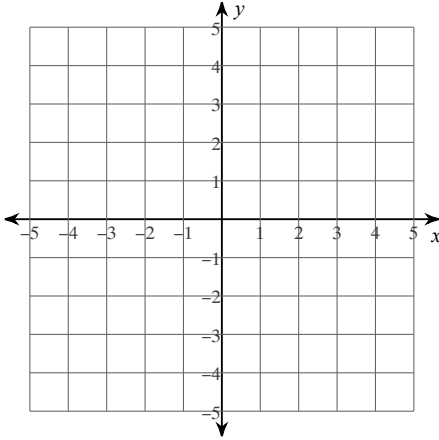


## 5.7 Systems of Linear Inequalities

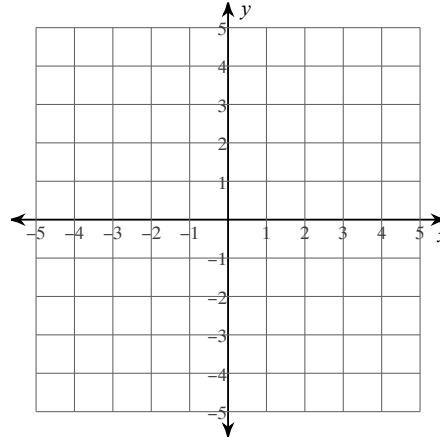
Sketch the solution to each system of inequalities.

1)  $y > \frac{1}{2}x - 3$

$y \leq \frac{1}{2}x + 2$

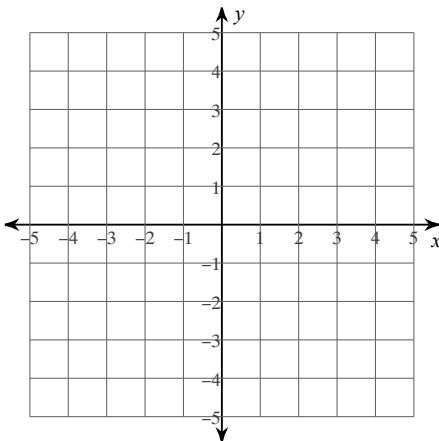


2)  $y > x + 1$   
 $y \geq 5x - 3$

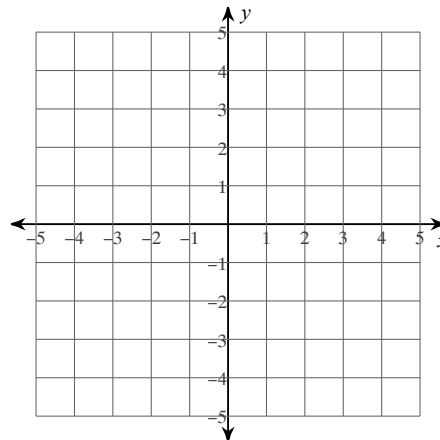


3)  $y \geq \frac{4}{3}x + 1$

$y \geq \frac{1}{3}x - 2$

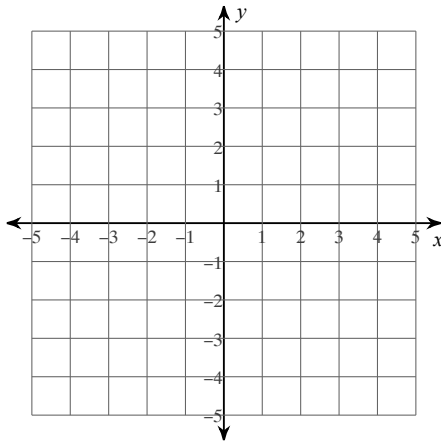


4)  $y \leq -x + 2$   
 $y > 2x - 1$



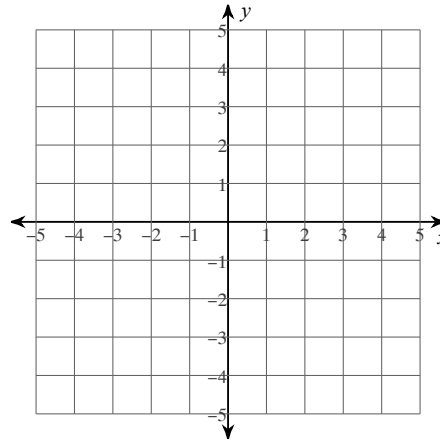
$$5) y < -\frac{1}{2}x - 2$$

$$y \leq 2x + 3$$



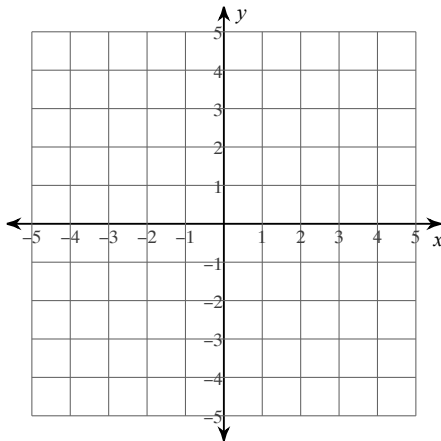
$$6) 2x + 3y > 3$$

$$x - 3y < 6$$



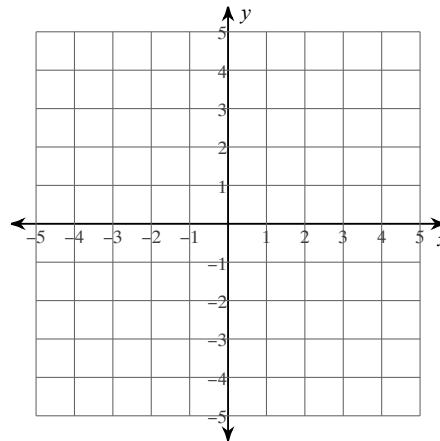
$$7) x + 2y \leq -6$$

$$2x - y < -2$$

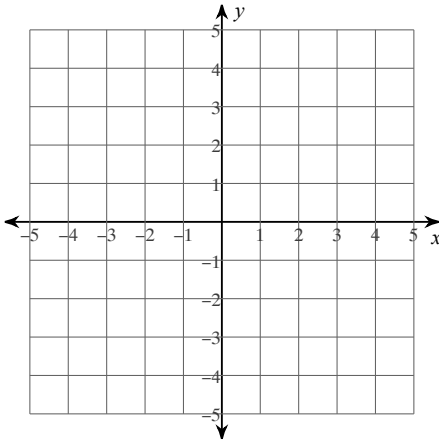


$$8) x + y > 1$$

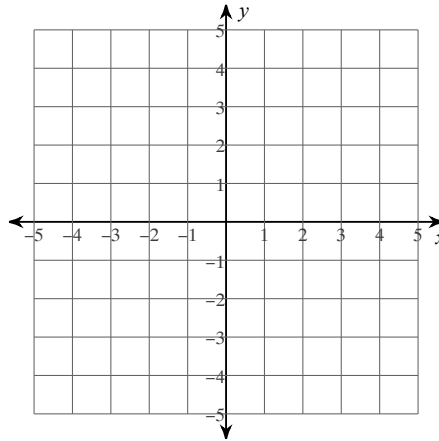
$$x - 2y < 4$$



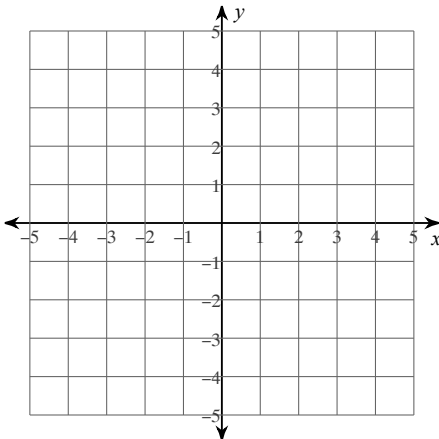
$$9) \begin{aligned} 4x - 3y &> 3 \\ x - 3y &\geq -6 \end{aligned}$$



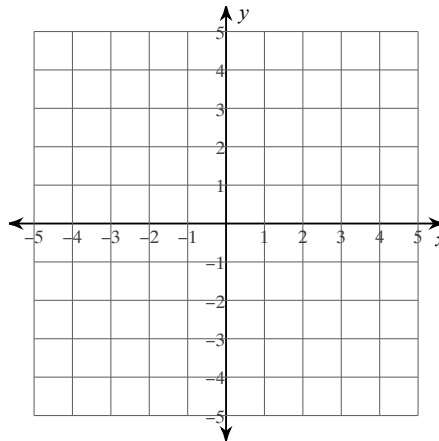
$$10) \begin{aligned} 3x + y &\geq -2 \\ 2x - y &< -3 \end{aligned}$$



$$11) \begin{aligned} y &< 4x + 1 \\ y &\geq 4x - 1 \end{aligned}$$



$$12) \begin{aligned} y &\geq \frac{1}{3}x + 2 \\ y &\leq \frac{1}{3}x - 1 \end{aligned}$$



Determine if the given point is a solution to the system of linear inequalities.

$$13) (5, -2)$$

$$\begin{aligned} y &> 2x - 15 \\ y &< 3x - 17 \end{aligned}$$

$$14) (2, 8)$$

$$\begin{aligned} y &\geq -x + 5 \\ y &> \frac{1}{2}x - 3 \end{aligned}$$