

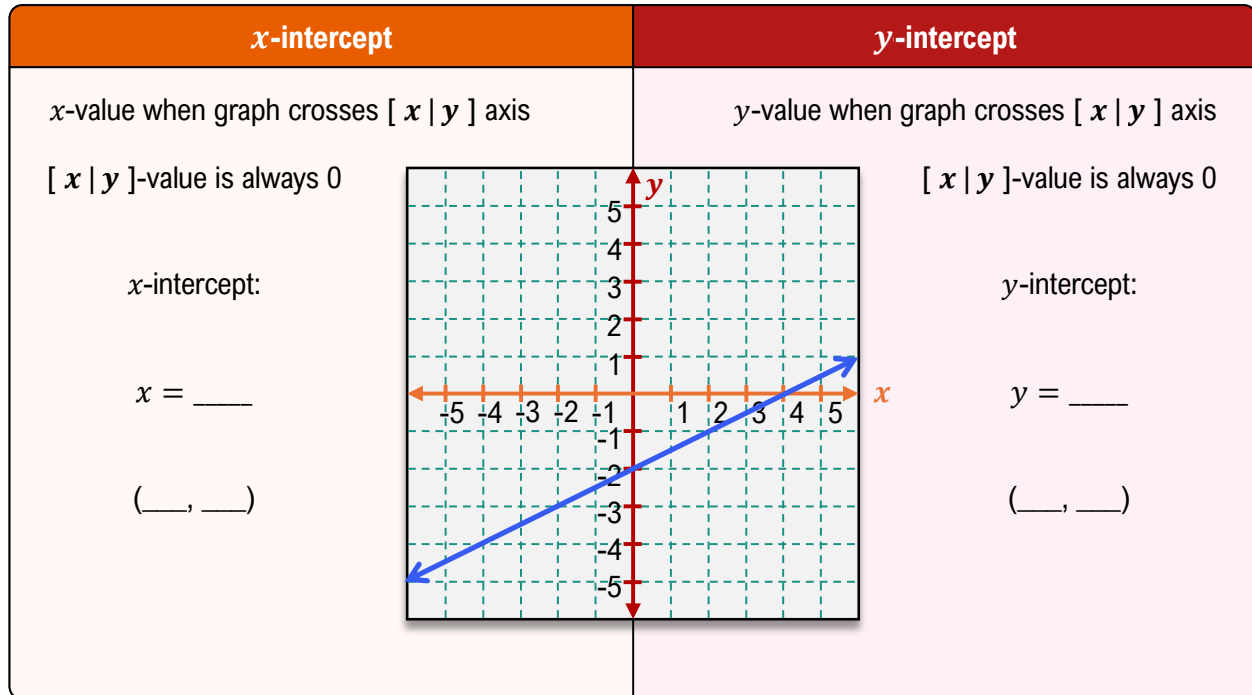
TOPIC: GRAPH LINEAR EQUATIONS USING INTERCEPTS

Identify x - and y -Intercepts

◆ The **intercepts** of a line are the points where the line _____ the x -axis and y -axis.

EXAMPLE

Identify the x - and y -intercepts on the graph below.



◆ Given an equation, find **x -int** by setting $\underline{\hspace{1cm}} = 0$ & solve for $\underline{\hspace{1cm}}$. Find **y -int** by setting $\underline{\hspace{1cm}} = 0$ & solve for $\underline{\hspace{1cm}}$.

EXAMPLE

Find the x - and y -intercepts given the equation.

$$x + 2y = 8$$

x -int

Plug in $\underline{\hspace{1cm}} = 0$

($\underline{\hspace{1cm}}$, $\underline{\hspace{1cm}}$)

y -int

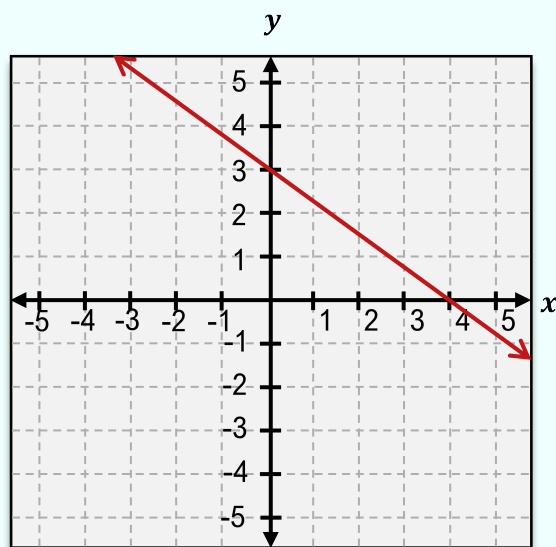
Plug in $\underline{\hspace{1cm}} = 0$

($\underline{\hspace{1cm}}$, $\underline{\hspace{1cm}}$)

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EXAMPLE

Find the x and y intercepts in the line graph.



PRACTICE

Find the x - and y -intercepts of the line $2x + 3y = 12$.

PRACTICE

Find the x - and y -intercepts of the line $\frac{x}{4} - \frac{y}{3} = 1$.

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Graphing a Linear Equation Using Intercepts

- ◆ Recall: We can find the x & y intercepts of a 2-variable linear equation by setting the other variable to 0.
- Graph a linear eqn by plotting the x & y intercepts along with a ____ random point, then connecting with a line.

New

Graphing a 2-Variable Equation w/ Intercepts

$$2x - y = 4$$

x -intercept:

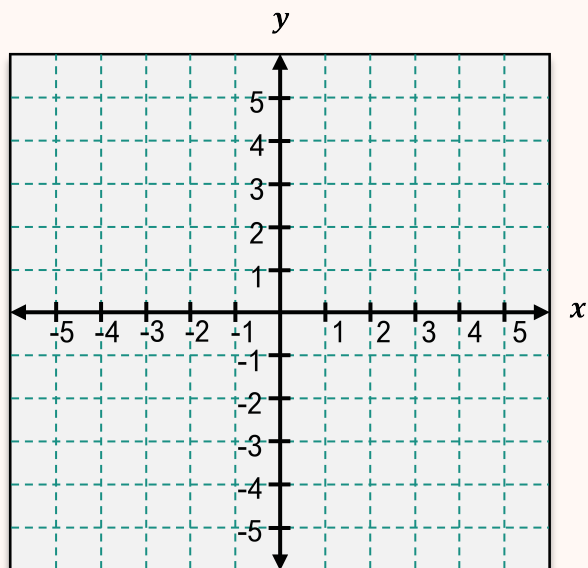
(____, 0)

y -intercept:

(0, ____)

Third Point: *Plug in ANY x , solve for y*

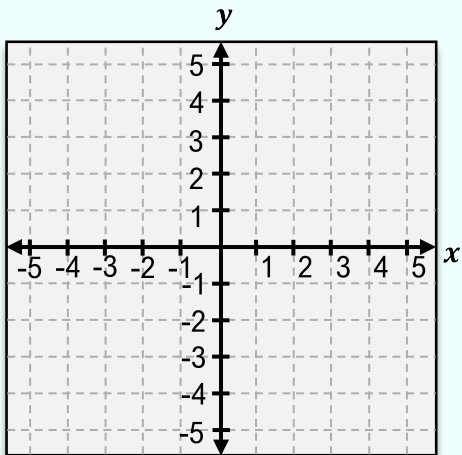
(____, ____)



TOPIC: GRAPH LINEAR EQUATIONS USING INTERCEPTS

EXAMPLE

Given the equation $3x - y = 0$, find the intercepts and graph the line.



EXAMPLE

Given the equation $2y - 3 = \frac{2}{3}x$, find the intercepts and graph the line.

