



## Review

Determine the point of intersection for the following lines

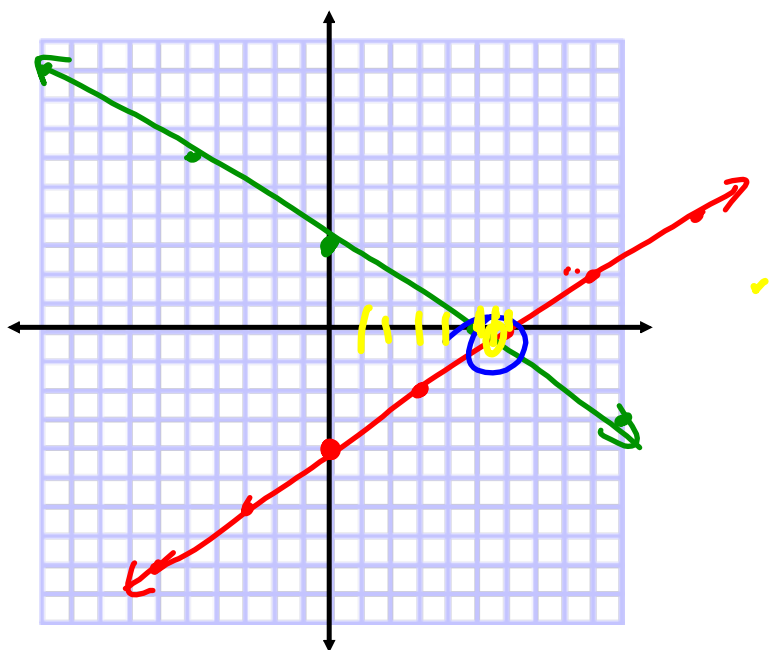
$$y = \frac{2}{3}x - 4$$

$$y = -\frac{3}{5}x + 3$$

Point of Intersection

$$= (5.6, -0.4)$$

$x$                    $y$



$$3y + 2x - 9 = 0$$

$$\frac{3y}{3} = -\frac{2x}{3} + \frac{9}{3}$$

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

Solve  $y = 3x + 10$  for:

1.  $y$  when  $x = 5$

$$\begin{aligned} y &= 3(5) + 10 \\ &= 15 + 10 \\ &= 25 \end{aligned}$$

2.  $y$  when  $x = 20$

$$\begin{aligned} y &= 3(20) + 10 \\ &= 60 + 10 \\ &= 70 \end{aligned}$$

$$y = 3x + 10$$

3.  $x$  when  $y = 1$

$$\begin{aligned} 1 &= 3x + 10 \\ -10 &\leftarrow \\ -9 &= 3x \\ \frac{-9}{3} &= \frac{3x}{3} \\ -3 &= x \end{aligned}$$

4.  $x$  when  $y = 2x$

$$\begin{aligned} 2x &= 3x + 10 \\ -3x &\leftarrow \\ -x &= 10 \\ x &= -10 \end{aligned}$$

$$y = 3x + 10$$

5.  $x$  when  $y = 4x - 3$

$$\begin{aligned} 4x - 3 &= 3x + 10 \\ -3x &\leftarrow \quad \rightarrow +3 \end{aligned}$$

$$x = 13 \quad \checkmark$$

~~Solve for x if given~~

given

$$y = -2x + 7$$

$$y = x + 3$$

Solve for x if

$$x + 3 = -2x + 7 - 3$$

*(Note: A green circle is drawn around 'x+3' in the original image. A red arrow points from 'x+3' to '-2x', and a green arrow points from 'x+3' to '7-3'.)*

$$\frac{3x}{3} = \frac{4}{3}$$

$$x = \frac{4}{3}$$

Solve the Linear system

$$y = 2x + 5$$

$$x - 3y + 2 = 0$$

$$x - 3(2x + 5) + 2 = 0$$

$$x - 6x - 15 + 2 = 0$$

$$-5x - 13 = 0$$

$$\frac{-13}{5} = \frac{5x}{5}$$

$$\frac{-13}{5} = x$$

## STEPS

① Solve one equation for  $x$  or  $y$ .

② Substitute step ① into the other equation

③ Solve.

④ Sub. your answer into ANY equation

⑤ Solve

$$y = 2x + 5$$

$$y = 2\left(\frac{-13}{5}\right) + 5$$

$$y = \frac{-26}{5} + \frac{25}{5}$$

$$y = \frac{-1}{5}$$

$$3x + 4y - 3 = 0$$

Create 2 Linear Equations

$$y = 3x + 7$$

Switch systems with a partner (group)

**SOLVE**

A B C

$$\begin{array}{r} \underline{3} \times \underline{2} \times 1 \\ = 6 \end{array}$$





$$8a = 4 - b$$
$$b = 4 - 8a$$

pg. 39  
# 4, 5, 9

1. 5.-----

$$3x + 4y = 7$$

$$y = 2x + 4$$

$$(1.354, -0.785)$$

(4)

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