

$$y = mx + b$$

$m = \text{slope}$ $b = y\text{-intercept}$

$$= \frac{\text{rise}}{\text{run}}$$

$$= \frac{+ \text{up} / - \text{down}}{+ \text{right} / - \text{left}}$$

Algebra 2

$x = \#$ vertical line that goes through the value

$y = \#$ horizontal line that goes through the value

Name _____

Review for Graphing Quiz

Date _____ Period _____

2

$$y = mx + b$$

Write the slope-intercept form of the equation of each line.

1) $7x + 8y = 24$

$$\begin{aligned} -7x & \quad | \quad -7x \\ 8y & = -\frac{7x}{8} + \frac{24}{8} \\ \hline y & = -\frac{7}{8}x + 3 \end{aligned}$$

2) $2x - 7y = 35$

3) $3x - y = 5$

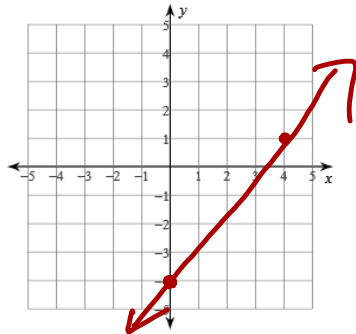
4) $9x + y = -6$

2

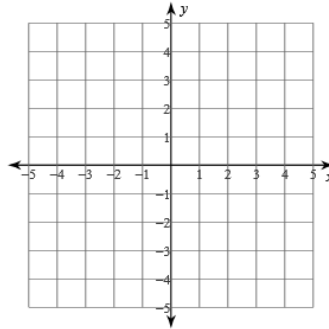
Solve each system by graphing. State the solution to the system.

5) $y = \frac{5}{4}x - 4$

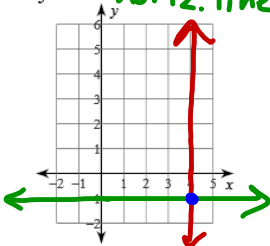
$y = -\frac{1}{2}x + 3$



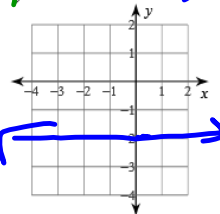
6) $y = x + 1$
 $x = -2$



7) $x = 4$ $y = -1$

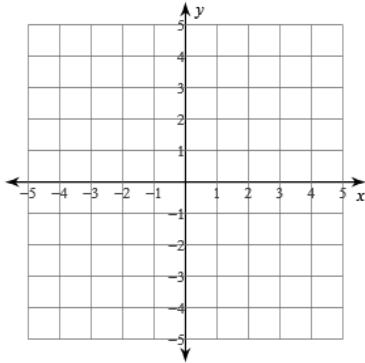


8) $x = -3$ $y = -2$ → horiz. $y = -2$

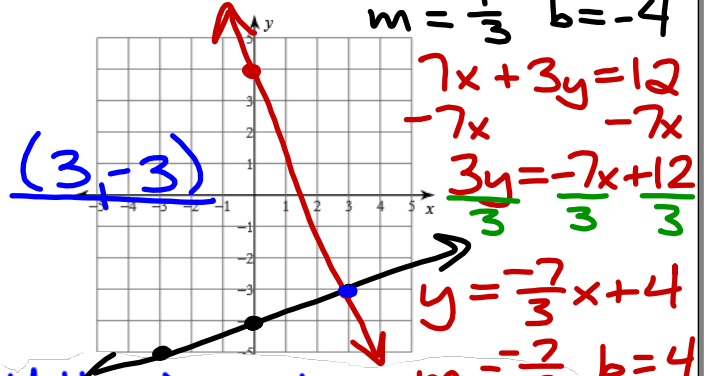


$(4, -1)$

9) $x + 3y = 6$
 $x - y = 2$



10) $x - 3y = 12$
 $7x + 3y = 12$

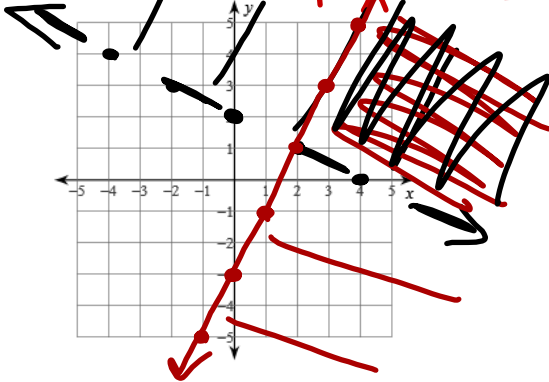


$x - 3y = 12$
 $-x$
 $-3y = -1x + 12$
 $\frac{-3y}{-3} = \frac{-1x}{-3} + \frac{12}{-3}$
 $y = \frac{1}{3}x - 4$
 $m = \frac{1}{3} \quad b = -4$
 $7x + 3y = 12$
 $-7x$
 $3y = -7x + 12$
 $\frac{3y}{3} = \frac{-7x}{3} + \frac{12}{3}$
 $y = \frac{-7}{3}x + 4$
 $m = \frac{-7}{3} \quad b = 4$

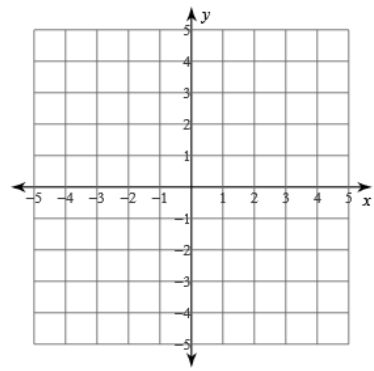
solid line: $\geq \leq$ shade above: $\geq \leq$
 dashed line: $> <$ shade below: $\leq <$

Sketch the solution to each system of inequalities.

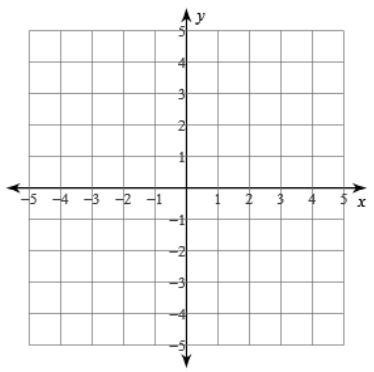
11) $y > \frac{1}{2}x + 2$ $m = \frac{1}{2} \quad b = 2$
 $y \leq x - 3$ $m = 1 \quad b = -3$



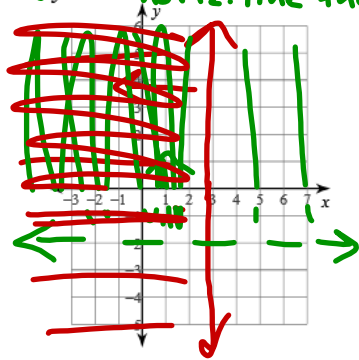
12) $y \leq -x - 2$
 $y \leq -4x + 1$



13) $y \geq x + 1$
 $x < 1$



14) $x \leq 3$ vert. line through $x = 3$
 $y > -2$ horiz. line through $y = -2$



vertical shading
 $\leq <$ shade left
 $\geq >$ shade right