5.1

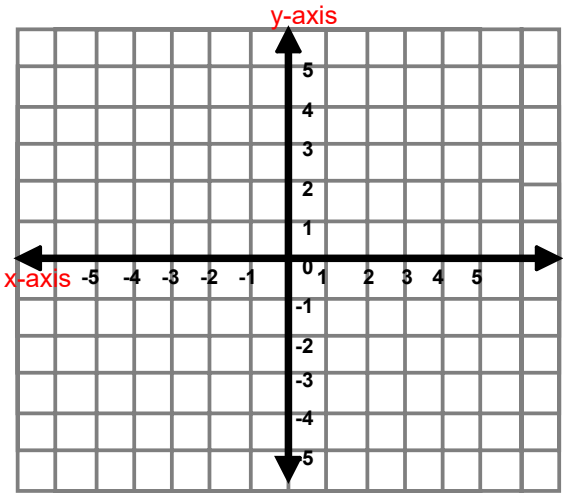
SOLVING SYSTEMS OF LINEAR EQUATIONS BY GRAPHING

Graphing Linear Equations

Graph the following equations using slope-intercept form.

1) $y = 3x - 4$

2) $y = -\frac{3}{4}x + 1$



Systems of equations

A system of equations is when you have two or more equations with the same variables.

$$3x + 2y = 14$$

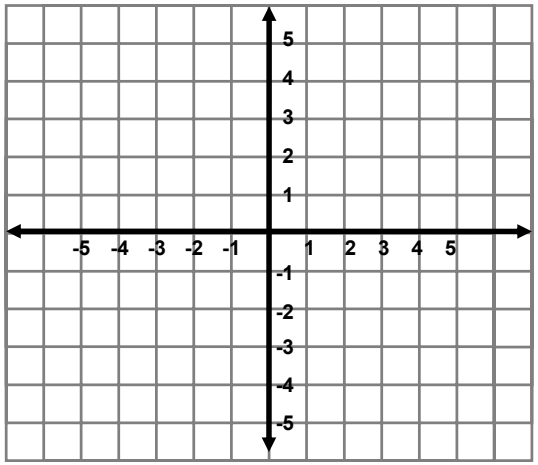
$$x + y = 1$$

Solving systems of equations means: _____

_____.

In this case, the solution that will fit for this is (,)

To find the solution of systems of equations by graphing, graph both equations. Basically, the intersection is the solution.

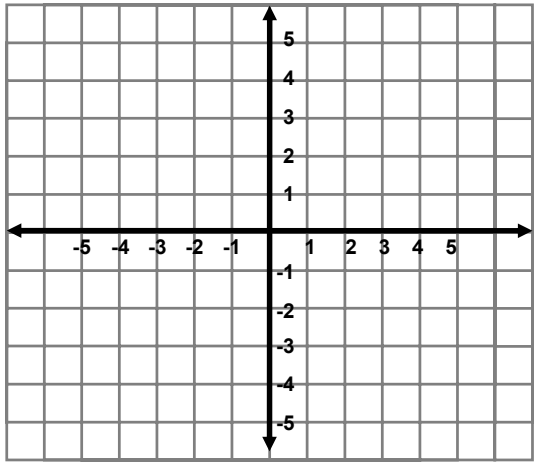


$$2x - y = 5$$

$$x + y = 1$$

Clue: Change these to slope-intercept form and then graph.

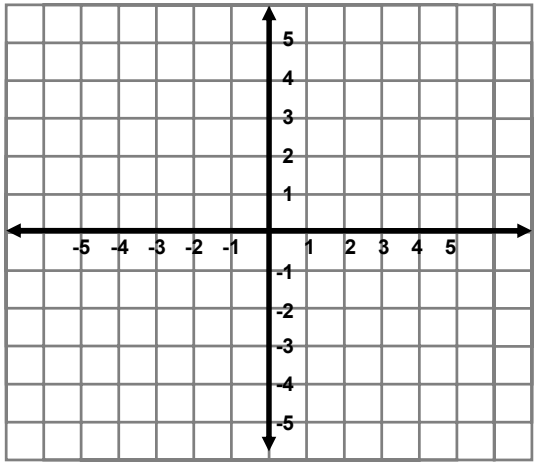
Use the graph to solve the system. Then check your solution algebraically.



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

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

3) Find the solution by graphing:



$$2x + y = 2$$

$$-x + y = -4$$

4) Tell whether the ordered pair is a solution of the linear system.

a) $(-1, 2)$

$y = -x + 1$

$y = 2x + 4$

b) $(-1, 5)$

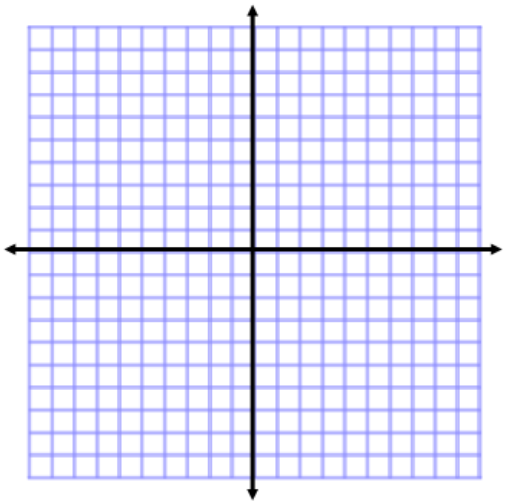
$x + y = 4$

$x - y = 6$

5) Solve the linear system by graphing. Check your solution.

$-x + y = 7$

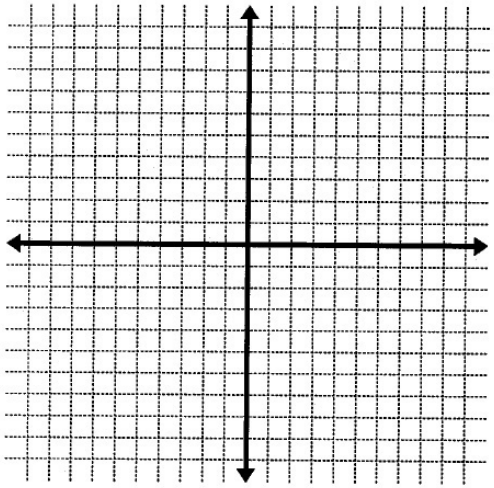
$x + 4y = 8$



Practice

6) $2x + y = 3$

$3y = x - 12$

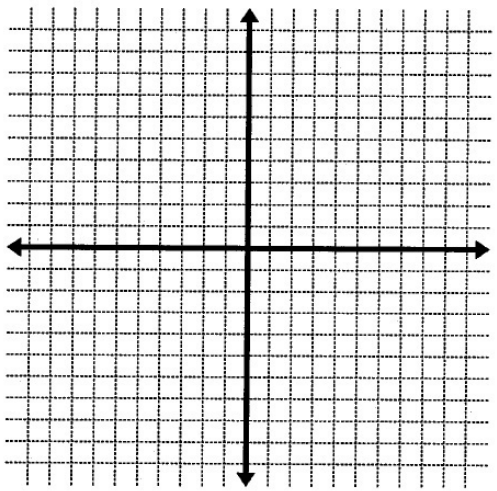


Check:

Practice

7) $4y - 3x = 12$

$y + 2x = -8$

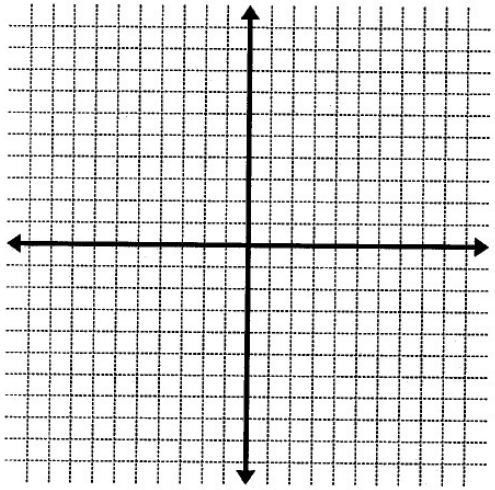


Check:

Practice

8) $y = -x + 4$

$y = \frac{-3}{5}x + 2$

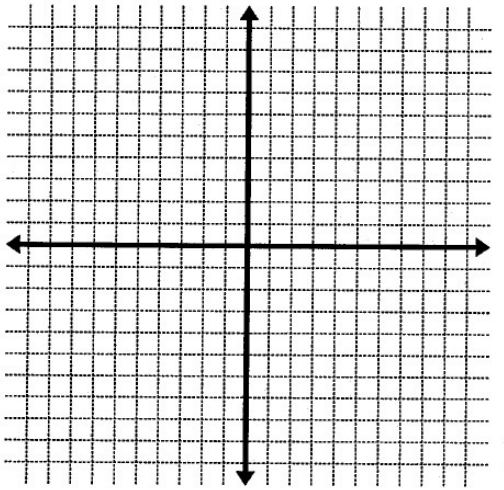


Check:

Practice

9) $y + 3x = -2$

$2y - 3x = 14$



Check: