

Name:

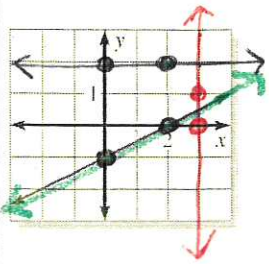
Date:

Topic/Objective: 3.3 Graph using Intercepts

Class/Period: Algebra/

Questions/Main Ideas:

Notes:



$(0, 2)$ $(3, 0)$
 $(2, 2)$ $(3, 1)$

Definition of x intercept

The point where a graph crosses the x-axis.

Definition of y intercept

The point where a graph crosses the y-axis.

How do I find the x intercept?

To find the x - intercept from an equation, replace y with zero and solve for x.

How do I find the y intercept?

To find the y- intercepts from an equation, replace x with zero and solve for y.

Find the x and y intercept of the graph:

1.) $2x + 7y = 28$

2.) $3x + 2y = 6$

3.) $4x + 2y = 10$

1.) $2x + 7y = 28$

x- intercept: y=0 y- intercept: x=0

$y = 0$ $x = 0$

$2x + 7(0) = 28$

$2x = 28$
 $\frac{2x}{2} = \frac{28}{2}$

$x = 14$ $(14, 0)$

$2(0) + 7y = 28$

$7y = 28$
 $\frac{7y}{7} = \frac{28}{7}$

$y = 4$

$(0, 4)$

2.) $3x + 2y = 6$

x- intercept: y=0 y- intercept: x=0

$y = 0$ $x = 0$

$3x + 2(0) = 6$

$3x = 6$
 $\frac{3x}{3} = \frac{6}{3}$

$x = 2$ $(2, 0)$

$3(0) + 2y = 6$

$2y = 6$
 $\frac{2y}{2} = \frac{6}{2}$

$y = 3$

$(0, 3)$

3.) $4x + 2y = 10$

x- intercept: y=0 y- intercept: x=0

$y = 0$ $x = 0$

$4x + 2(0) = 10$

$4x = 10$
 $\frac{4x}{4} = \frac{10}{4}$

$x = 2.5$ $(2.5, 0)$

$4(0) + 2y = 10$

$2y = 10$
 $\frac{2y}{2} = \frac{10}{2}$

$y = 5$

$(0, 5)$

Graph the equation:
 $x+2y=4$

Step 1: Find the
 x and y
 intercepts
 Step 2:
 Plot and
 connect

$$x+2y=4$$

X-int

$$y=0$$

$$x+2(0)=4$$

$$x=4$$

$$(4,0)$$

y-int

$$x=0$$

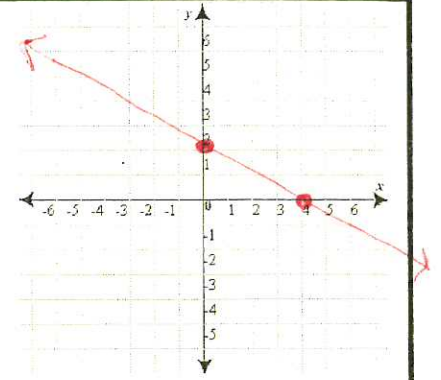
$$0+2y=4$$

$$2y=4$$

$$\frac{2y}{2} = \frac{4}{2}$$

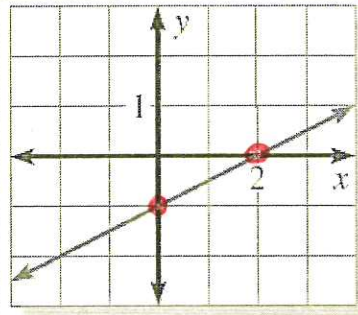
$$y=2$$

$$(0,2)$$



Use a graph to find the
 intercepts.

What are the x and y
 intercepts of the graph?

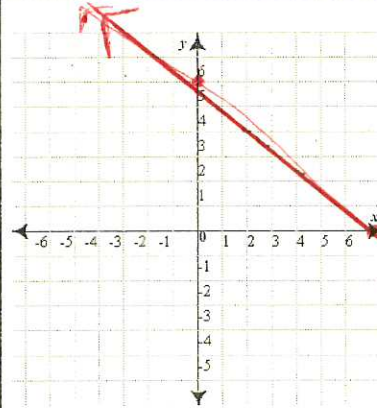


$(2,0)$ x intercept

$(0,-1)$ y intercept

Graph the equation:
 $6x+7y=42$

Label the points where
 the line crosses the
 axes.



X-int

$$y=0$$

$$6x+7(0)=42$$

$$6x=42$$

$$\frac{6x}{6} = \frac{42}{6}$$

$$x=7$$

$$(7,0)$$

y-int

$$x=0$$

$$6(0)+7y=42$$

$$7y=42$$

$$\frac{7y}{7} = \frac{42}{7}$$

$$y=6$$

$$(0,6)$$

Summary: one thing you learned about
 graphing x and y intercepts !!