**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per.\_\_\_\_\_\_\_ Score:\_\_\_\_\_**

**U9 HW #2** *Solving Systems of Linear Equations by Graphing Part II*

1. Solve the system of linear equations graphically. If there is one solution, verify that your solution satisfies both equations.

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

 | 1. $2x-8y=6$ and $x-4y=3$

Circle the ordered pair(s) that are solutions to this system. $$\left(0, 0\right) \left(0, -1\right) \left(3, 0\right) (9, 3)$$ |
| 1. $y=6x-6$ and $y=3x-6$

 | 1. $2x+y=-4$ and $y+2x=3$

 |

1. Without graphing, determine whether the following systems of linear equations will have one solution, no solution, or infinitely many solutions. (Hint: Look for the pattern when you simplify both equations.)

|  |  |
| --- | --- |
| 1. $x+y=5$ and $x+y=6$
 | 1. $-3x+9y=15$ and $y=\frac{1}{3}x+\frac{5}{3}$
 |
| 1. $y=6$ and $y=2x+1$
 | 1. $x-y=5$ and $x+y=5$
 |

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



1. One equation in a system of linear equations is $y=x-4$.
	1. Write a second equation for the system so that the system has only **one solution**.
	2. Write a second equation for the system so that the system has **no solution**.
	3. Write a second equation for the system so that the system has **infinitely many solutions**.