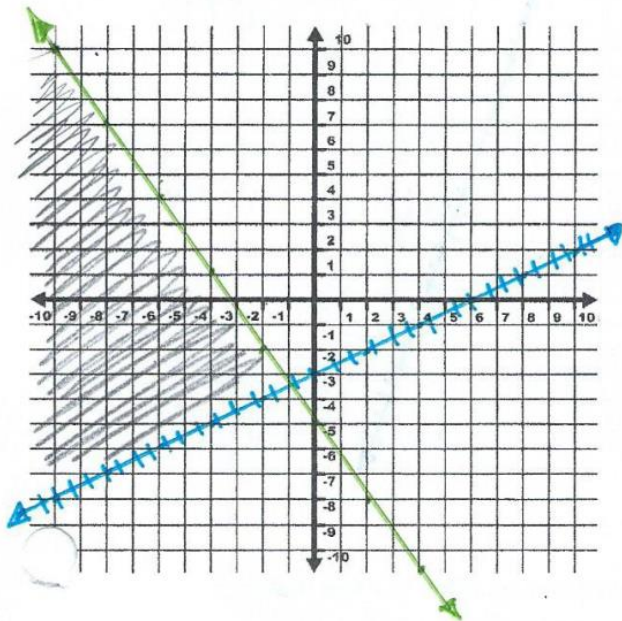


Solving Systems of Inequalities

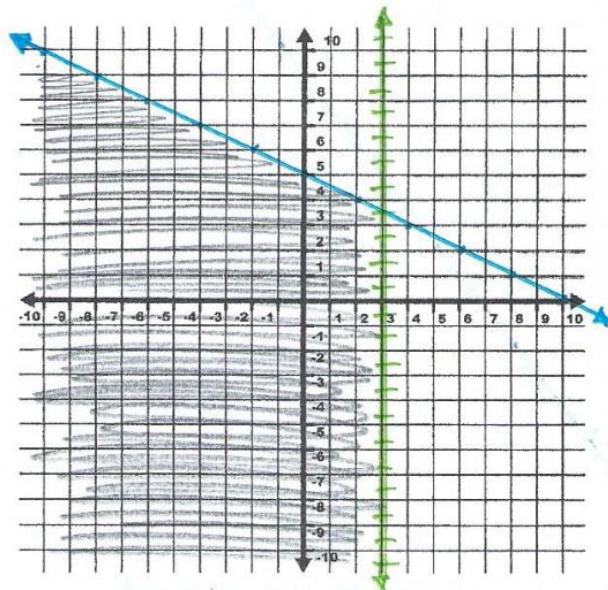
Name: Key
 Date: _____ Period: _____

Solve each System of Inequalities by Graphing.

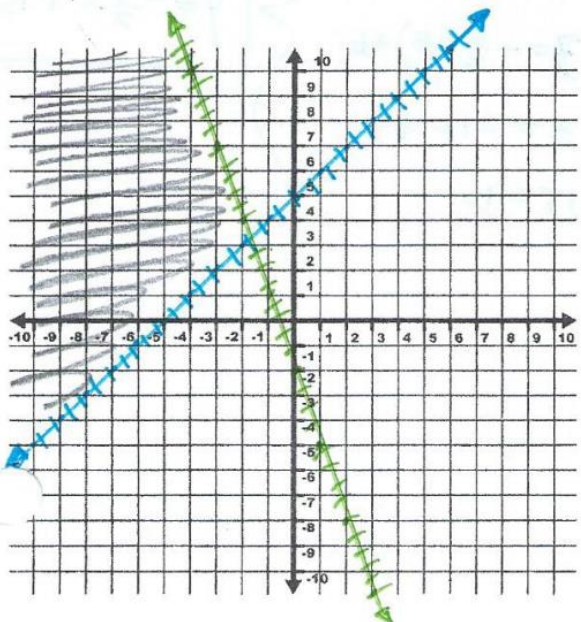
1.) $x - 2y < 6 \rightarrow y > \frac{1}{2}x - 3$
 $-3x - 2y \geq 10 \rightarrow y \leq -\frac{3}{2}x - 5$



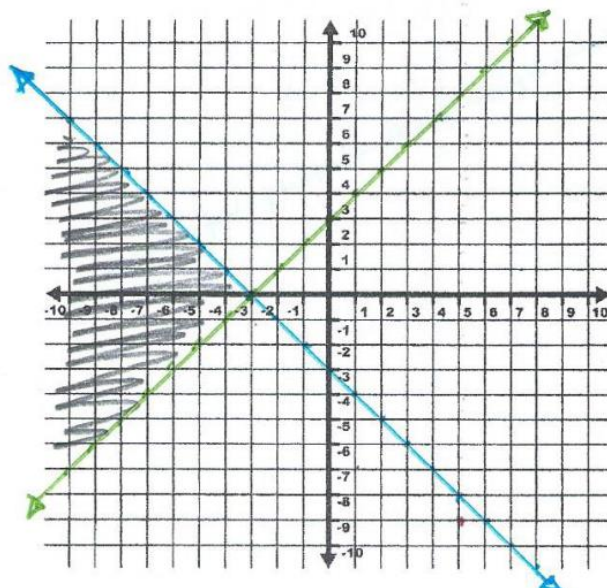
2.) $x + 2y \leq 10 \rightarrow y \leq -\frac{1}{2}x + 5$
 $x > -3$



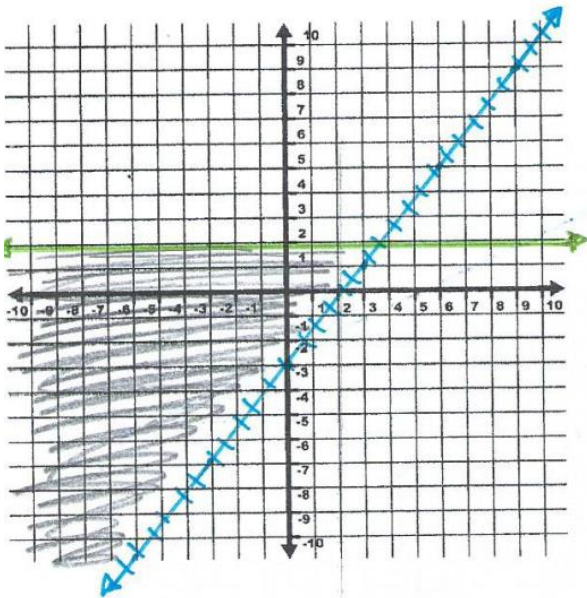
3.) $x - y < -5 \rightarrow y > x + 5$
 $3x + y < -2 \rightarrow y < -3x - 2$



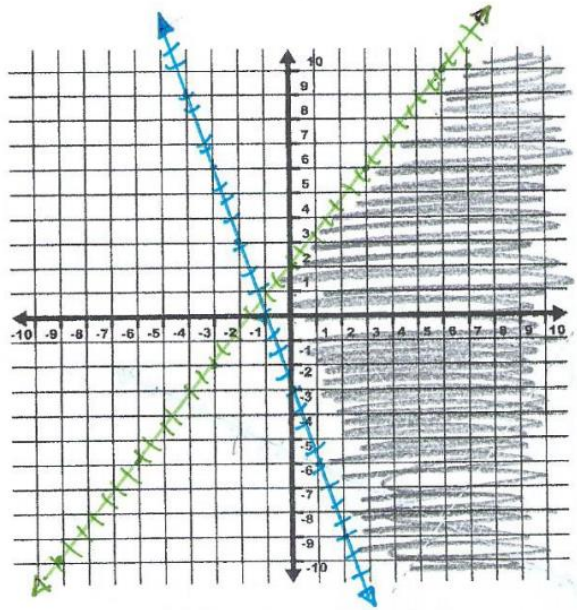
4.) $2x + 2y \leq -6 \rightarrow y \leq -x - 3$
 $3y \geq 3x + 9 \rightarrow y \geq x + 3$



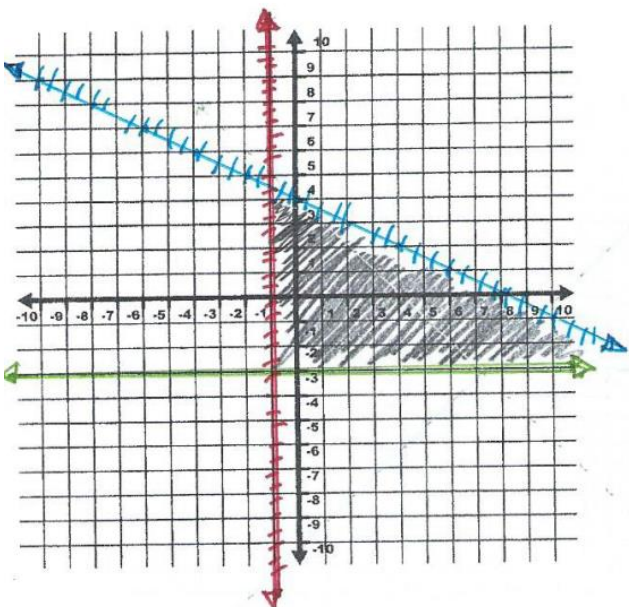
5.) $4x - 3y < 9 \rightarrow y > \frac{4}{3}x - 3$
 $y < 2$



6.) $6x + 2y > -6 \rightarrow y > -3x - 3$
 $-8x + 6y < 12 \rightarrow y < \frac{4}{3}x + 2$



7.) $2x + 4y < 16 \rightarrow y < -\frac{1}{2}x + 4$
 $y \geq -3$
 $x > -1$



8.) Write an equation of a line that is perpendicular to $y = \frac{2}{3}x - \frac{5}{12}$ and passes through the point (8, 3).

$\perp m = -\frac{3}{2}$
 $(8, 3): y = mx + b$
 $3 = -\frac{3}{2}(8) + b$
 $3 = -12 + b$
 $15 = b$

$y = -\frac{3}{2}x + 15$