

TH-AZ Algebra 2 Week 13

$$3x + 2y = 6$$

$$y = 4x - 6$$

$$3x + 2y = 6$$

$$\frac{3x}{3} = \frac{6}{3} \quad (2, 0)$$

$$x = 2$$

$$3x + 2y = 6 \quad (0, 3)$$

$$\frac{2y}{2} = \frac{6}{2} \quad y = 3$$

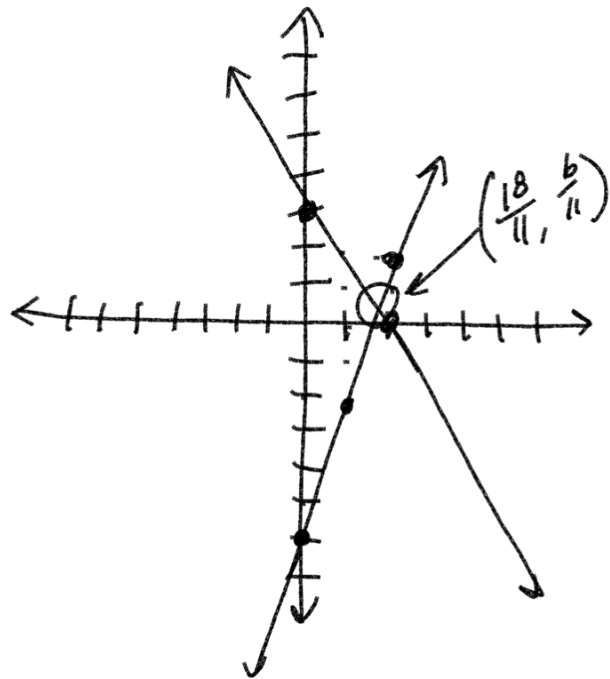
$$3x + 2y = 6$$

$$y = 4x - 6$$

$$y = 4x - 6$$

$$y = \frac{4(18)}{11} - 6$$

$$y = \frac{72}{11} - \frac{66}{11} = \frac{6}{11}$$



$$3x + 2(4x - 6) = 6$$

$$3x + 8x - 12 = 6$$

$$11x - 12 = 6$$

$$+12 \quad +12$$

$$\frac{11x}{11} = \frac{18}{11}$$

$$x = \frac{18}{11}$$

$$\left( \frac{18}{11}, \frac{6}{11} \right)$$

$$y = 8x + 3$$

$$5x - 3y = -9$$

$$y = 8x + 3$$

$$8(0) + 3$$

$$y = 3$$

$$(0, 3)$$

Substitution

$$5x - 3(8x + 3) = -9$$

$$5x - 24x - 9 = -9$$

$$+9 \quad +9$$

$$5x - 24x = 0$$

$$\frac{-19x}{-19} = \frac{0}{-19}$$

$$x = 0$$

$$6x - 4y = -24$$

$$-2(9x - 2y = 18)$$

$$6x - 4y = -24$$

$$+ \quad -18x + 4y = -36$$


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$$\frac{-12x}{-12} = \frac{-60}{-12}$$

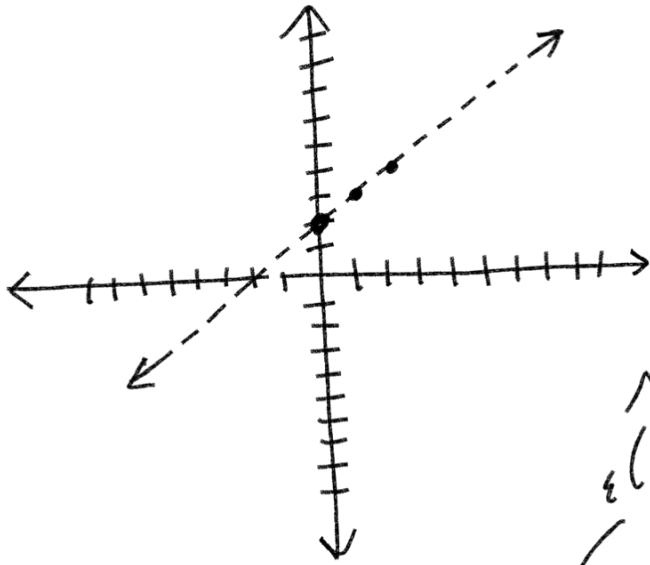
$$x = 5$$

$$y > x + 2$$

dashed line

$$\begin{cases} y \leq -x + 1 \end{cases}$$

full line  
slope =  $-\frac{1}{1}$



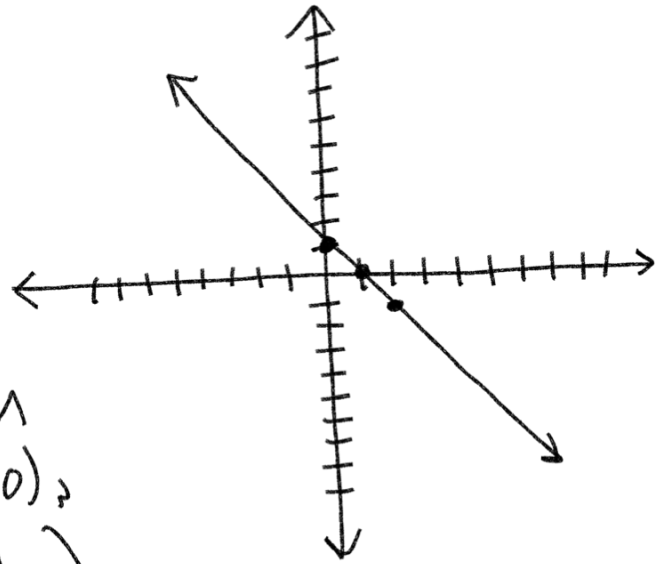
$$y = x + 2$$

$$y > x + 2$$

$$0 > 0 + 2$$

$$0 > 2 \text{ false}$$

$$\begin{matrix} \wedge & \wedge \\ (0, 0) & ? \\ \swarrow & \searrow \\ \wedge & \wedge \end{matrix}$$

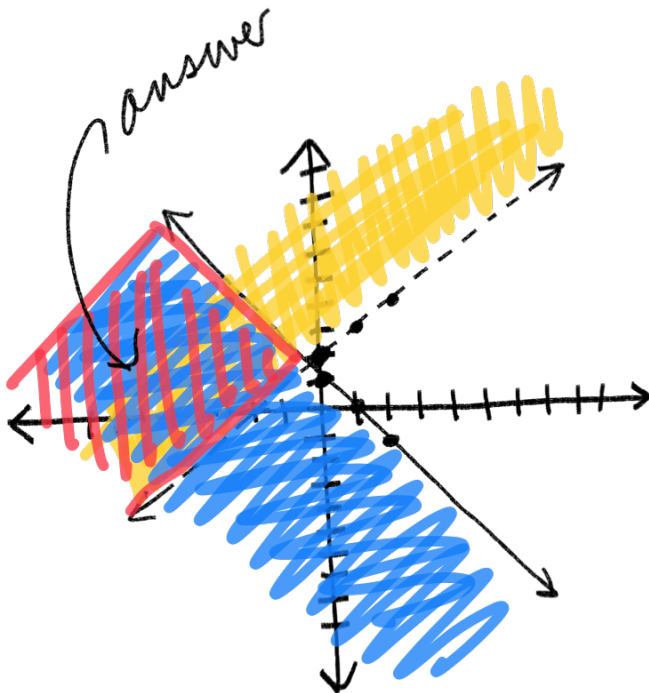


$$(0, 0)$$

$$0 \leq 0 + 1$$

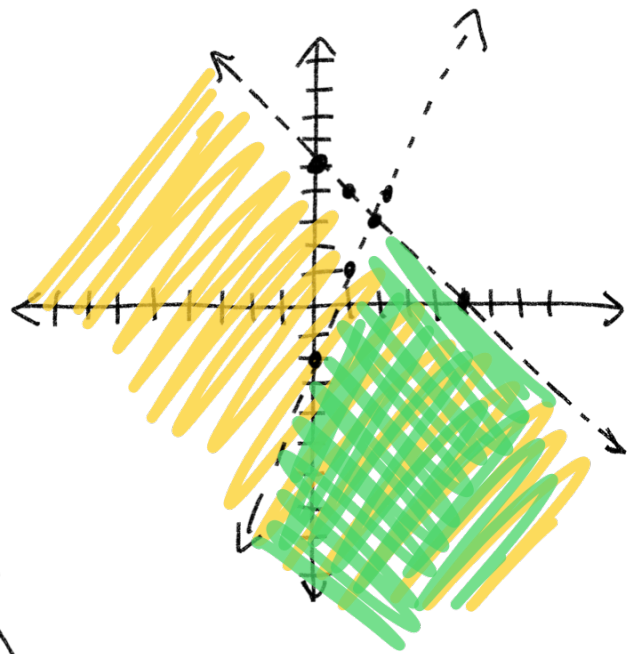
$$0 \leq 1$$

$$\text{true}$$



$$\begin{cases} y > x + 2 \\ y \leq -x + 1 \end{cases}$$

$$\begin{cases} x + y < 5 \\ y < 3x - 2 \end{cases}$$



$$\begin{array}{r} x + y < 5 \\ -x \quad -x \\ \hline y < -x + 5 \end{array}$$

$$\begin{array}{r} \wedge \wedge \\ \leq (0,0) \leq \\ \swarrow \searrow \\ \text{true} \end{array}$$

$$\begin{array}{r} x + y < 5 \\ 0 + 0 < 5 \\ 0 < 5 \end{array} \quad \text{true}$$

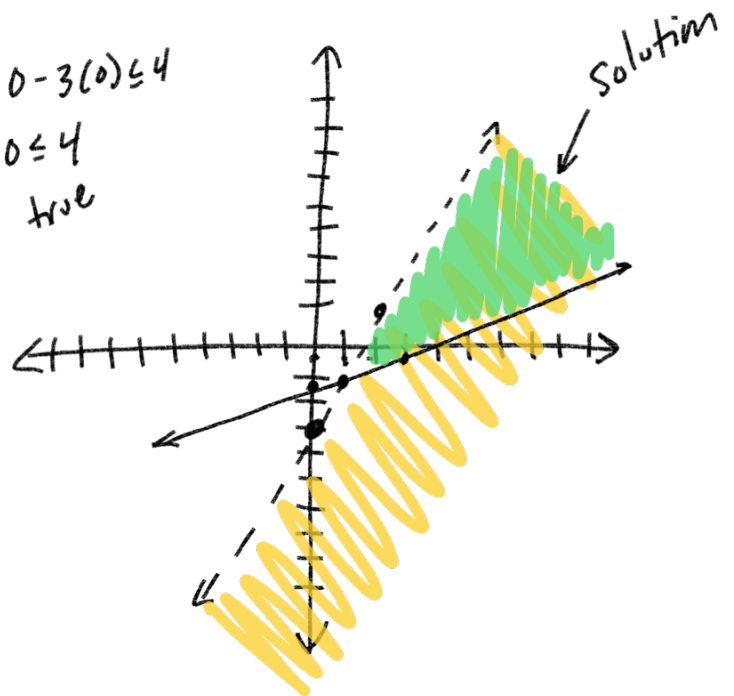
$$\begin{array}{r} (0,0) \\ y < 3x - 2 \\ 0 < 3(0) - 2 \\ 0 < -2 \end{array} \quad \text{false}$$

$$3 < 2x - y$$

$$x - 3y \leq 4$$

$$\begin{array}{r} \wedge \wedge \\ \leq (0,0) \leq \\ \swarrow \searrow \\ \text{true} \end{array}$$

$$\begin{array}{r} 0 - 3(0) \leq 4 \\ 0 \leq 4 \\ \text{true} \end{array}$$



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

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

$$\begin{array}{r} (0,0) \\ 0 < 2(0) - 3 \\ 0 < -3 \end{array} \quad \text{false}$$

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

$$y > 3x + 2$$

$$2x + y \leq 1$$



$$0 > 3(0) + 2$$

$$0 > 2$$

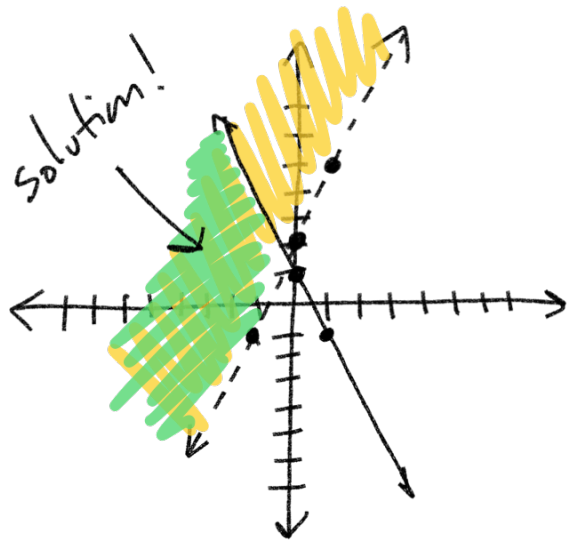
false

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

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

$$0 \leq -2(0) + 1$$

$$0 \leq 1 \quad \text{true}$$



HW

3-3 evens

Supplemental WS

Online HW 13

Quiz 13

due

(Sat-Sun)

(Sat-Sun)

(December 26<sup>th</sup>-27<sup>th</sup>)