

- > TODAY'S AGENDA: Feb. 4th - 8th
- Continue working on Khan Academy
- Mission: Engage NY Module 4
  - > **Intecepts of a Line from an Equation**
- Today's Objective:
  - > Students will be able to determine the Intercepts of of a Line
- Today's Standards:
  - > CCSS Math: 8.EE.C.7, 8.EE.C.7b, 8.F.A.3, HSF.IF.C.7, HSF.IF.C.7a

# Intercepts from an Equation

x-Intercept (  $x$  ,  $y$  )  
 $(0, 0)$

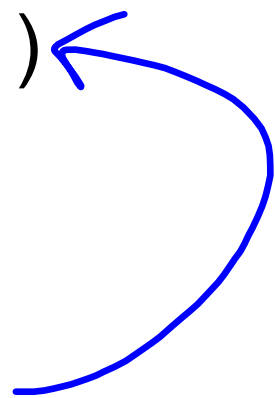
y-Intercept (  $0$  , )

$$y = 3x + 4$$
$$(0, 4)$$

$$y = m x + b$$

$\uparrow$   
slope

$\uparrow$   
y-intercept



Determine the intercepts of the line.

$$9x - 7y = 14$$

$$x\text{-intercept: } \left( \frac{14}{9}, 0 \right)$$

$$y\text{-intercept: } \left( 0, -2 \right)$$

$$9x - 7y = 14$$

$$9x - 7(0) = 14$$

$$9x - 0 = 14$$

$$\frac{9x}{9} = \frac{14}{9}$$

$$x = \frac{14}{9}$$

$$9x - 7y = 14$$

$$9(0) - 7y = 14$$

$$0 - 7y = 14$$

$$\frac{-7y}{-7} = \frac{14}{-7}$$

$$y = -2$$



Determine the intercepts of the line.

$$y = 11x + 6$$

x-intercept:  $\left( \frac{-6}{11}, 0 \right)$

y-intercept:  $(0, 6)$

$$y = 11x + 6$$

$$0 = 11x + 6$$

$$\begin{array}{r} -6 \\ \hline 11 \end{array} = \frac{-6}{11}$$

$$x = \frac{-6}{11}$$

Determine the intercepts of the line.

$$-4x + 7y = 3$$

$$x\text{-intercept: } \left( \boxed{-\frac{3}{4}}, \boxed{0} \right)$$

$$y\text{-intercept: } \left( \boxed{0}, \boxed{\frac{3}{7}} \right)$$

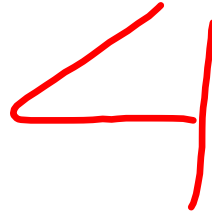
$$\left( \frac{-3}{4} \right) = \frac{3}{-4} = -\frac{3}{4}$$

$$\begin{aligned} -4x + 7y &= 3 \\ -4x + 7(0) &= 3 \\ -4x + 0 &= 3 \\ -4x &= 3 \\ \frac{-4x}{-4} &= \frac{3}{-4} \\ x &= -\frac{3}{4} \end{aligned}$$

$$\begin{aligned} -4x + 7y &= 3 \\ -4(0) + 7y &= 3 \\ 0 + 7y &= 3 \\ 7y &= 3 \\ \frac{7y}{7} &= \frac{3}{7} \\ y &= \frac{3}{7} \end{aligned}$$

Determine the intercepts of the line.

$$4x - 1 = 3y + 5$$



$x$ -intercept:  $(\square, \square)$

$y$ -intercept:  $(\square, \square)$

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