

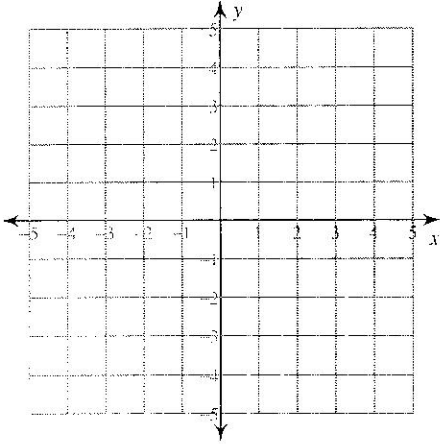
9: Solving Systems of Equations & Inequalities

Date _____ Period _____

Sketch the solution to each system of inequalities.

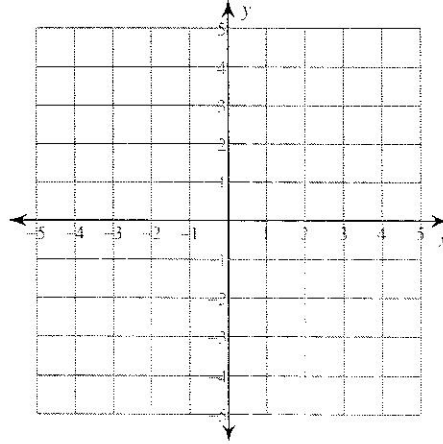
1) $y \leq 2x - 3$

$y < \frac{1}{3}x + 2$



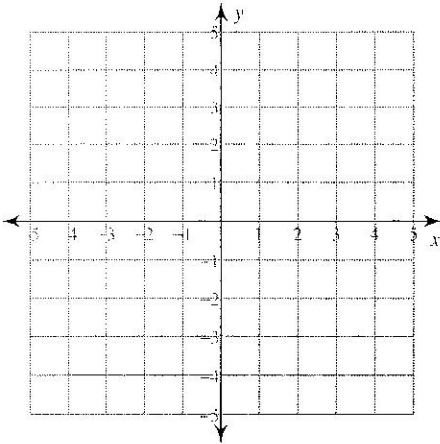
2) $y < -2x - 3$

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



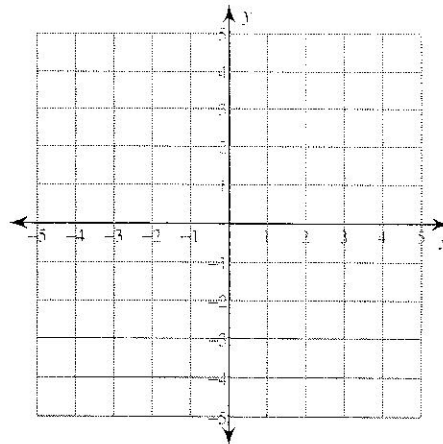
3) $y \geq 3x + 2$

$y \leq -x - 2$



4) $y < 3x + 2$

$y < -x - 2$



Solve each system by substitution.

$$\begin{aligned} 5) \quad y &= -2x + 6 \\ -7x - 2y &= -24 \end{aligned}$$

$$\begin{aligned} 6) \quad y &= -6x + 19 \\ -7x + 4y &= -17 \end{aligned}$$

$$\begin{aligned} 7) \quad y &= 3x + 7 \\ 5x - 5y &= -15 \end{aligned}$$

$$\begin{aligned} 8) \quad -3x + 4y &= -23 \\ y &= 6x - 11 \end{aligned}$$

Solve each system by elimination.

$$\begin{aligned} 9) \quad -6x - 4y &= -30 \\ -2x - 8y &= 30 \end{aligned}$$

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

$$\begin{aligned} 11) \quad 8x + 4y &= 0 \\ 7x + 8y &= 9 \end{aligned}$$

$$\begin{aligned} 12) \quad 6x - y &= 10 \\ 12x - 2y &= 20 \end{aligned}$$

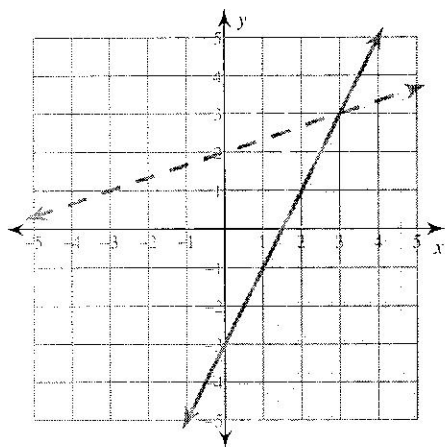
9: Solving Systems of Equations & Inequalities

Date _____ Period _____

Sketch the solution to each system of inequalities.

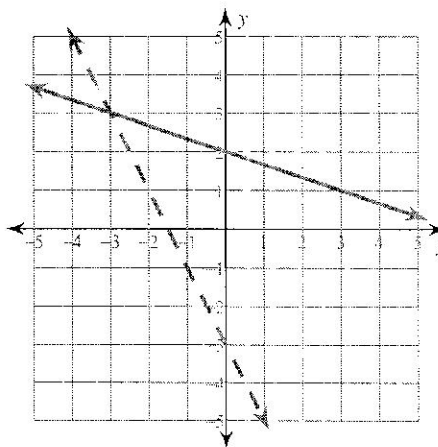
1) $y \leq 2x - 3$

$y < \frac{1}{3}x + 2$



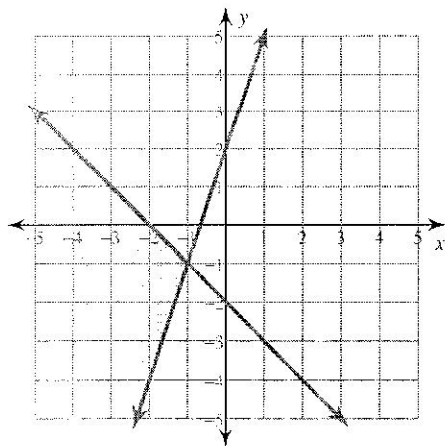
2) $y < -2x - 3$

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



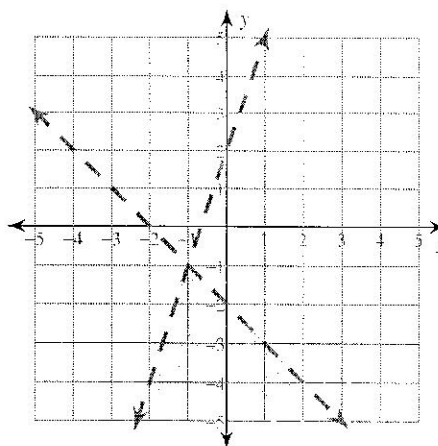
3) $y \geq 3x + 2$

$y \leq -x - 2$



4) $y < 3x + 2$

$y < -x - 2$



Solve each system by substitution.

$$\begin{aligned} 5) \quad & y = -2x + 6 \\ & -7x - 2y = -24 \\ & (4, -2) \end{aligned}$$

$$\begin{aligned} 6) \quad & y = -6x + 19 \\ & -7x + 4y = -17 \\ & (3, 1) \end{aligned}$$

$$\begin{aligned} 7) \quad & y = 3x + 7 \\ & 5x - 5y = -15 \\ & (-2, 1) \end{aligned}$$

$$\begin{aligned} 8) \quad & -3x + 4y = -23 \\ & y = 6x - 11 \\ & (1, -5) \end{aligned}$$

Solve each system by elimination.

$$\begin{aligned} 9) \quad & -6x - 4y = -30 \\ & -2x - 8y = 30 \\ & (9, -6) \end{aligned}$$

$$\begin{aligned} 10) \quad & -x - y = -3 \\ & -9x - 9y = -9 \\ & \text{No solution} \end{aligned}$$

$$\begin{aligned} 11) \quad & 8x + 4y = 0 \\ & 7x + 8y = 9 \\ & (-1, 2) \end{aligned}$$

$$\begin{aligned} 12) \quad & 6x - y = 10 \\ & 12x - 2y = 20 \\ & \text{Infinite number of solutions} \end{aligned}$$