

① Solve $3x + 4y = 8$ for y , then graph the equation.

② Find the equation of the line through $(-6, 2)$ and $(3, -4)$.

$$m = \frac{\text{rise}}{\text{run}} = \frac{2 - (-4)}{-6 - 3} = \frac{6}{-9} = -\frac{2}{3}$$

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

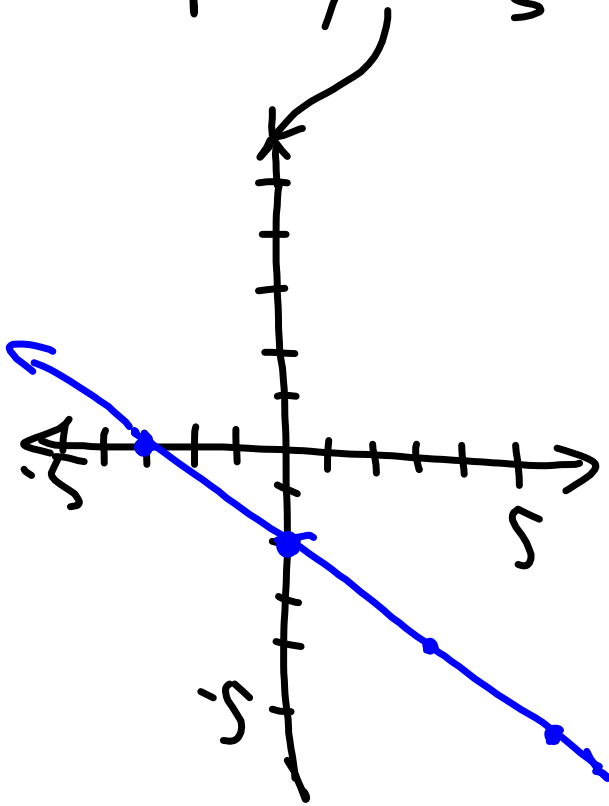
$$-4 = -\frac{2}{3}\left(\frac{3}{1}\right) + b$$

$$-4 = -2 + b$$

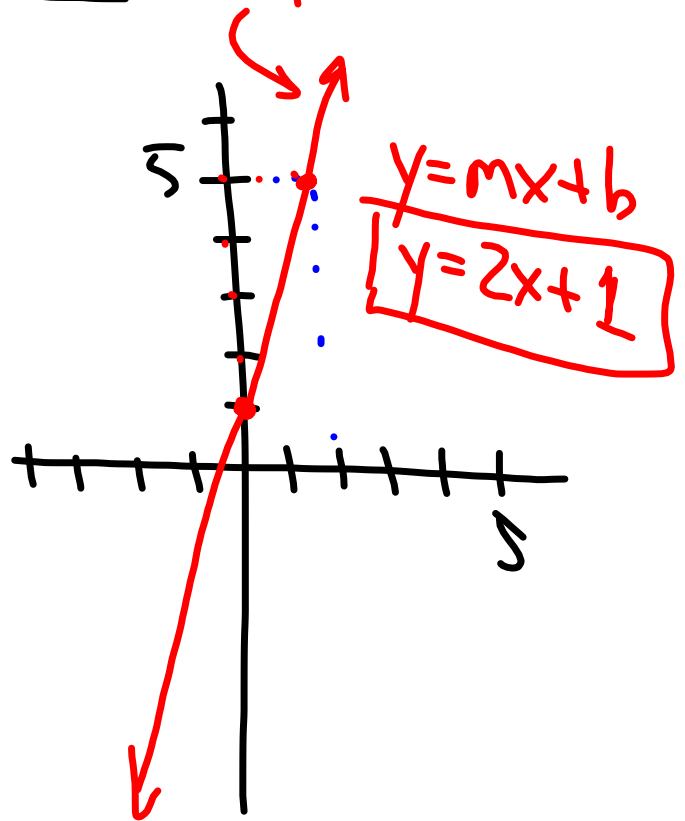
$$b = -2$$

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

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



Equation?



$$\begin{array}{l} x + 3y = 3 \xrightarrow{\text{times } -2} -2x - 6y = -6 \\ 2x - 9y = 1 \implies \hline -15y = -5 \end{array}$$

$$x + 3\left(\frac{1}{3}\right) = 3$$

$$x + 1 = 3$$

$$\boxed{x = 2}$$

$$\begin{array}{l} 2(2) - 9\left(\frac{1}{3}\right) \stackrel{?}{=} 1 \\ 4 - 3 = 1 \end{array}$$

$$y = \frac{-5}{-15}$$

$$\boxed{y = \frac{1}{3}}$$

OR

$$\boxed{\left(2, \frac{1}{3}\right)}$$

$$\begin{array}{r} x + 3y = 3 \implies 3x + 9y = 9 \\ 2x - 9y = 1 \implies 2x - 9y = 1 \\ \hline 5x = 10 \\ \boxed{x = 2} \end{array}$$

$$\begin{aligned}4x + 3y &= 10 \\2x + y &= 4\end{aligned}$$

$$\begin{array}{l}
 3x + 2y = 4 \xrightarrow{\text{times } 5} 15x + 10y = 20 \\
 5x + 3y = 7 \xrightarrow{\text{times } -3} -15x - 9y = -21 \\
 \hline
 \end{array}$$

$y = -1$

$3x + 2(-1) = 4$
 $3x - 2 = 4$
 $3x = 6$
 $x = 2$

Subst. method

$$x + 3y = 3 \rightarrow x = 3 - 3y$$
$$2x - 9y = 1$$

$$2(3 - 3y) - 9y = 1$$

$$6 - 6y - 9y = 1$$

$$-15y = -5$$

$$y = \frac{-5}{-15} = \frac{1}{3}$$