

Daily HW Check

Box 7: Cumulative Review: #4

Box 8: Cumulative Review: #17

Box 9: Equations from a graph: #4

Box 10: Equations from a graph: # 7

3 Different Forms for Linear Equations

1) Slope-intercept Form: $y=mx + b$

2) Standard Form: $Ax +By = C$

3) Point-Slope Form: $y - y_1 = m (x - x_1)$

Convert from Standard to Slope-intercept form.

- Move "mx" by addition or subtraction
- Isolate "y" by multiplying or dividing

1) $4x - 11y = -32$

$$\begin{aligned} 4x - 4x - 11y &= -32 - 4x \\ -11y &= -4x - 32 \end{aligned} \quad \rightarrow \quad \begin{aligned} \frac{-11y}{-11} &= \frac{-4x - 32}{-11} \\ y &= \frac{4}{11}x + \frac{32}{11} \end{aligned}$$

Convert from Standard Form to Slope-intercept form. Identify the slope and y-intercept.

2) $4x + y = 5$

$$y = -4x + 5$$
$$m = -4, b = 5$$

3) $3x - 2y = 16$

$$-2y = -3x + 16$$
$$y = \frac{3}{2}x - 8 \quad m = \frac{3}{2}, b = -8$$

4) $x + y = 3$

$$y = -x + 3$$
$$m = -1, b = 3$$

Convert from point-slope form to slope-intercept. Identify the slope and y-intercept.

$$\begin{aligned} 5) \quad y - 1 &= -\frac{4}{7}(x + 2) \\ y - 1 &= -\frac{4}{7}(x) - \frac{4}{7}\left(\frac{2}{1}\right) \\ y - 1 &= -\frac{4}{7}x - \frac{8}{7} \\ y - 1 + 1 &= -\frac{4}{7}x - \frac{8}{7} + \frac{7}{7} \\ y &= -\frac{4}{7}x - \frac{1}{7} \end{aligned}$$

$$m = -\frac{4}{7}, b = -\frac{1}{7}$$

$$\begin{aligned} 6) \quad y + 2 &= -(x + 3) \\ y + 2 &= -1(x) - 1(3) \\ y + 2 &= -x - 3 \\ y + 2 - 2 &= -x - 3 - 2 \\ y &= -x - 5 \end{aligned}$$

$$m = -1, b = -5$$