

**Solve each system of equations using substitution. Show all work. If you have a solution, you must show the work to check it. Circle your final answer.**

1)  $y = -8x + 3$   
 $y = 4x - 9$

2)  $4x - 2y = -20$   
 $y = 3x + 11$

3)  $-5x + y = 7$   
 $8x + 2y = -4$

4)  $-3x - 4y = 17$   
 $x + 5y = -2$

**Solve each system of equations using elimination. Show all work. If you have a solution, you must show the work to check it. Circle your final answer.**

5)  $-2x - 2y = 18$   
 $2x + 8y = -30$

6)  $-9x + 3y = 30$   
 $-6x + 3y = 24$

7)  $-4x - 5y = -17$   
 $8x + 4y = 4$

8)  $8x - 4y = 16$   
 $-7x - 12y = -14$

$$\begin{aligned} 9) \quad & 9x + 2y = -3 \\ & 10x + 5y = 5 \end{aligned}$$

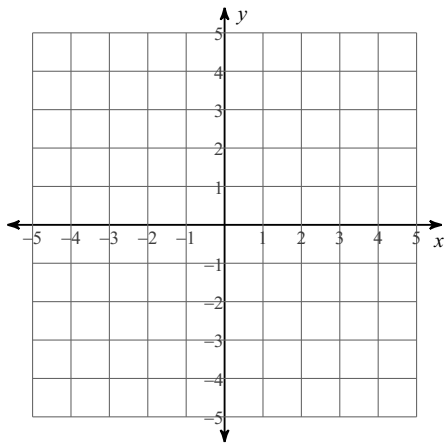
$$\begin{aligned} 10) \quad & -2x - 7y = -16 \\ & -3x + 3y = 30 \end{aligned}$$

$$\begin{aligned} 11) \quad & -8x + 20y = 0 \\ & 2x - 5y = -1 \end{aligned}$$

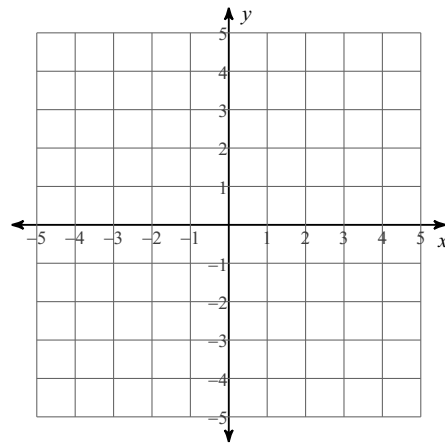
$$\begin{aligned} 12) \quad & 4x - 10y = 16 \\ & -2x + 5y = -8 \end{aligned}$$

Solve each system of linear inequalities by graphing. Plot at least 3 points per line. Please make sure the shading for each line is obviously different (use different colors to shade). Show all work.

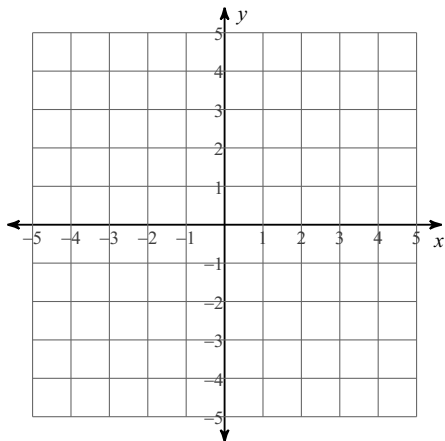
13)  $x - y \leq 1$   
 $x + 3y < 9$



14)  $2x + y \leq 1$   
 $x + 2y \geq -4$



15)  $y \leq -x - 2$   
 $y > -3$



16)  $y < 2x + 1$   
 $y \leq \frac{1}{2}x - 2$

