



# Math Virtual Learning

# Algebra1S1

April 17, 2020

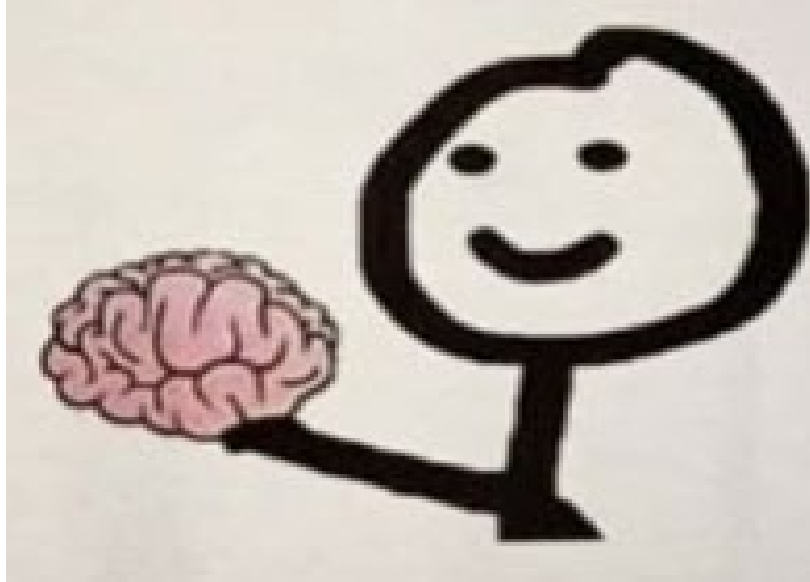


Grade/Course  
Lesson: April 17, 2020

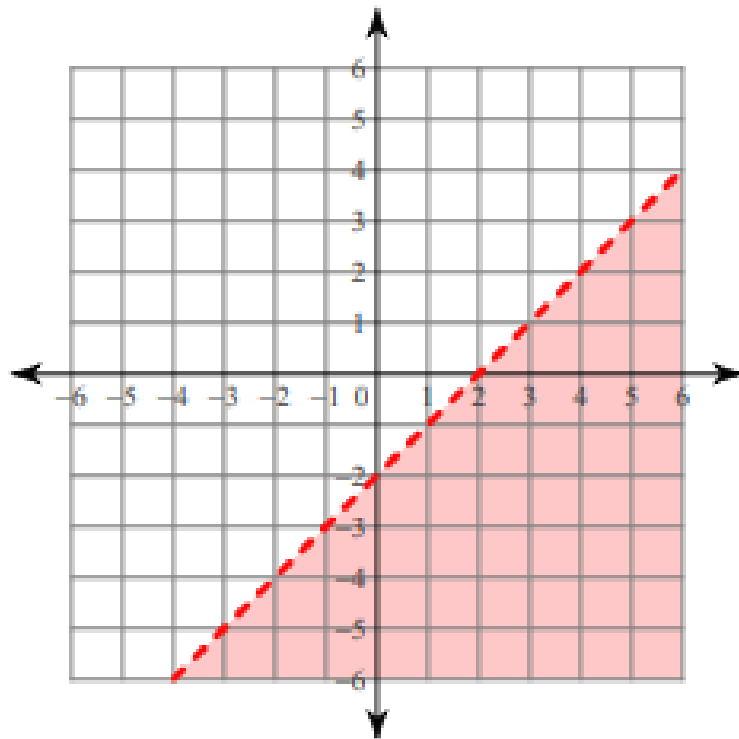
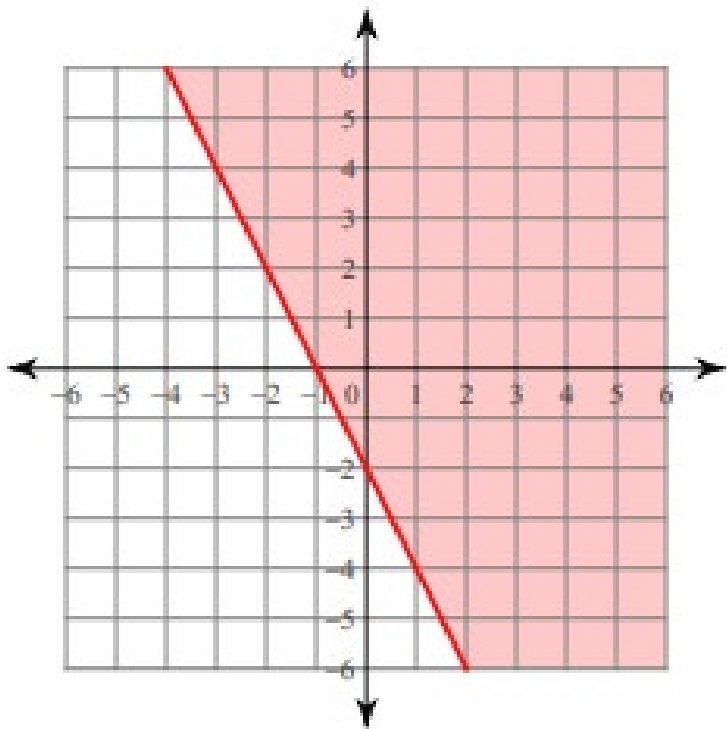
**Objective/Learning Target:**

Students will find the solution to a system of linear equations by graphing.

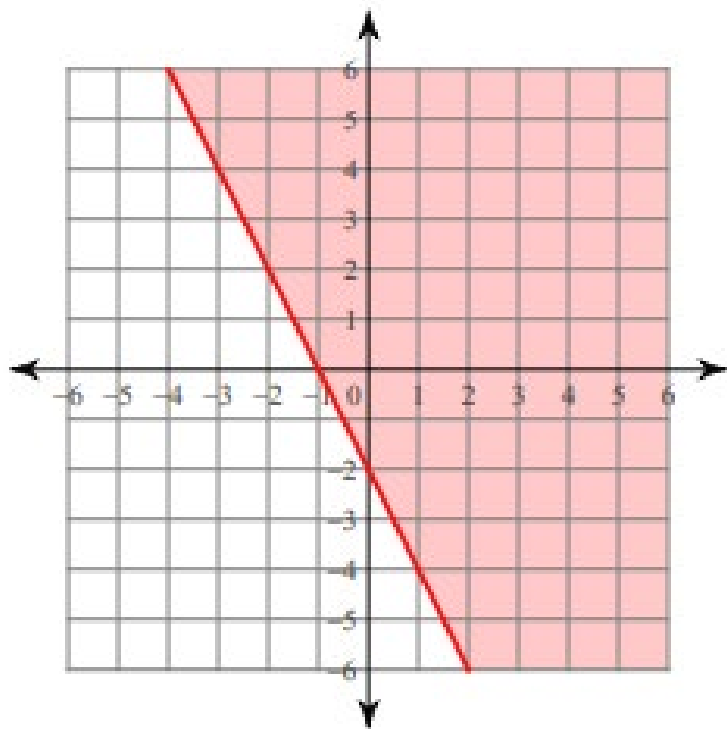
# Brainstarter



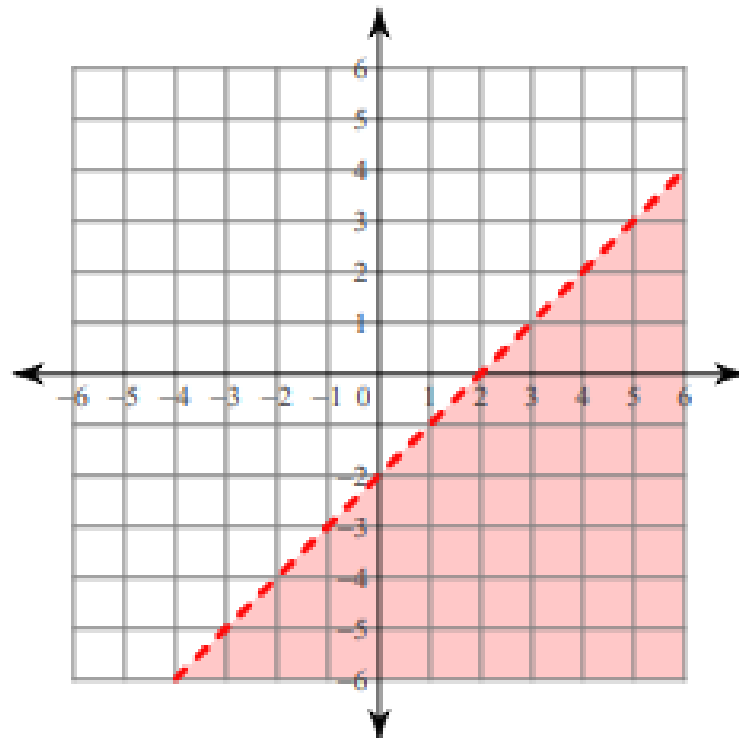
Write the inequalities for the following graphs



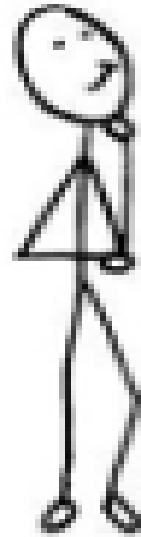
$$y \geq -2x - 2$$



$$y < x - 2$$



**Let's Get Started:**  
[Watch Video:](#)



Remember "Take Notes"

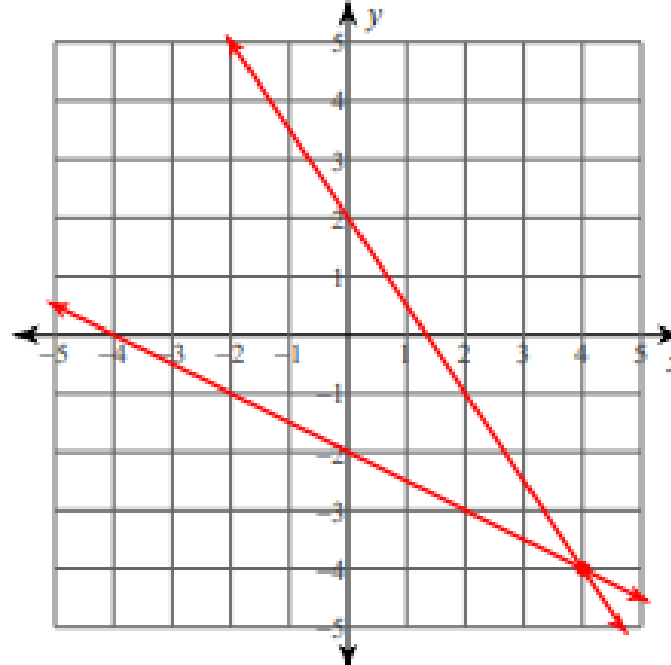
# Solve a system of linear equations by graphing

1. Make sure you have two equations in  $y = mx + B$

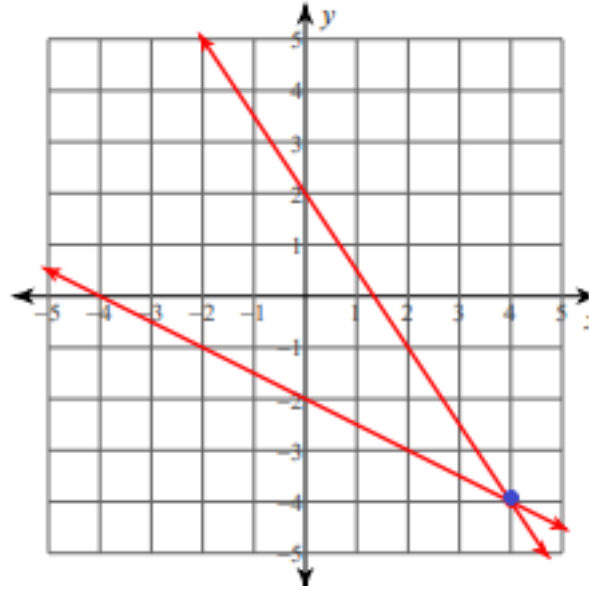
$$y = -\frac{1}{2}x - 2$$

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

2. Graph the line represented by each equation



3. Mark the point where the two lines intersect each other.



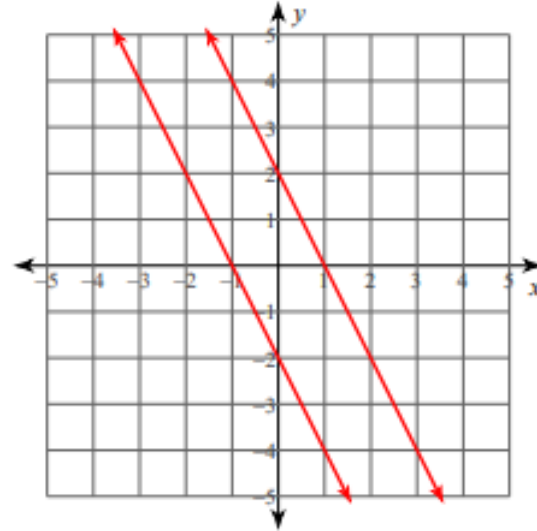
The x and y coordinates of the intersection point will be the solution to the **system of equations!**

( 4, -4 )



A system has no solutions if the lines are parallel.

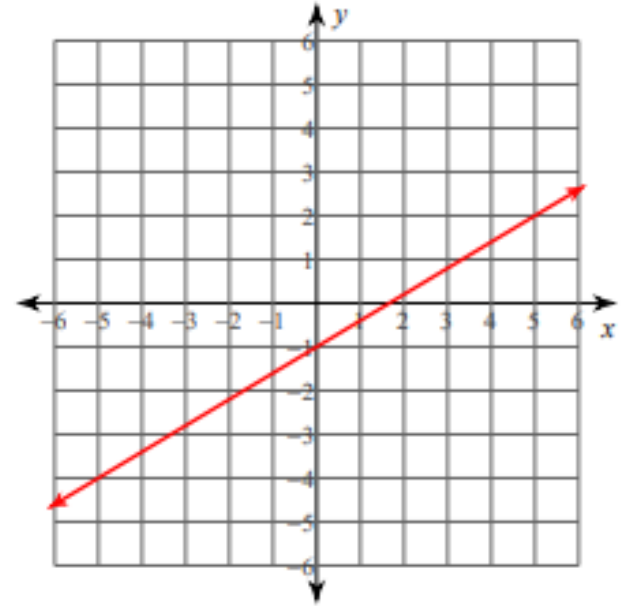
$$y = -2x + 2 \quad y = -2x - 2$$



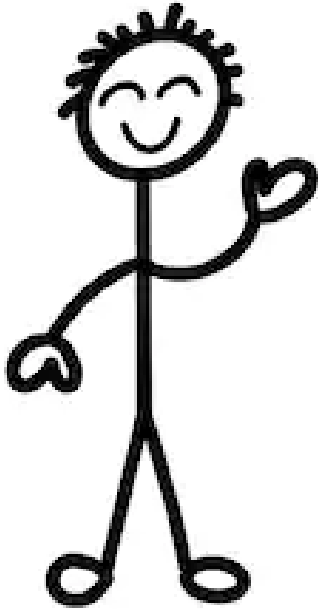
Notice that the lines have the same slope. **-2**  
No Solution

If a system has infinitely many solutions, then the lines overlap at every point. In other words, they're the same exact line! This means that any point on the line is a **solution** to the **system**.

$$y = \frac{3}{5}x - 1 \quad -3x + 5y = -5$$

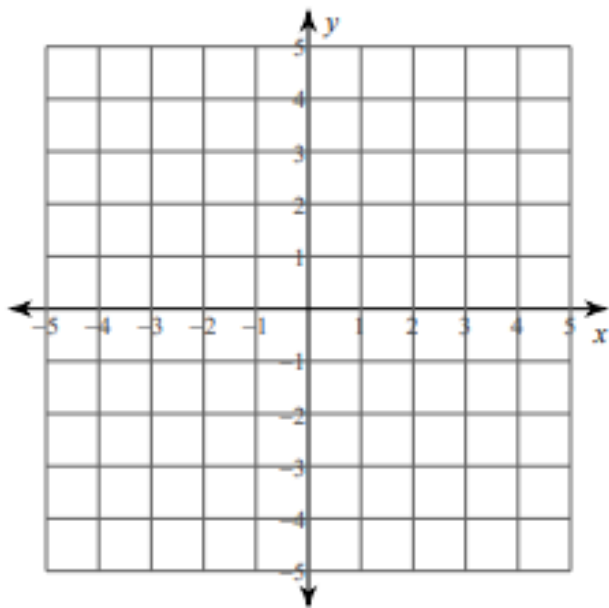


Now it's your  
turn!



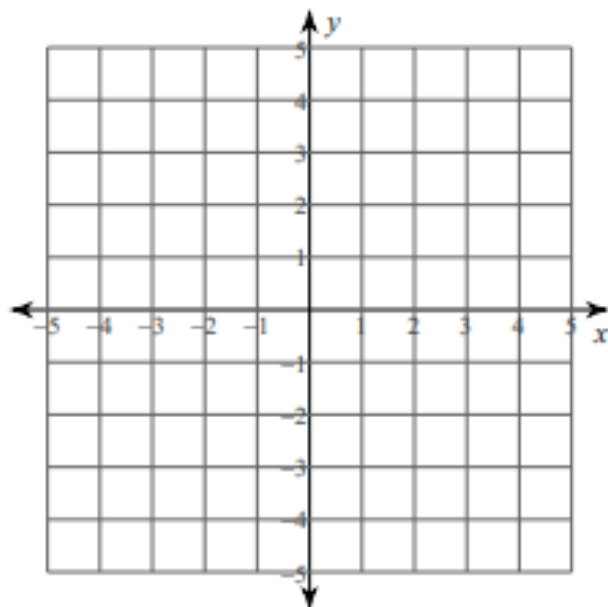
$$1) y = -\frac{5}{3}x + 3$$

$$y = \frac{1}{3}x - 3$$



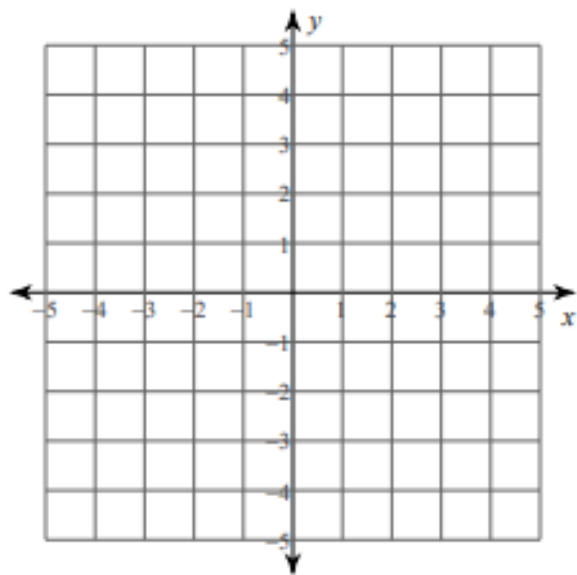
$$2) y = 4x + 3$$

$$y = -x - 2$$



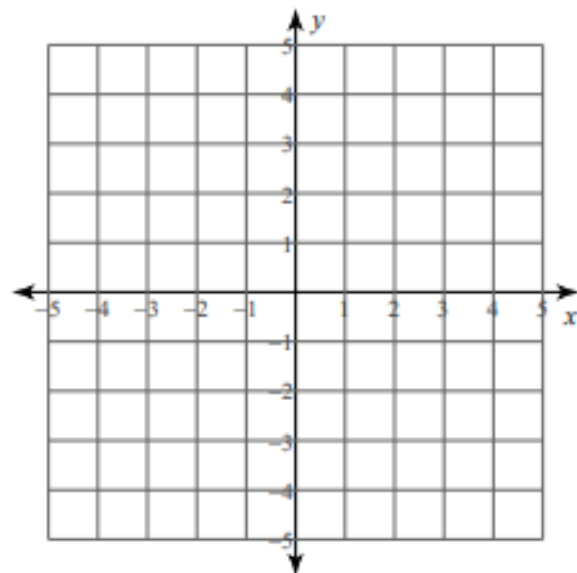
$$3) y = -\frac{1}{2}x - 1$$

$$y = \frac{1}{4}x - 4$$



$$4) y = -1$$

$$y = -\frac{5}{2}x + 4$$

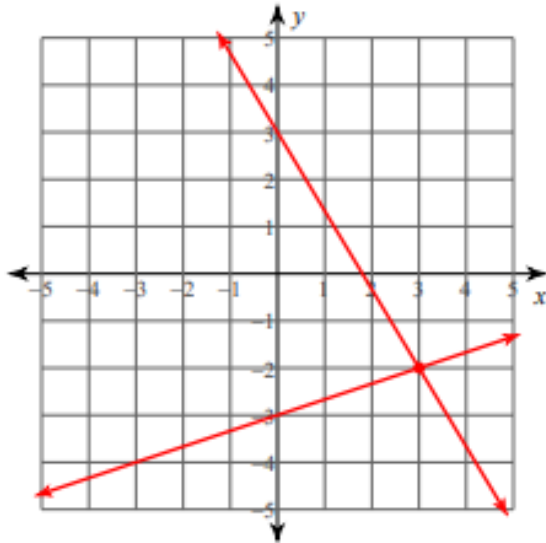


# Answer Key:

Once you have completed the problems, check your answers here.

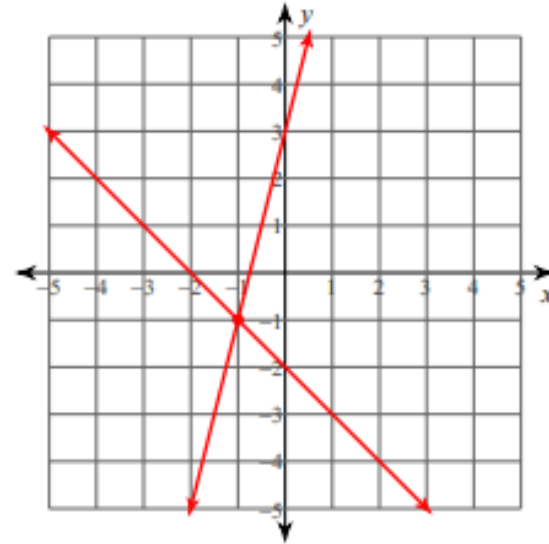
1)  $y = -\frac{5}{3}x + 3$

$y = \frac{1}{3}x - 3$



(3, -2)

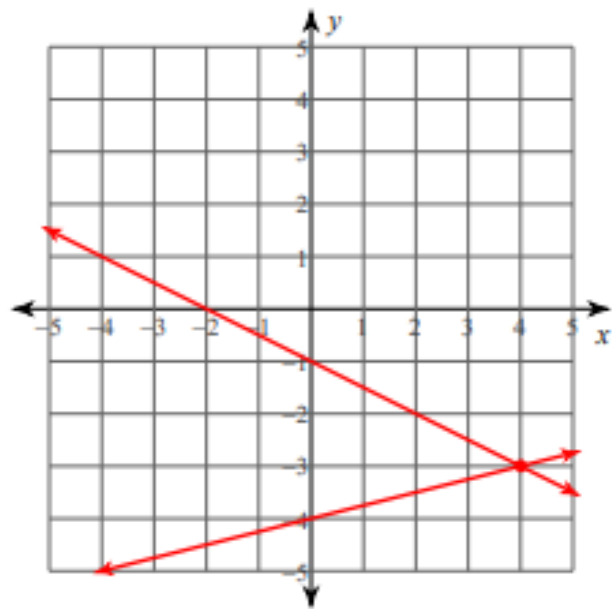
2)  $y = 4x + 3$   
 $y = -x - 2$



(-1, -1)

$$3) y = -\frac{1}{2}x - 1$$

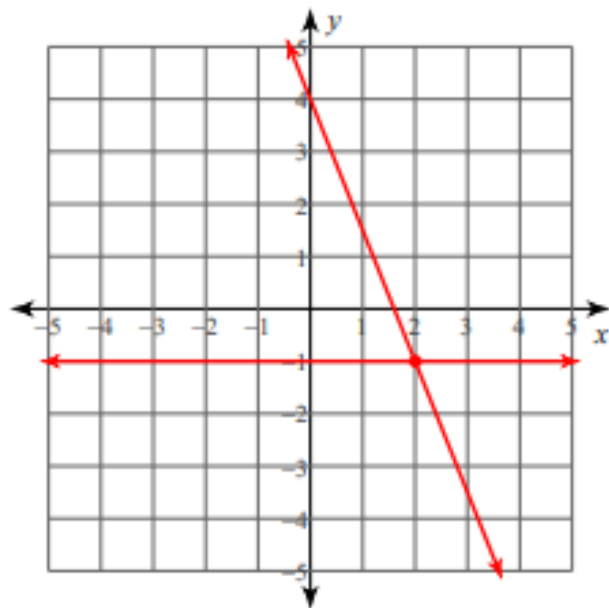
$$y = \frac{1}{4}x - 4$$



(4, -3)

$$4) y = -1$$

$$y = -\frac{5}{2}x + 4$$



(2, -1)

## Additional Practice:

Click on the links below to get additional practice and to check your understanding!

Enter your first name, then click continue without signing in.

[Solution to a System of Equations](#)

