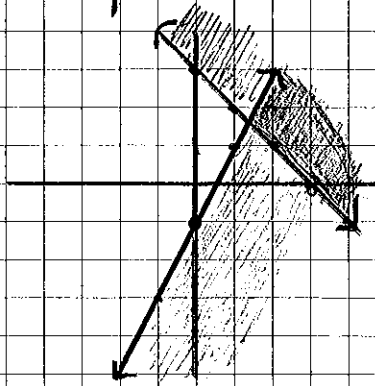


4.6 K

①  $y \leq 2x + 1$   
 $y \geq -x + 3$

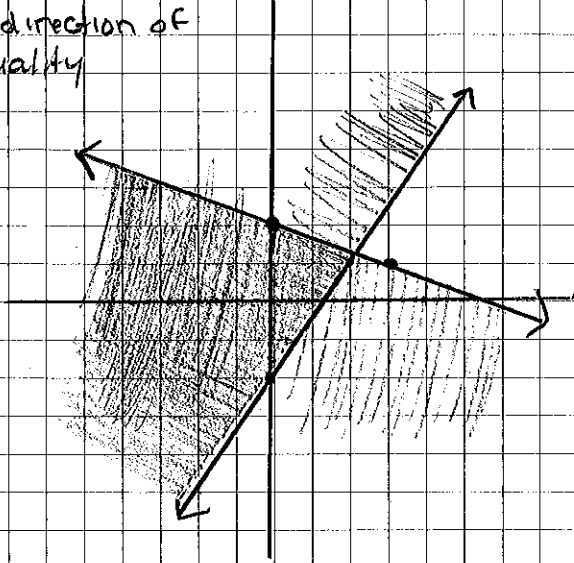


②  $3x - 2y \leq 4$   
 $x + 3y \leq 6$

$$\begin{array}{r} 3x - 2y \leq 4 \\ -3x \quad -3x \\ \hline -2y \leq -3x + 4 \\ \frac{-2y}{-2} \leq \frac{-3x + 4}{-2} \\ y \geq \frac{3}{2}x - 2 \end{array}$$

Switch direction of inequality

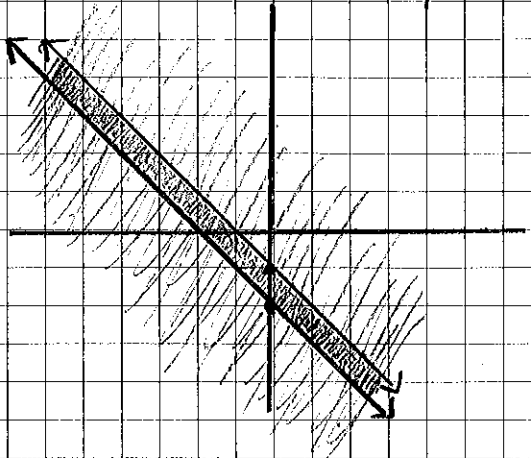
$$\begin{array}{r} x + 3y \leq 6 \\ -x \quad -x \\ \hline 3y \leq -x + 6 \\ \frac{3y}{3} \leq \frac{-x + 6}{3} \\ y \leq -\frac{1}{3}x + 2 \end{array}$$



③  $x + y \geq -3$   
 $2x + 2y \leq -2$

$$\begin{array}{r} x + y \geq -3 \\ -x \quad -x \\ \hline y \geq -x - 3 \end{array}$$

$$\begin{array}{r} 2x + 2y \leq -2 \\ -2x \quad -2x \\ \hline 2y \leq -2x - 2 \\ \frac{2y}{2} \leq \frac{-2x - 2}{2} \\ y \leq -x - 1 \end{array}$$



$$\textcircled{4} \quad -y \leq 3x + 4$$

$$-3x + 3y \leq -9$$

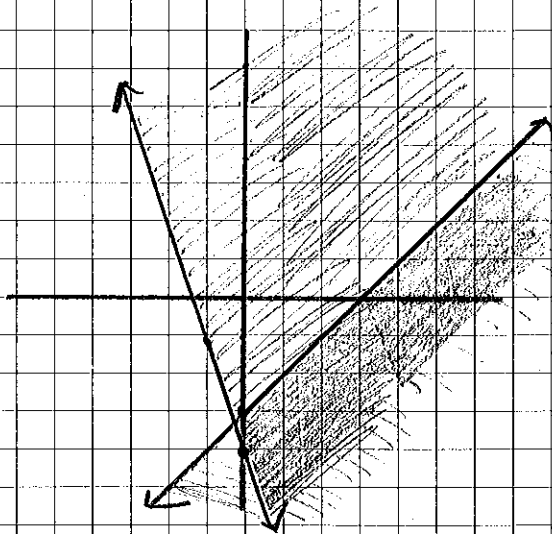
$$\frac{-y \leq 3x + 4}{-1 \quad -1 \quad -1}$$

$$y \geq -3x - 4$$

$$\frac{-3x + 3y \leq -9}{+3x \quad +3x}$$

$$\frac{3y \leq 3x - 9}{3 \quad 3 \quad 3}$$

$$y \leq x - 3$$



$$\textcircled{9} \quad (-3, -3) \quad 5x + 4y > -4$$

$$5(-3) + 4(-3) > -4$$

$$-15 - 12 > -4$$

$$-27 > -4$$

Not true

So  $(-3, -3)$  is not a solution to the system of inequalities.

$$\textcircled{10} \quad x = \text{hours at job 1}$$

$$y = \text{hours at job 2}$$

$$15x + 11y \geq 600$$

$$x + y \leq 55$$

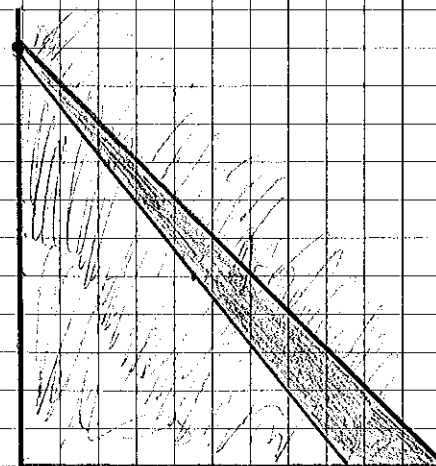
$$\frac{15x + 11y \geq 600}{-15x \quad -15x}$$

$$\frac{11y \geq -15x + 600}{11 \quad 11 \quad 11}$$

$$y \geq -\frac{15}{11}x + 54\frac{6}{11}$$

$$\frac{x + y \leq 55}{-x \quad -x}$$

$$y \leq -x + 55$$



Each block  
= 5 units

4.6K

(11)  $x =$  stationary set

$y =$  greeting set

$$2.50x + 3y \geq 300$$

$$x + y \geq 100$$

$$\begin{array}{r} 2.5x + 3y \geq 300 \\ -2.5x \qquad -2.5x \\ \hline \end{array}$$

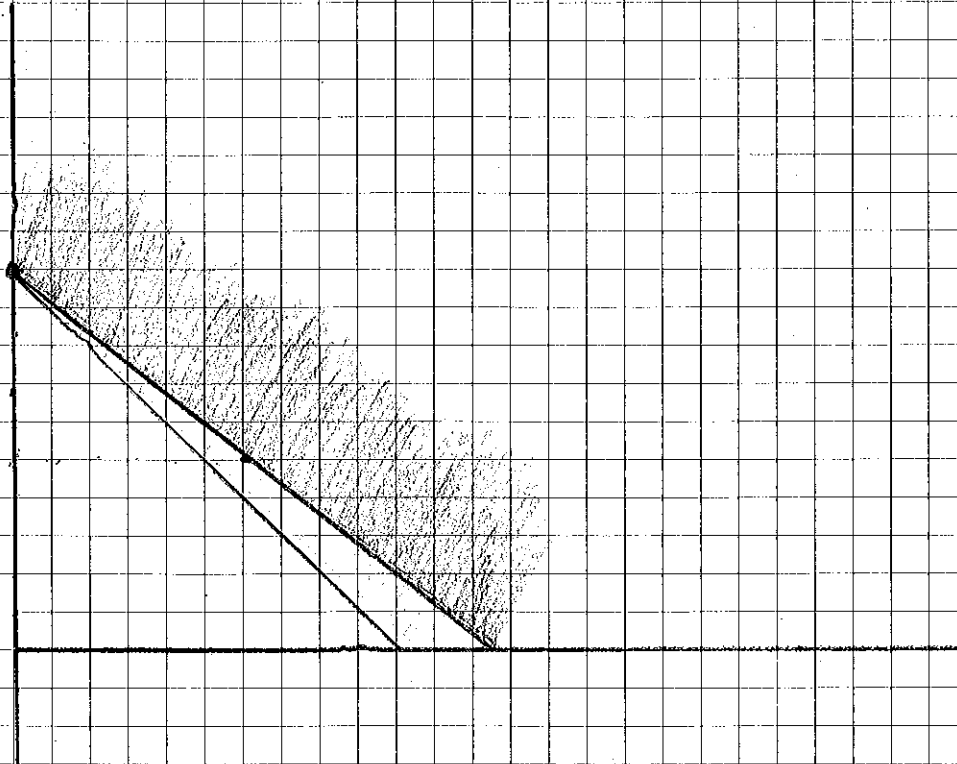
$$\frac{3y}{3} \geq \frac{-2.5x + 300}{3}$$

$$y \geq -\frac{5}{6}x + 100$$

$$\begin{array}{r} x + y \geq 100 \\ -x \qquad -x \\ \hline \end{array}$$

$$y \geq -x + 100$$

EACH BOX  
= 10 units



4.6 K

⑫  $x = \text{strawberries}$

$y = \text{blueberries}$

$$x + y \geq 10$$

$$2x + 3y \leq 25$$

$$\begin{array}{r} x + y \geq 10 \\ -x \quad \quad -x \\ \hline \end{array}$$

$$y \geq -x + 10$$

$$\begin{array}{r} 2x + 3y \leq 25 \\ -2x \quad \quad -2x \\ \hline \end{array}$$

$$\frac{3y}{3} \leq \frac{-2x + 25}{3}$$

$$y \leq -\frac{2}{3}x + 8\frac{1}{3}$$

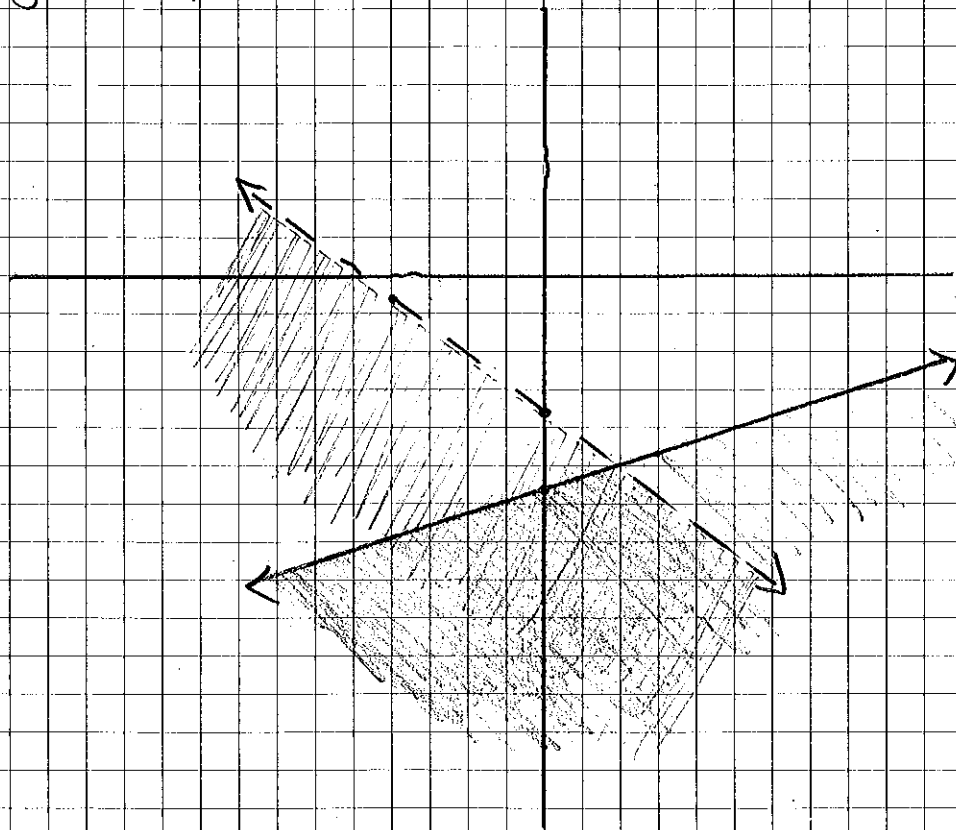


4.6 R

$$\textcircled{3} \quad \begin{aligned} 3x + 4y &< -14 \\ x - 3y &\geq 17 \end{aligned}$$

$$\begin{array}{r} 3x + 4y < -14 \\ -3x \qquad -3x \\ \hline 4y < -3x - 14 \\ \frac{4y}{4} < \frac{-3x}{4} - \frac{14}{4} \\ \hline y < -\frac{3}{4}x - 3.5 \end{array}$$

$$\begin{array}{r} x - 3y \geq 17 \\ -x \qquad -x \\ \hline -3y \geq -x + 17 \\ \frac{-3y}{-3} \geq \frac{-x}{-3} + \frac{17}{-3} \\ \hline y \leq \frac{1}{3}x - \frac{17}{3} \end{array}$$



14

$$x - 5y - 6 \geq 0$$

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

$$\begin{array}{r}
 x - 5y - 6 \geq 0 \\
 +6 \quad +6 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 x - 5y \geq 6 \\
 -x \quad -x \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 -5y \geq -x + 6 \\
 \frac{-5y}{-5} \geq \frac{-x+6}{-5} \\
 \hline
 \end{array}$$

$$y \leq \frac{1}{5}x - \frac{6}{5}$$

$$\begin{array}{r}
 2x + 4y + 1 \leq -1 \\
 -1 \quad -1 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 2x + 4y \leq -2 \\
 -2x \quad -2x \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 4y \leq -2x - 2 \\
 \frac{4y}{4} \leq \frac{-2x-2}{4} \\
 \hline
 \end{array}$$

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

