

## SM2-A HW #7-1 (Systems of Equations and Inequalities)

Solve each system by graphing.

$$\begin{aligned} 1) \quad & y = 6x + 3 \\ & y = -x - 4 \end{aligned}$$

$$\begin{aligned} 2) \quad & y = \frac{1}{4}x + 2 \\ & y = \frac{1}{4}x - 4 \end{aligned}$$

$$\begin{aligned} 3) \quad & 7x + 4y = 16 \\ & x + 2y = -2 \end{aligned}$$

$$\begin{aligned} 4) \quad & x + 2y = -6 \\ & 3x - 2y = -2 \end{aligned}$$

$$\begin{aligned} 5) \quad & x - 2y = 6 \\ & 3x - 2y = 2 \end{aligned}$$

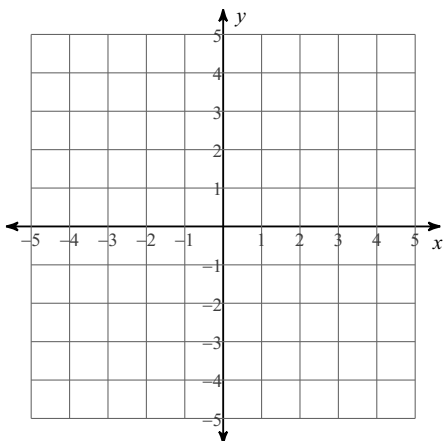
$$\begin{aligned} 6) \quad & x - 2y = 6 \\ & x + 2y = -2 \end{aligned}$$

$$\begin{aligned} 7) \quad & x - 2y = -6 \\ & 3x - y = 2 \end{aligned}$$

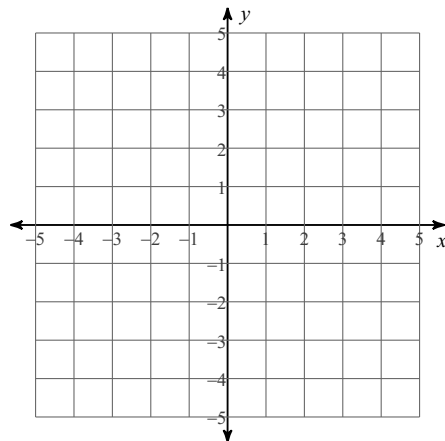
$$\begin{aligned} 8) \quad & 2x + 3y = -3 \\ & 2x + 3y = 12 \end{aligned}$$

Sketch the solution to each system of inequalities.

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

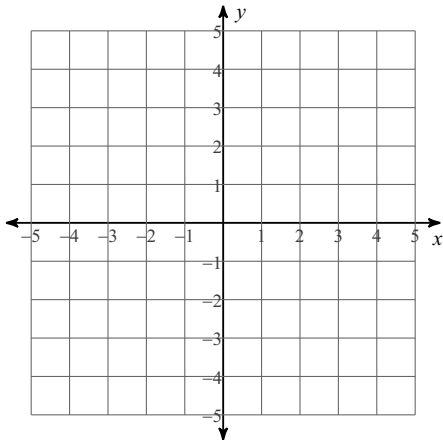


$$\begin{aligned} 10) \quad & y < \frac{5}{2}x - 3 \\ & y < \frac{1}{2}x + 1 \end{aligned}$$



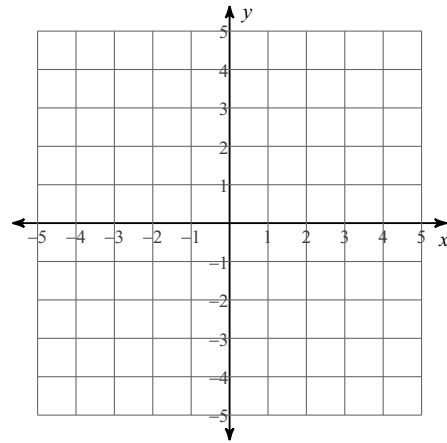
$$11) y \leq -\frac{3}{2}x + 2$$

$$y \leq x - 3$$



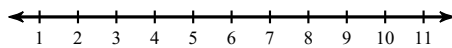
$$12) y \leq -\frac{5}{2}x - 2$$

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

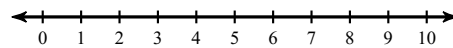


**Solve each inequality and graph its solution.**

$$13) 90 < 3(3n + 6)$$

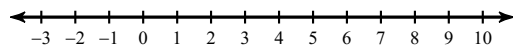


$$14) -4n + 8(n + 8) < 96$$

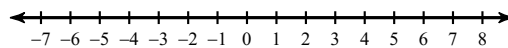


**Solve each compound inequality and graph its solution.**

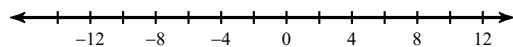
$$15) -4m \geq -4 \text{ or } m + 4 \geq 10$$



$$16) -6 \leq -2 + v < 5$$



$$17) \frac{b}{5} \leq -2 \text{ or } 4 + b > 11$$



$$18) n + 1 < 5 \text{ and } \frac{n}{8} > -1$$

