Course: MFM2P Gr. 10 Applied **Lesson: 5 - 2**

Unit: Linear Systems **Topic: Solving Linear Systems by Graphing**

- ***homework check:*** **Lesson 5 - 1**

- ***note:*** **Solving Linear Systems by Graphing**

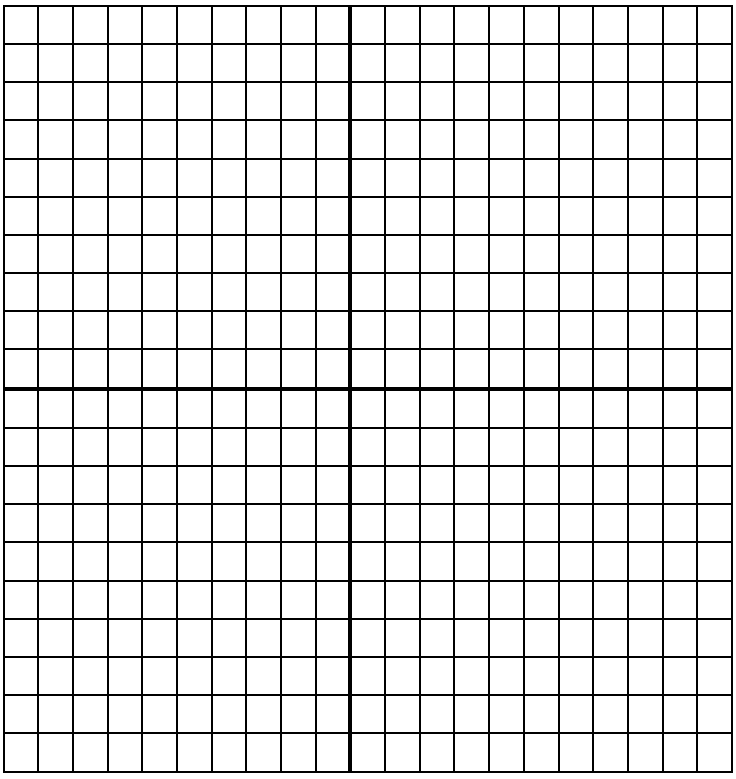
In order to find the solution to a linear system, we can graph both systems and find the point of intersection. The x and y values from the point of intersection can then be substituted back in to the original system in order to check the validity of the solution. For example, find the solution to each of the following systems.

a) Solve the following system by graphing each line and finding the point of intersection

$y = -x + 4$

$y = 5x - 2$

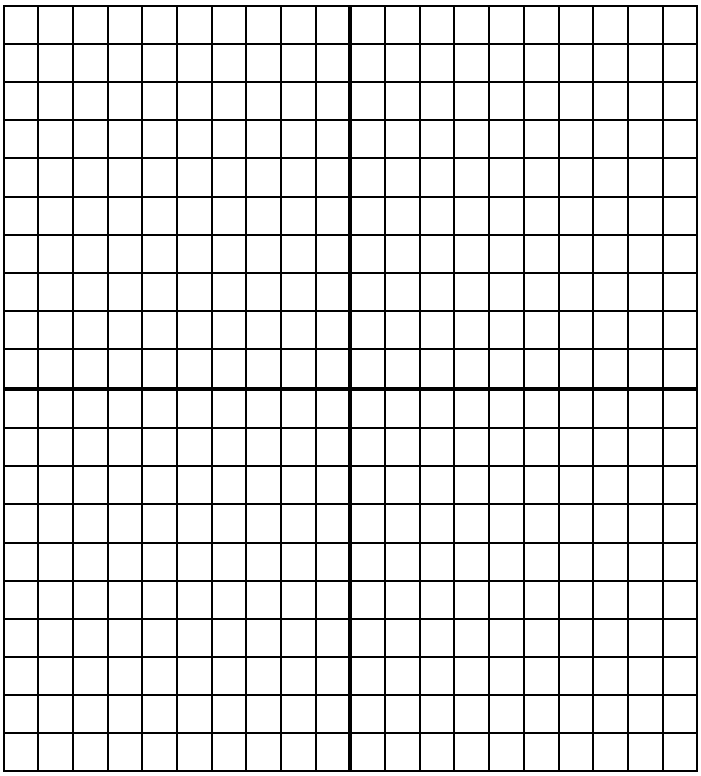
Solution:



b) Find the intersection for the following:

$-2x = y + 5$

$y = 9x + 6$



- ***homework assignment:*** **<u>Lesson 5 - 2</u>**

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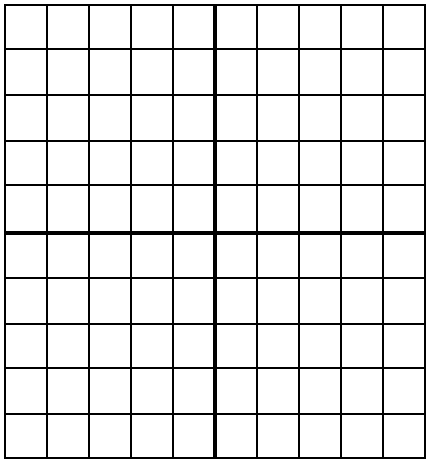
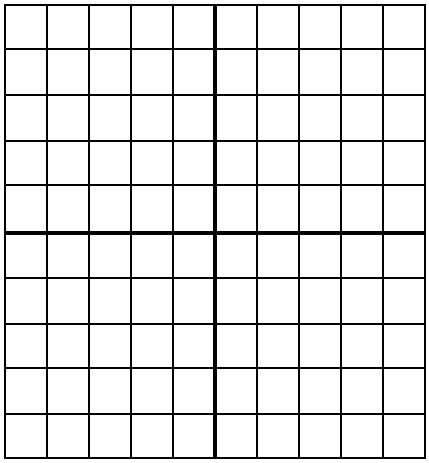
Lesson 5 – 2: Solving Systems Graphically

1. Graph each system to find the point of intersection (POI). Label each solution carefully.

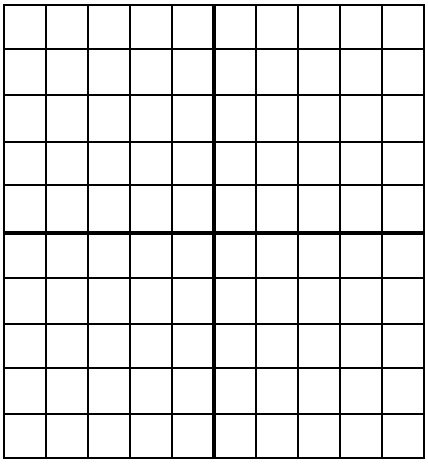
a) $y = \frac{3}{2}x - 2$
$y = \frac{1}{2}x + 2$



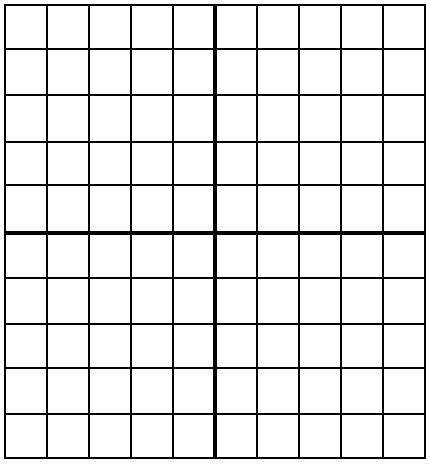
b) $y = -x + 2$
$y = -4x - 4$



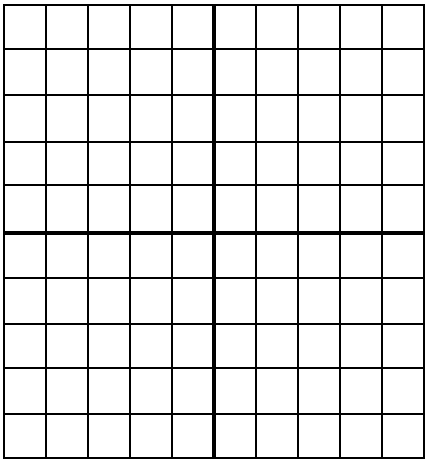
c) $y = 3x - 4$
$y = -2x + 1$



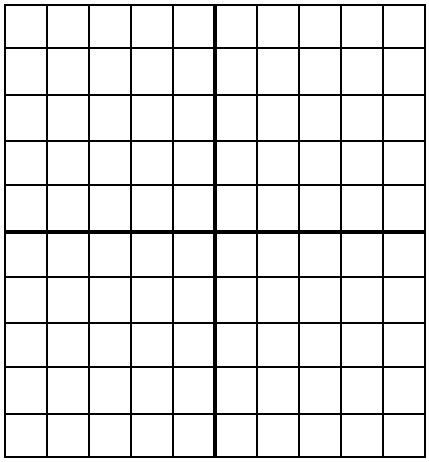
d) $y = \frac{1}{2}x - 1$
$y = \frac{3}{2}x + 1$



e) $y = \frac{1}{4}x - 2$
$y = \frac{3}{2}x + 5$



f) $y = \frac{-1}{3}x - 5$
$y = 2x + 2$



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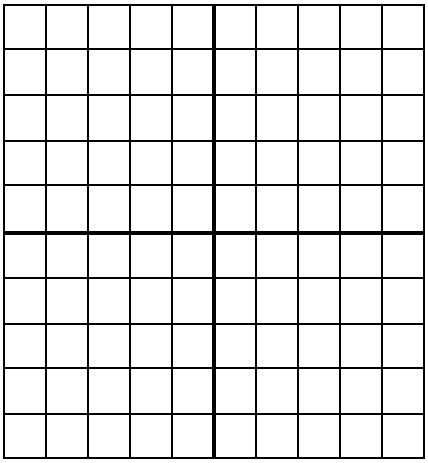
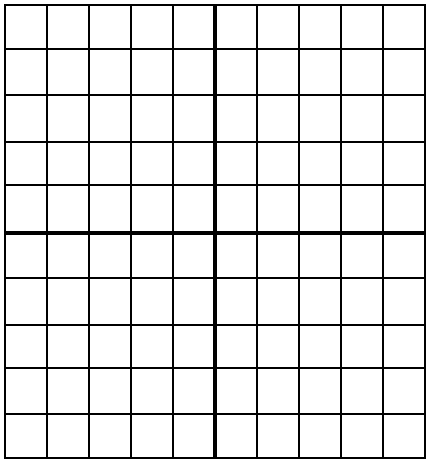
2. Solve each linear system.

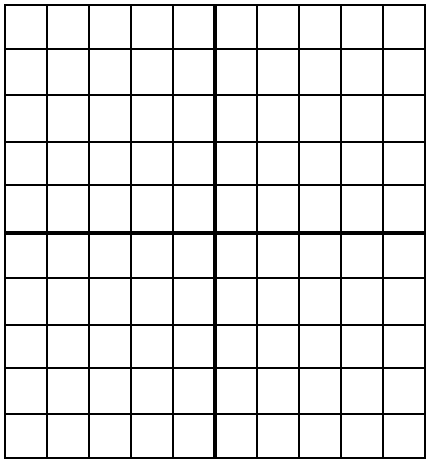
a) $x = -12 - 4y$
$5x - 4y + 12 = 0$



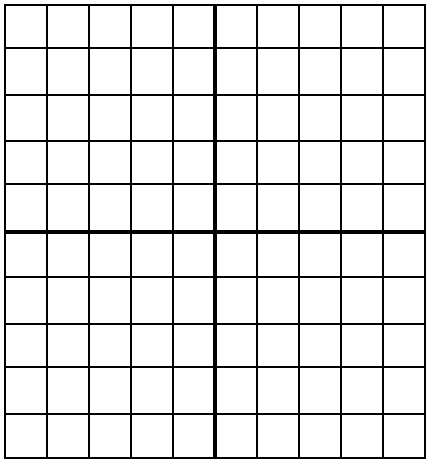
b) $0 = 3x - 3y - 9$
$x + y - 1 = 0$



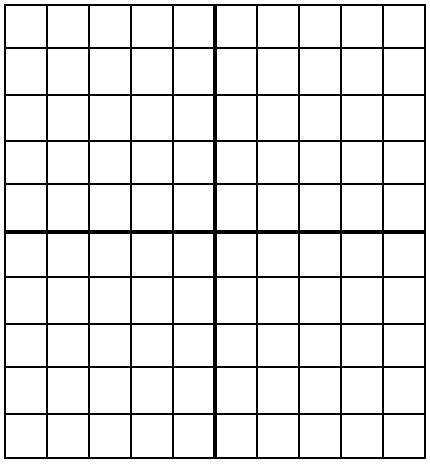
c) $x = 2$
$4 = x - 2y$



d) $y = -3x - 1$
$3 = y - x$



e) $0 = x + y + 3$
$5x + y = 1$



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