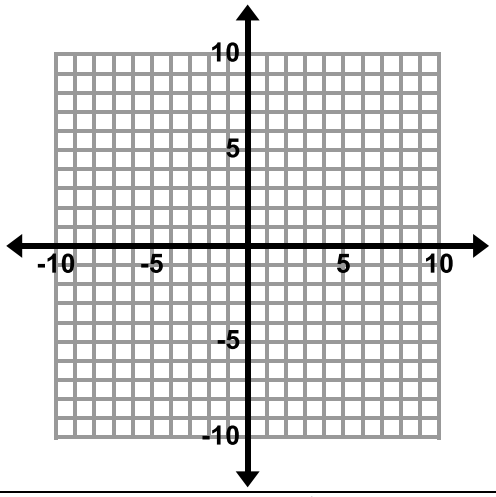
Name Period

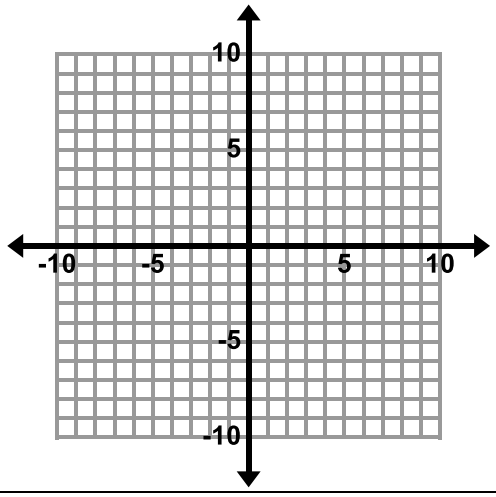
Intermediate 2 **Solve Systems of Equations by Graphing (Convert to *y = mx + b*)** **Worksheet 4-2**

For any systems of equations below without instructions, solve the system of linear equations graphically. If there is one solution, verify that your solution satisfies both equations. Follow the directions provided for 4 & 6.

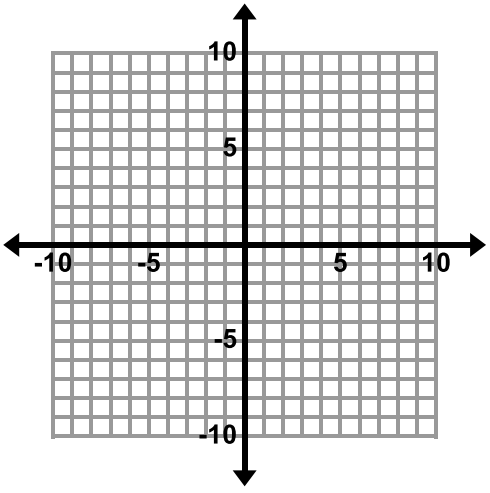
1. $y = 3x + 1$ and $x + y = 5$



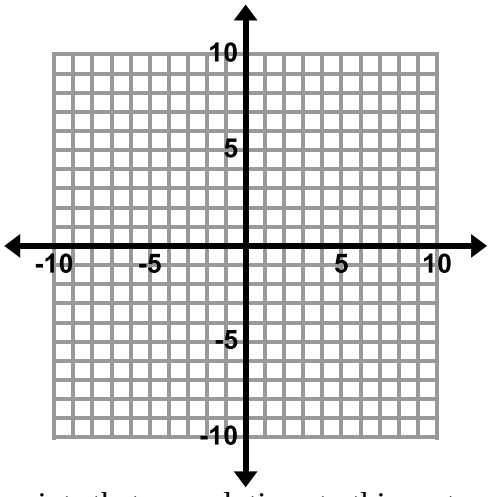
2. $y = -5$ and $2x + y = -3$



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

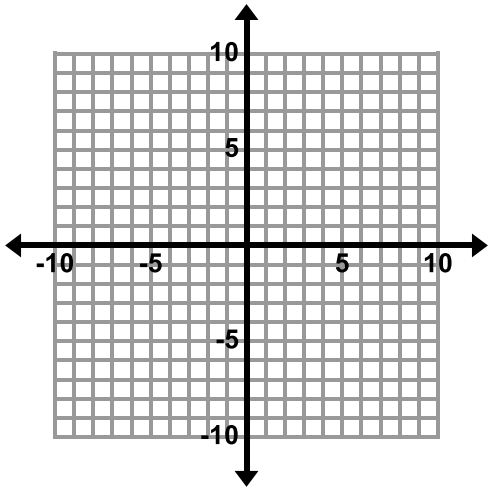


4. $x - y = -2$ and $-x + y = 2$

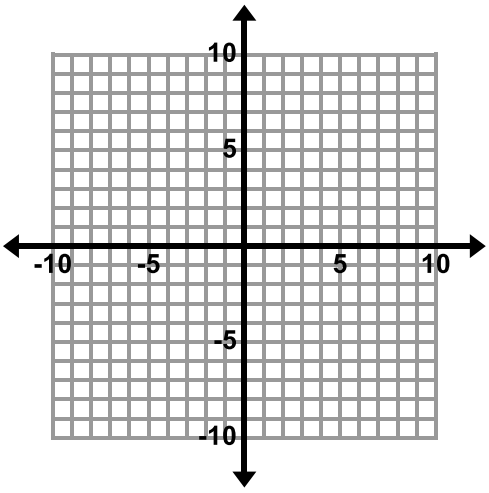


List 2 points that are solutions to this system.

5. $y = \frac{1}{2}x - 2$ and $y = \frac{1}{2}x + 4$



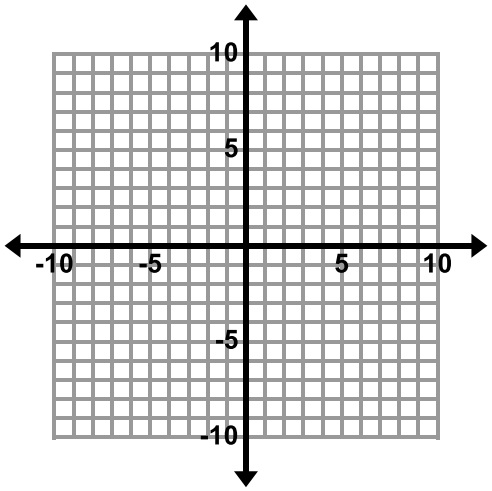
6. $2x - 8y = 6$ and $x - 4y = 3$



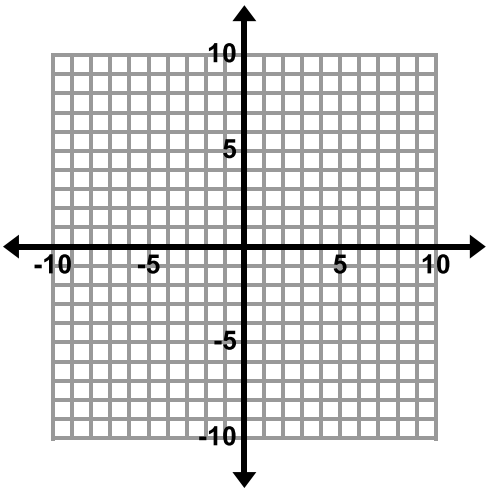
Circle the ordered pair(s) that are solutions to this system.

$(0, 0)$ $(0, -1)$ $(3, 0)$ $(9, 3)$

7. $y = 6x - 6$ and $y = 3x - 6$



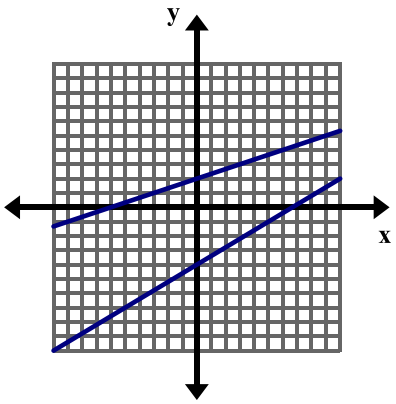
8. $2x + y = -4$ and $y + 2x = 3$



Without graphing, determine whether the following systems of linear equations will have one solution, no solution, or infinitely many solutions.

9. $x + y = 5$ and $x + y = 6$	***10.*** $-3x + 9y = 15$ and $y = \frac{1}{3}x + \frac{5}{3}$
11. $y = 6$ and $y = 2x + 1$	***12.*** $x - y = 5$ and $x + y = 5$

13. How many solutions does the system of linear equations graphed below have? How do you know?



14. One equation in a system of linear equations is $y = x - 4$.

a. Write a second equation for the system so that the system has only **one solution**.

b. Write a second equation for the system so that the system has **no solution**.

c. Write a second equation for the system so that the system has **infinitely many solutions**.