

**DIRECTIONS:** Use a graph to solve each system of equations. If a system has no solution (parallel lines), write “no solution.” If the graphs coincide, write “infinitely many solutions.” You can check solutions by substituting the values for  $x$  and  $y$  into **both** equations... it should work! There are graphs on the back of this sheet.

1. 
$$\begin{cases} y = x + 5 \\ y = -x - 1 \end{cases}$$

2. 
$$\begin{cases} y = 2 \\ y = \frac{4}{3}x - 2 \end{cases}$$

3. 
$$\begin{cases} y + 2x = 0 \\ 2y = -x - 6 \end{cases}$$

4. 
$$\begin{cases} y = 4x - 1 \\ 4x - y = 3 \end{cases}$$

5. 
$$\begin{cases} y = -2x + 2 \\ 4x + 2y = 4 \end{cases}$$

**DIRECTIONS:** Use the substitution method to solve each system of equations.

6. 
$$\begin{cases} x + 2y = 4 \\ 3x - 2y = 4 \end{cases}$$

7. 
$$\begin{cases} 3x + 2y = -1 \\ 2x + y = 1 \end{cases}$$

8. 
$$\begin{cases} x + 3y = 3 \\ 3x - 2y = 13 \end{cases}$$

9. 
$$\begin{cases} 3a + 2b = -2 \\ 9a - b = -6 \end{cases}$$

10. 
$$\begin{cases} 2m - 5n = 14 \\ m + \frac{3}{2}n = 5 \end{cases}$$

**DIRECTIONS:** Use the linear combination (dropout) method to solve each system of equations.

11. 
$$\begin{cases} 3x - 2y = 6 \\ 4x - 3y = 7 \end{cases}$$

12. 
$$\begin{cases} 5x - 6y = 9 \\ 2x - 3y = 3 \end{cases}$$

13. 
$$\begin{cases} 4x - 3y = 6 \\ 2x - 5y = -4 \end{cases}$$

14. 
$$\begin{cases} 2x - 3y = 3 \\ 5x + 2y = 17 \end{cases}$$

15. 
$$\begin{cases} 4x + 5y = 3 \\ 3x + 2y = 4 \end{cases}$$

