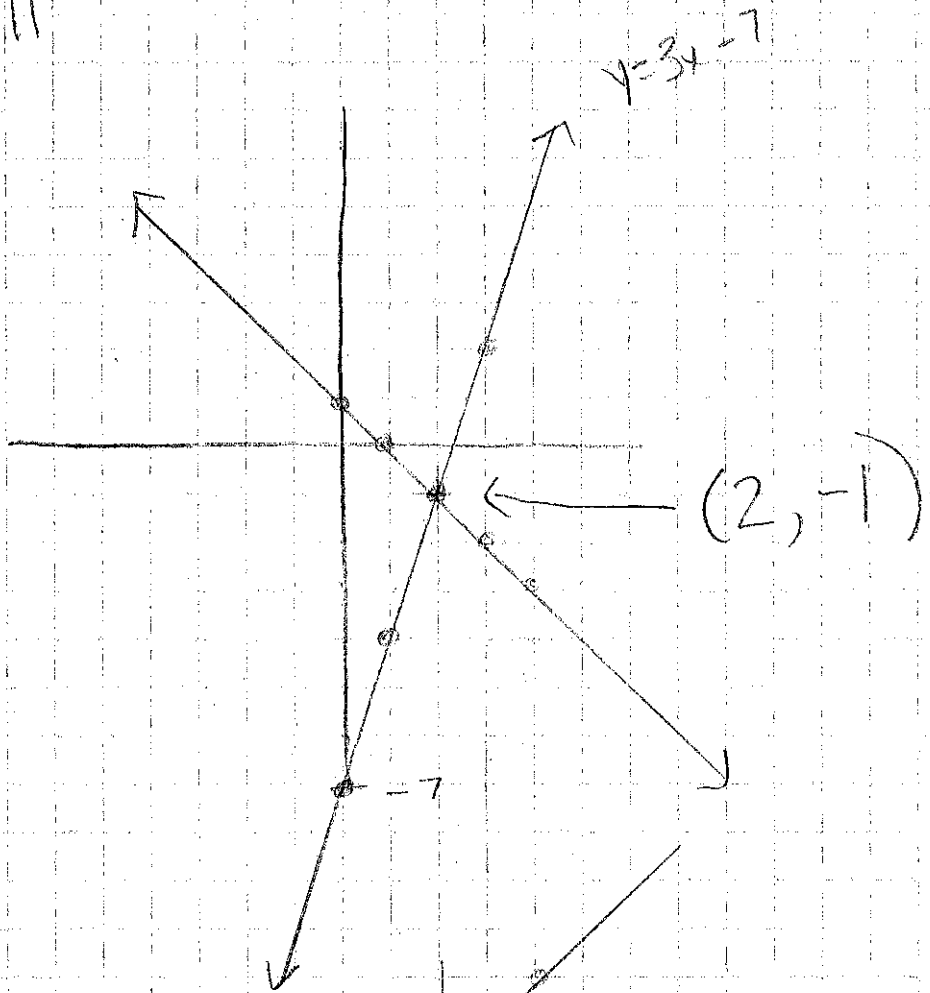
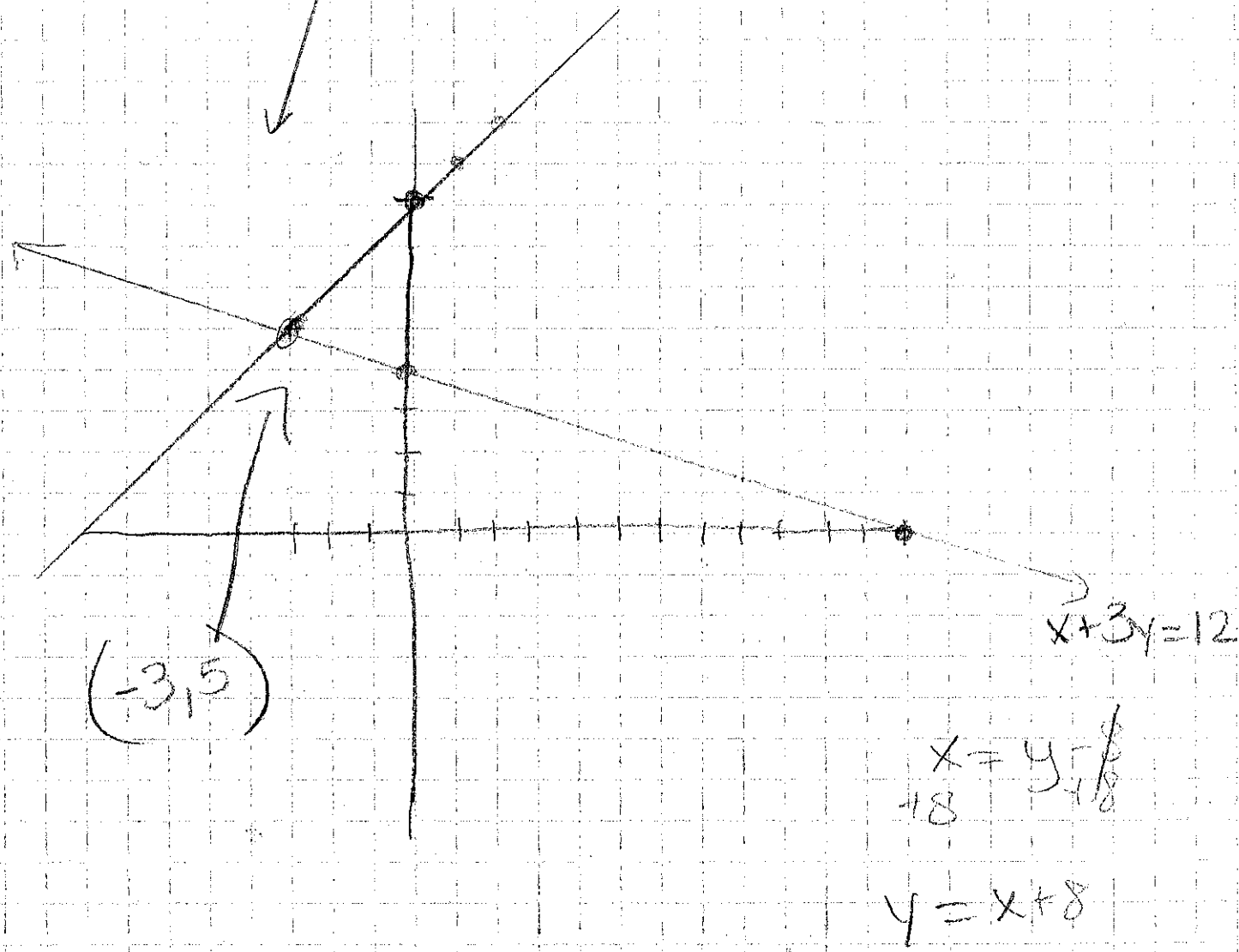


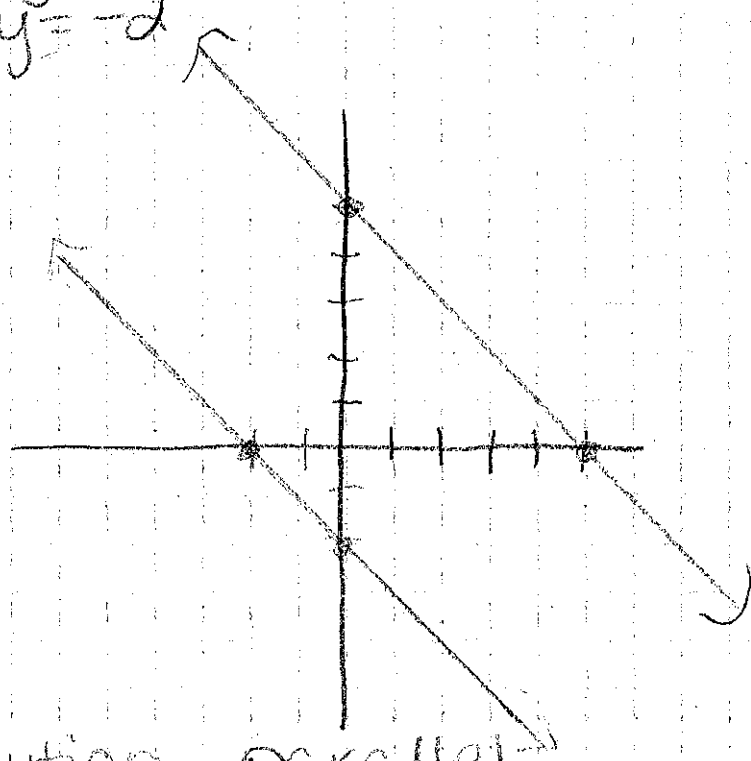
①



②



③ $x + y = 5$
 $x + y = -2$



no solution - parallel

$$\textcircled{4} \quad y = 4x - 7$$

$$y = 2x + 9$$

$$2x + 9 = 4x - 7$$

$$\begin{array}{r} -2x + 7 \\ -2x + 7 \end{array}$$

$$16 = 2x$$

$$x = 8$$

$$y = 4(8) - 7$$

$$y = 32 - 7$$

$$y = 25$$

$$(8, 25)$$

$$\textcircled{5} \quad 8x + 2y = -2$$

$$y = -5x + 1$$

$$8x + 2(-5x + 1) = -2$$

$$8x - 10x + 2 = -2$$

$$\begin{array}{r} -2x + 2 = -2 \\ -2 \quad -2 \end{array}$$

$$-2x = -4$$

$$x = 2$$

$$y = -5(2) + 1$$

$$y = -10 + 1$$

$$y = -9$$

$$\textcircled{6} \quad y + 2x = -1$$

$$-y - 3x = -16$$

$$5x = 15$$

$$x = 3$$

$$y + 6 = -1$$

$$\begin{array}{r} -6 \quad -6 \end{array}$$

$$y = -7$$

$$(3, -7)$$

$$\textcircled{7} \quad 4x + y = 8$$

$$-3x - y = 0$$

$$x = 8$$

$$32 + y = 8$$

$$y = -24$$

$$(8, -24)$$

$$(2, -9)$$

$$\begin{array}{r} \textcircled{8} \quad 2(2x + 5y = 20) \\ \quad 3x - 10y = 37 \\ \hline \rightarrow 4x + 10y = 40 \end{array}$$

$$7x = 77$$

$$x = 11$$

$$\begin{array}{r} 5 \quad 10 \\ 2x + 1y = 20 \end{array}$$

$$3(11) - 10y = 37$$

$$\begin{array}{r} 33 - 10y = 37 \\ -33 \quad -33 \\ \hline \end{array}$$

$$\frac{-10y}{-10} = \frac{4}{-10} = -\frac{2}{5}$$

$$y = -.4$$

$$(11, -.4)$$

$$\textcircled{9} \quad \begin{array}{l} 2(3x + 2y = -10) \\ 3(2x - 5y = 3) \end{array} \Rightarrow \begin{array}{l} 6x + 4y = -20 \\ 6x - 15y = 9 \end{array}$$

$$2x - 5y = 3$$

$$\frac{19y}{19} = \frac{-29}{19}$$

$$\left(\frac{-44}{19}, \frac{-29}{19} \right)$$

$$2x - 5\left(\frac{-29}{19}\right) = 3$$

$$y = \frac{-29}{19}$$

$$2x + \frac{145}{19} = 3 \rightarrow \frac{57}{19}$$

$$\frac{57}{19} - \frac{145}{19} = \frac{-88}{19}$$

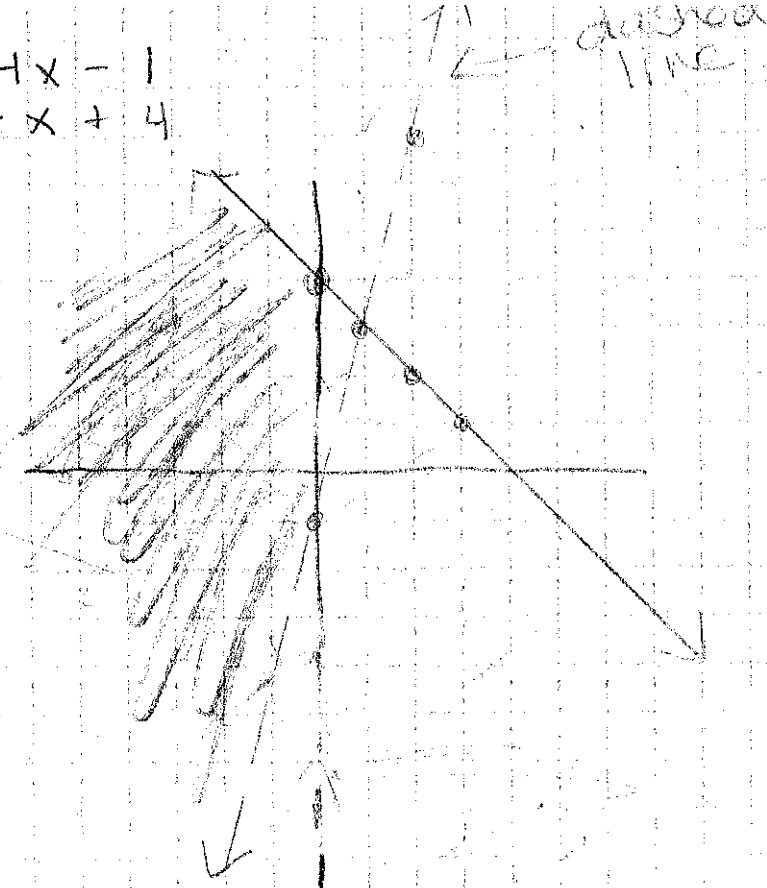
$$\frac{2x}{2} = \frac{140}{95}$$

$$\frac{140}{95} \times \frac{1}{2} = \frac{140}{190} = \frac{14}{19}$$

$$\frac{2x}{2} = \frac{-88}{19}$$

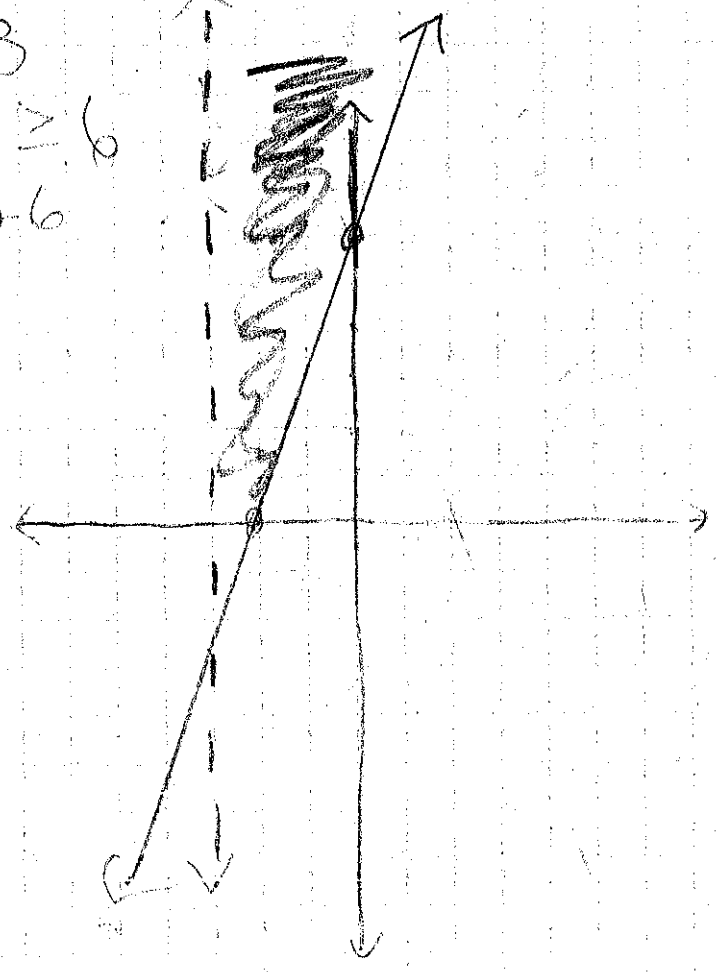
$$\frac{-88}{19} \div \frac{1}{2} = \frac{-88}{19} \times \frac{1}{2} = \frac{-88}{38} = \frac{-44}{19}$$

⑩ $y > 4x - 1$
 $y \leq -x + 4$

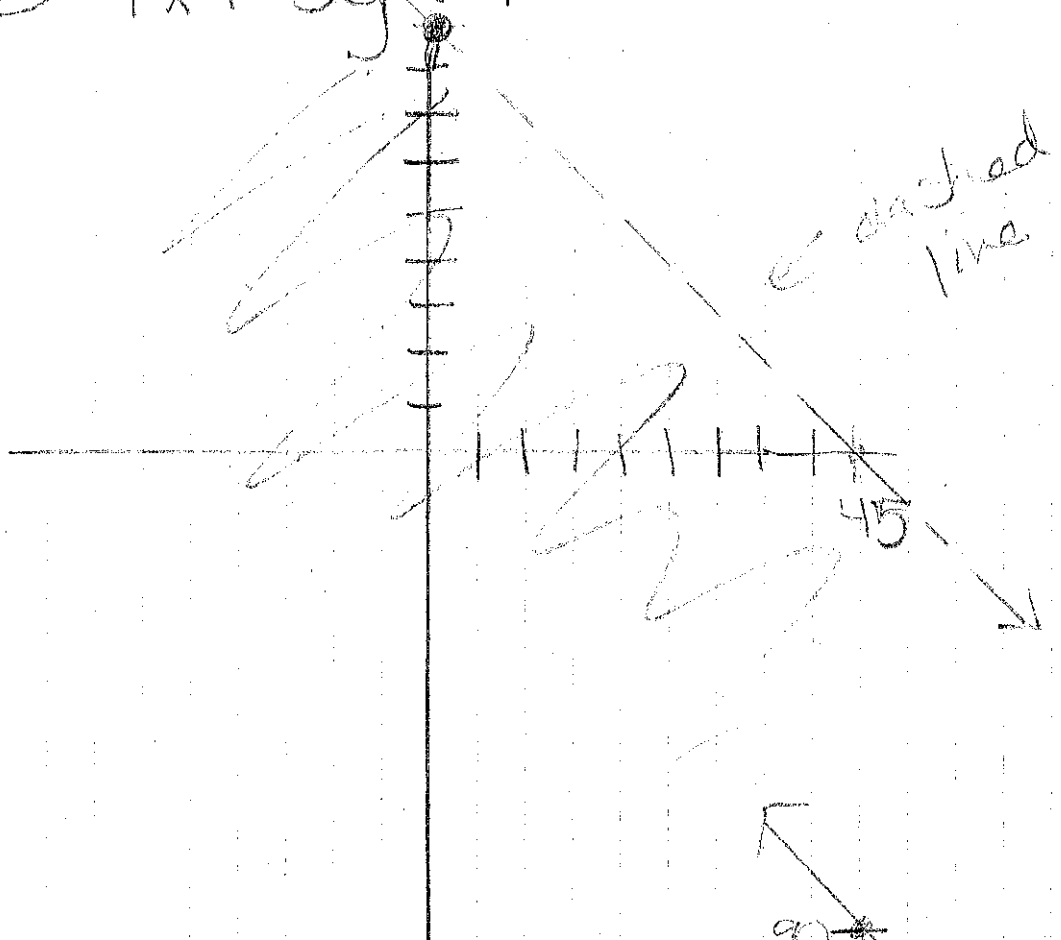


⑪ $x > -3$
 $-3x + y \geq 6$
 $y \geq 3x + 6$

$x\text{-int} = -2$
 $y\text{-int} = 6$



⑫ $1x + 5y < 45$



⑬ Length = x
width = y

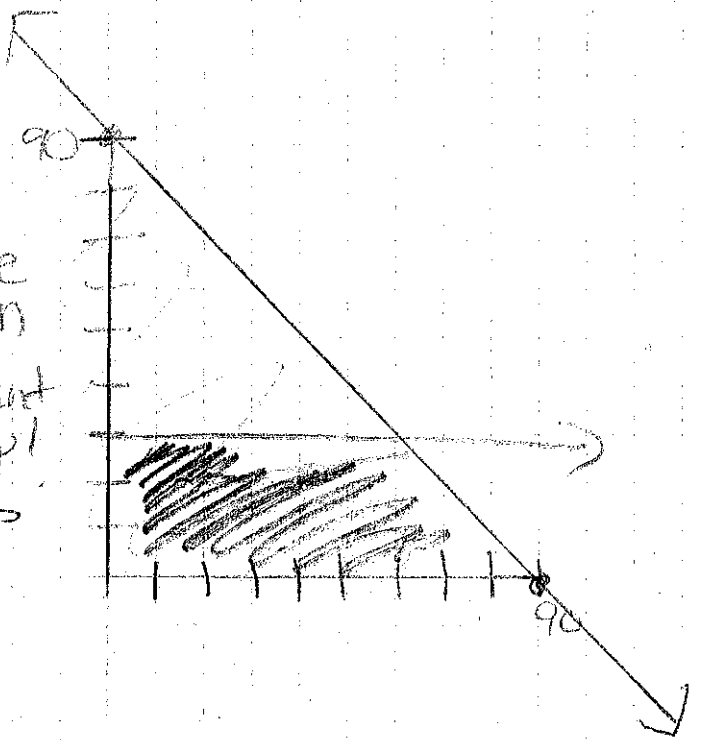
$x \leq 30$

$2x + 2y \leq 180$

perimeter \rightarrow

$x\text{-int} = 90$
 $y\text{-int} = 90$

*real life situation
1st quadrant ONLY!



$$(16) \quad 2x + 3y = 6$$

$$2x + 3y = 4$$

$$0 = 2$$

* any system, where both variables drop out and equal a constant

(17) he substituted y in for x
and x in for y

(18) No, if there are infinite solutions, the lines lie on each other

(19) one

(20) no solution

(21) infinite solution