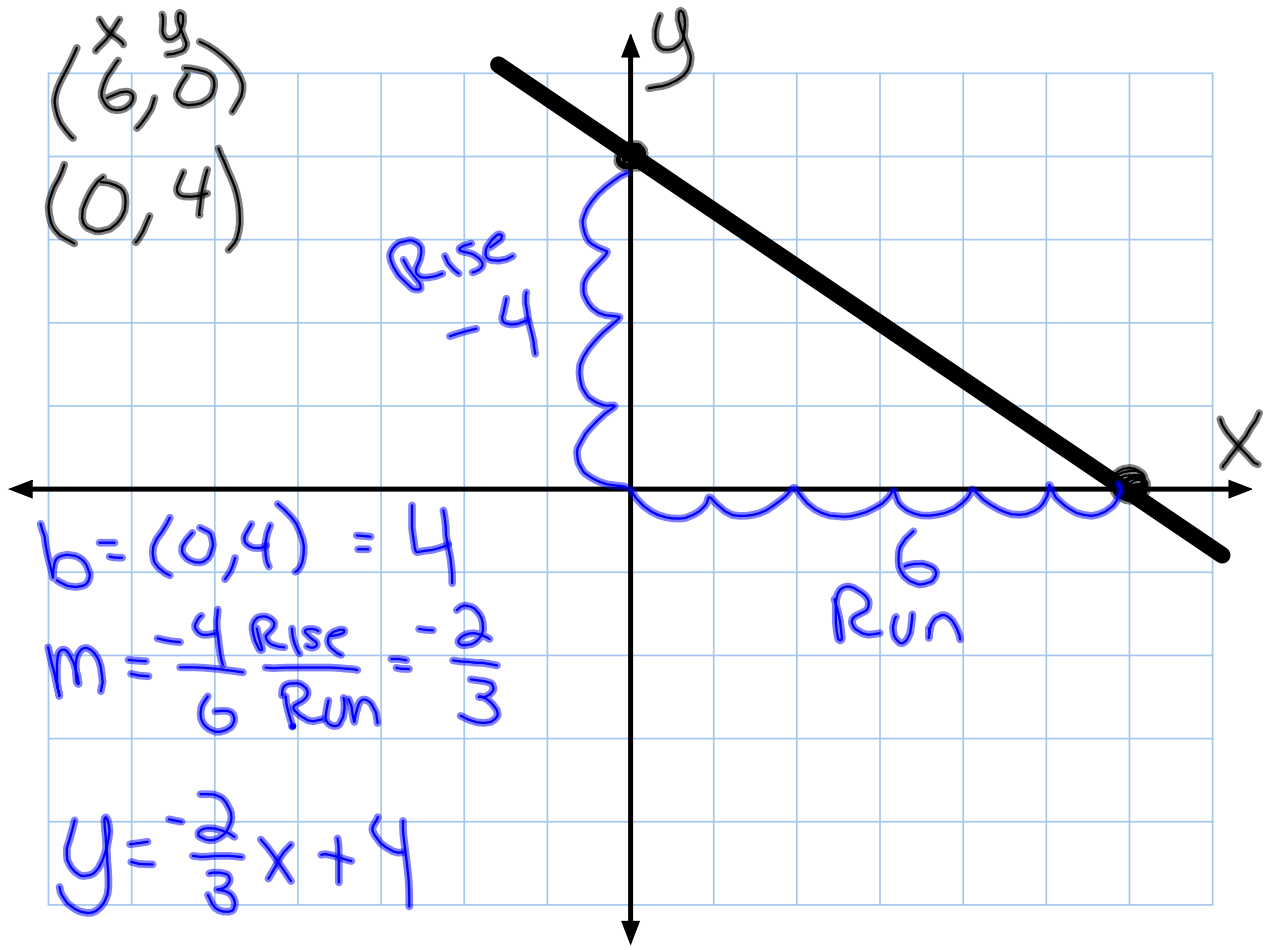
$2(0) + 3y = 12$

$y = 4$

$\frac{3y}{3} = \frac{12}{3}$

$(0, 4)$

$y = 4$


x y
(6, 0)
(0, 4)
y
x
Rise
-4
6
Run
b = (0,4) = 4
m = -4/6 Rise/Run = -2/3
y = -2/3 x + 4

$2x+y=8$

$y=0$ $2x+0=8$

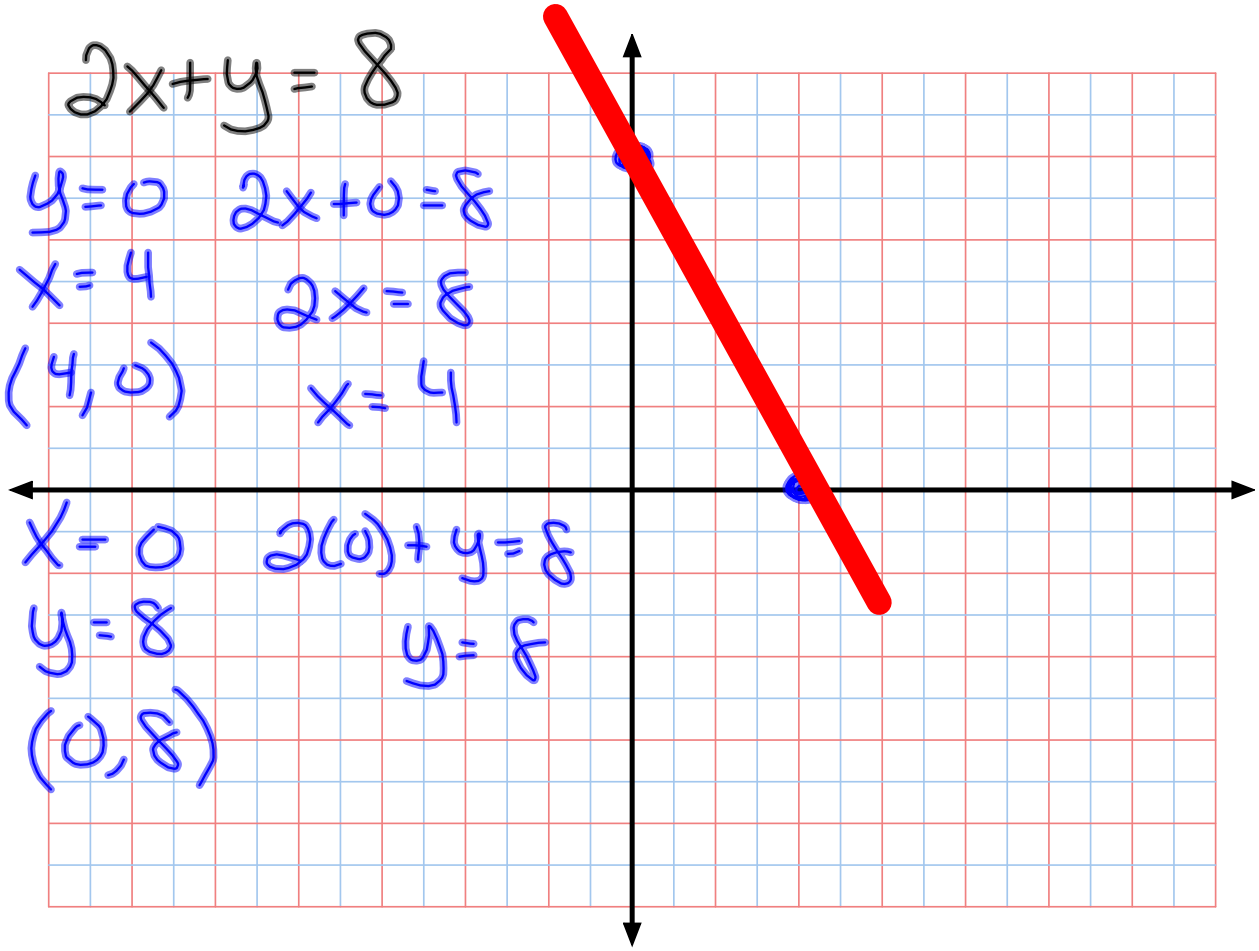
$x=4$ $2x=8$

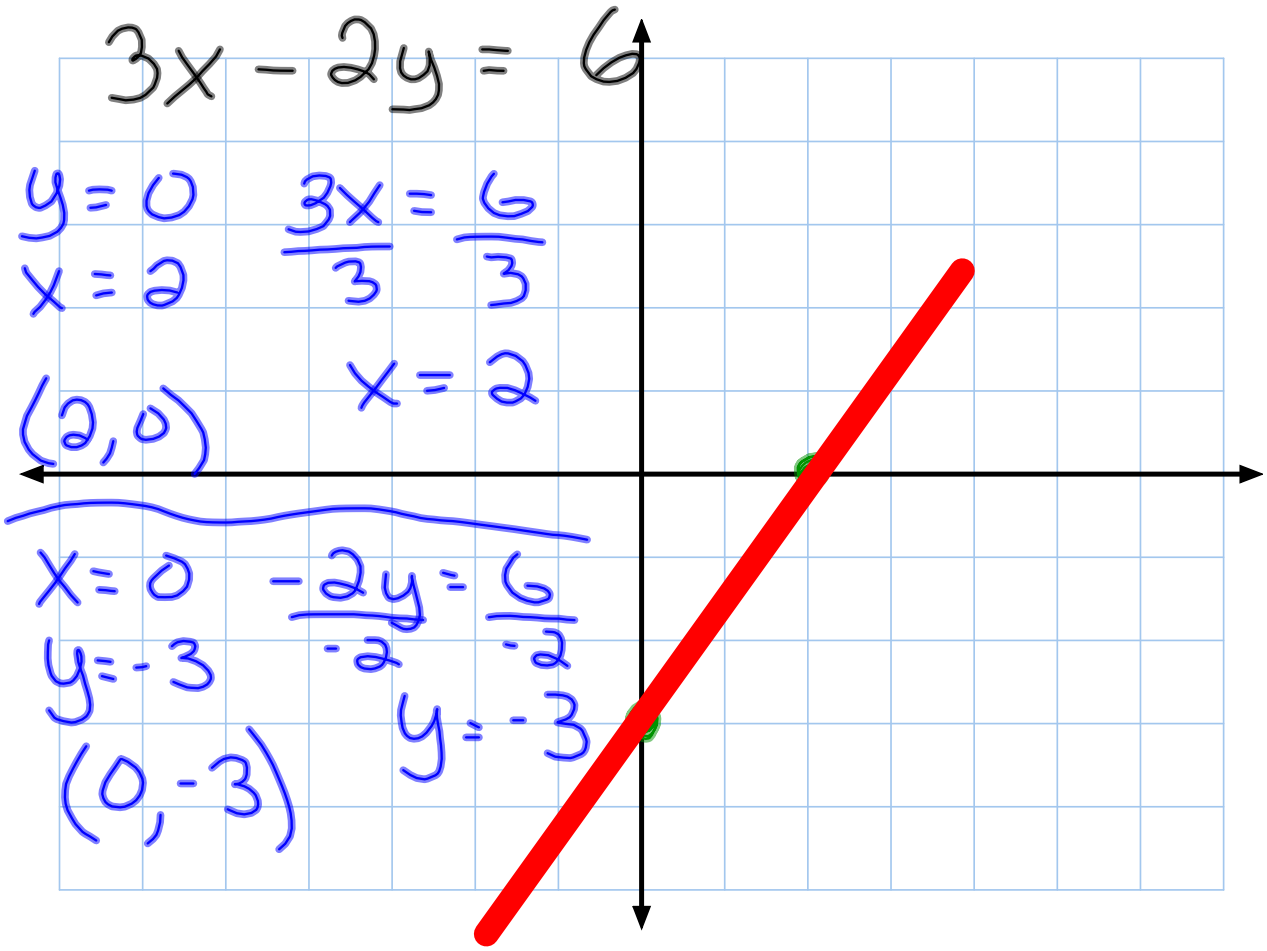
$(4,0)$ $x=4$

$x=0$ $2(0)+y=8$

$y=8$ $y=8$

$(0,8)$




3x - 2y = 6
y = 0
x = 2
(2, 0)
3x/3 = 6/3
x = 2
x = 0
y = -3
(0, -3)
-2y/-2 = 6/-2
y = -3

$5x - 6y = -2 \rightarrow y = mx + b$

$y = 0$ $\quad 5x - 6(0) = -2$

$x = -2/5$ $\quad \frac{5x}{5} = -\frac{2}{5}$

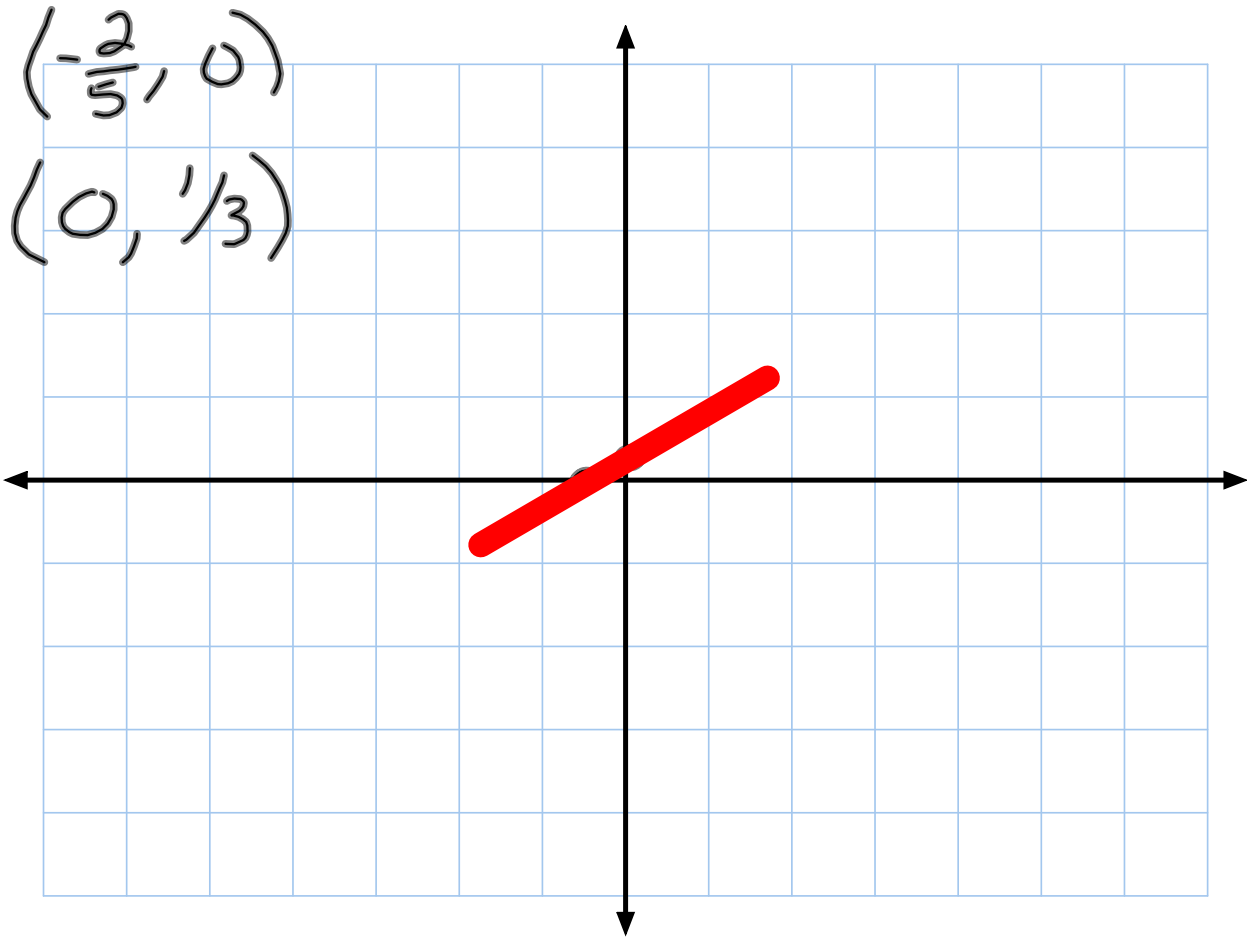
$(-2/5, 0)$ $\quad x = -2/5$

$x = 0$ $\quad 5(0) - 6y = -2$

$y = 1/3$ $\quad -6y = -2$

$\frac{-6y}{-6} = \frac{-2}{-6}$

$(0, 1/3)$ $\quad y = 1/3$


$(-\frac{2}{5}, 0)$
$(0, \frac{1}{3})$