

## Day 6 – Converting to Slope Intercept Form & Graphing – Notes

In the last unit, you reviewed how to solve for  $y$ . When you graph linear functions, it is much easier to graph in slope intercept form than standard form.

Standard Form	Slope Intercept Form
$Ax + By = C$	$y = mx + b$
$a, b,$ and $c$ are constants	$m = \text{slope}$ $b = \text{y-intercept}$

Solve the equations for  $y$ . Then name the slope and  $y$ -intercept.

A.  $3x - 2y = -16$

$$\begin{array}{r} 3x - 2y = -16 \\ -3x \quad -3x \\ \hline -2y = -3x - 16 \\ \frac{-2y}{-2} = \frac{-3x}{-2} - \frac{16}{-2} \end{array}$$

$$y = \frac{3}{2}x + 8$$

Slope:  $\frac{3}{2}$      $y$ -intercept:  $(0, 8)$

B.  $5x - y = 10$

$$\begin{array}{r} 5x - y = 10 \\ -5x \quad -5x \\ \hline -y = -5x + 10 \\ \frac{-y}{-1} = \frac{-5x}{-1} + \frac{10}{-1} \end{array}$$

$$y = 5x - 10$$

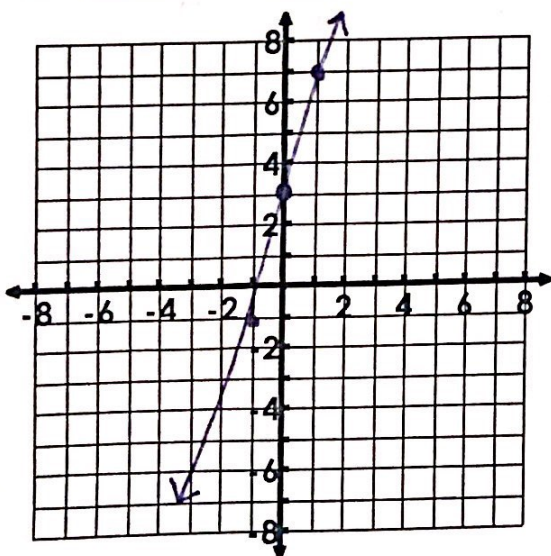
Slope:  $5$      $y$ -intercept:  $(0, -10)$

C.  $4x - y = -3$

$$\begin{array}{r} 4x - y = -3 \\ -4x \quad -4x \\ \hline -y = -4x - 3 \\ \frac{-y}{-1} = \frac{-4x}{-1} - \frac{3}{-1} \end{array}$$

$$y = 4x + 3$$

$m = 4$      $b = (0, 3)$



D.  $5y + 2x = 20$

$$\begin{array}{r} 5y + 2x = 20 \\ -2x \quad -2x \\ \hline 5y = -2x + 20 \\ \frac{5y}{5} = \frac{-2x}{5} + \frac{20}{5} \end{array}$$

$$y = -\frac{2}{5}x + 4$$

$m = -\frac{2}{5}$      $b = (0, 4)$

