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

**U8 CWK #2** *Solving Systems of Linear Equations by Graphing Part II*

1. Consider the equations $y=-2x$ and $y=-\frac{1}{2}x-3$. Make sure both equations are written in slope-intercept form, then graph both equations on the coordinate plane below and find the solution. Verify that the solution satisfies both equations.
2. Consider the equations $-2x+y=-1$ and $y=2x+4$. Make sure both equations are written in slope-intercept form, then graph both equations on the coordinate plane below and solve the system of linear equations.
3. Consider the equations $x+y=3$ and $3x+3y=9$. Make sure both equations are written in slope-intercept form, then graph both equations on the coordinate plane below and solve the system of linear equations.



1. In the table below, draw an example of a graph that represents the different solving outcomes of a system of linear equations. What do you notice about the slope and y-intercepts in each system of equation?

|  |  |  |
| --- | --- | --- |
| **One Solution** | **No Solution** | **Infinitely Many Solutions** |
| Pattern: |  |  |

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

|  |  |
| --- | --- |
| 1. $y=8x+2$ and $y=-4x$
 | 1. $y=-\frac{2}{3}x-5$ and $y+\frac{2}{3}x=1$
 |
| 1. $2x+y=8$ and $y=2x-2$
 | 1. $x+y=5$ and $-2x-2y=-10$
 |
| 1. $3x+2y=5$ and $3x+2y=6$
 | 1. $y=2x+5$ and $4x-2y=-10$
 |

1. One equation in a system of linear equations is $6x+4y=-12$.
2. Write a second equation for the system so that the system has only **one solution**.
3. Write a second equation for the system so that the system has **no solution**.
4. Write a second equation for the system so that the system has **infinitely many solutions**.