

OCT 30/07

LINEAR INEQUALITIES

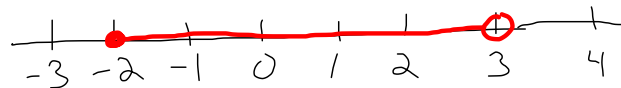
$$x \leq 3$$



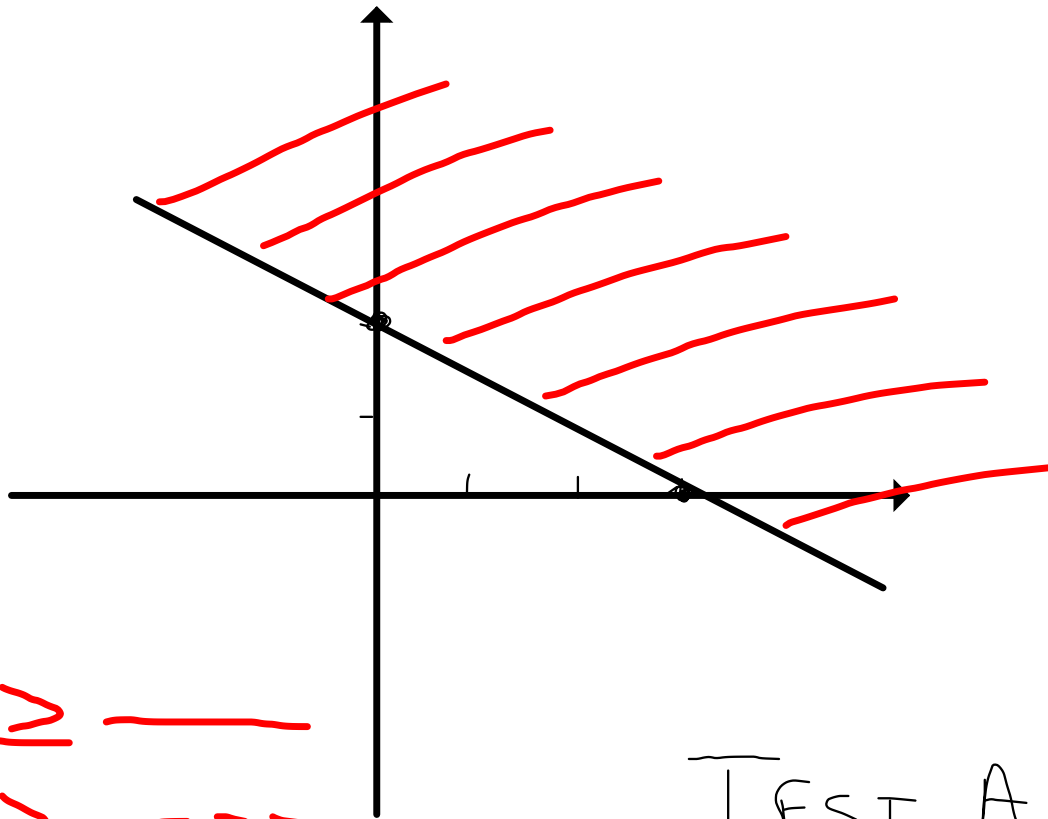
$$x = (5, \infty)$$



$$x = [-2, 3)$$



GRAPH $2x + 3y \geq 6$

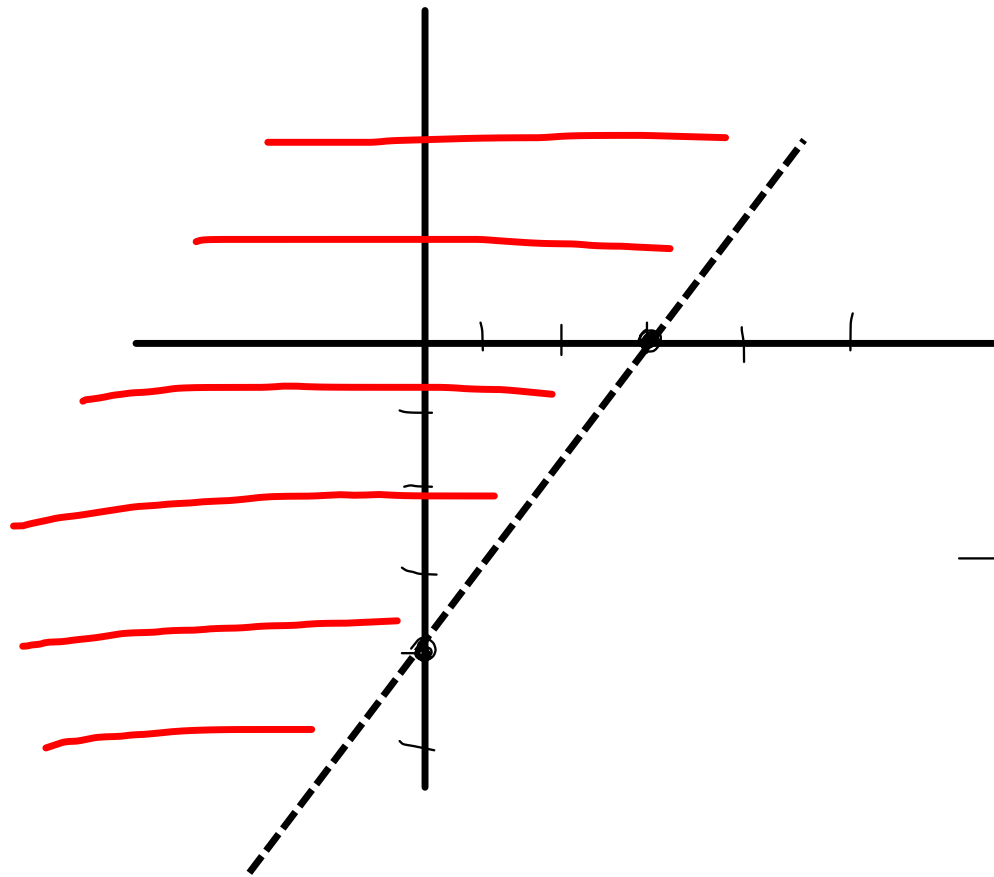


x	y
0	2
3	0

$\leq \geq$ ———
 $< >$ - - - -

TEST A POINT (0,0)
 $0 \geq 6$

$$\text{Ex } -3y + 4x < 12$$

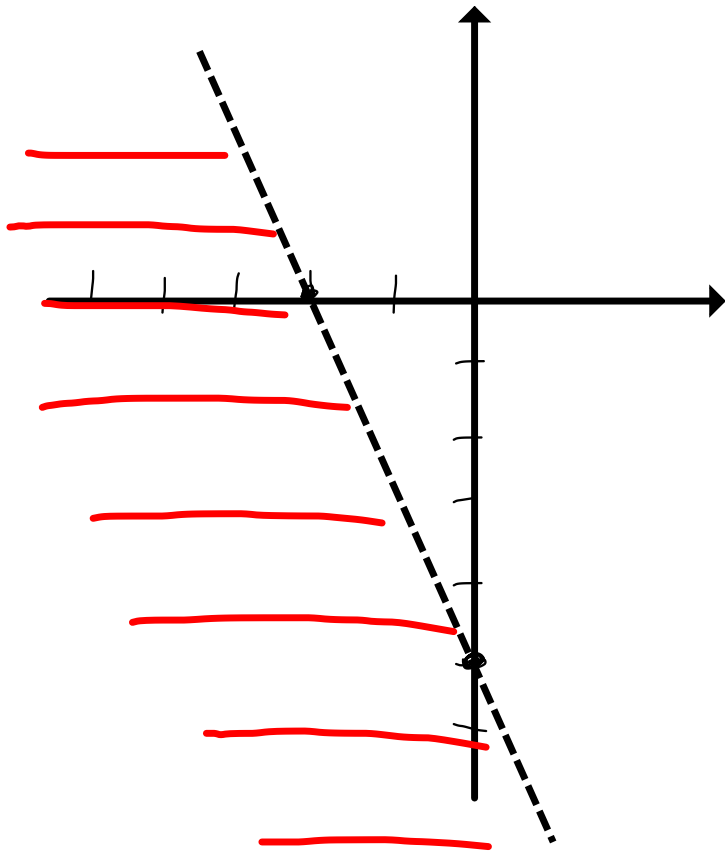


x	y
0	-4
3	0

TEST POINT
(0,0)

$$0 < 12 \quad \text{TRUE}$$

$$\text{Ex } -2y > 5x + 10$$



$$-5x - 2y > 10$$

X	Y
0	-5
-2	0

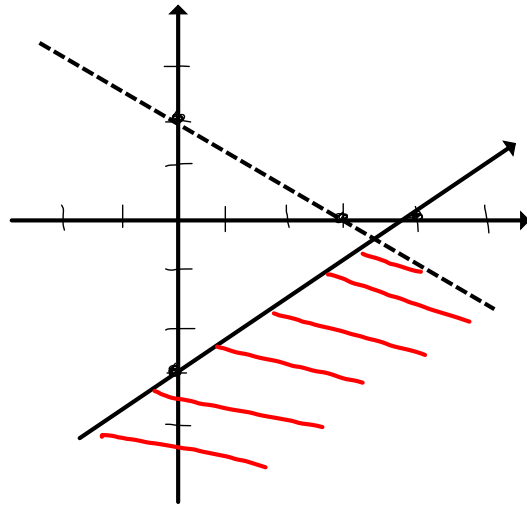
TEST (0, 0)

$$0 > 10 \quad \text{FALSE}$$

SYSTEMS OF INEQUALITIES

$$\textcircled{1} \quad 2x + 3y < 6$$

$$\textcircled{2} \quad 3x - 4y \geq 12$$



$$\textcircled{1} \quad \begin{array}{c|c} x & y \\ \hline 0 & 2 \\ 3 & 0 \end{array}$$

$$\textcircled{2} \quad \begin{array}{c|c} x & y \\ \hline 0 & -3 \\ 4 & 0 \end{array}$$

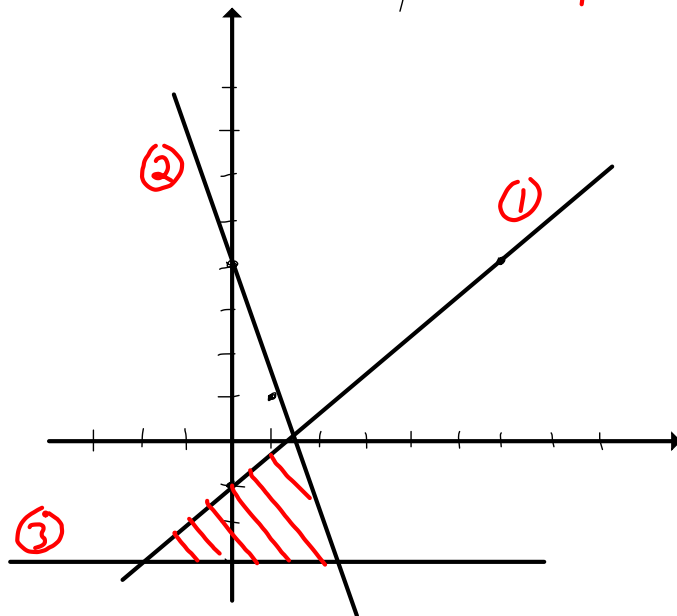
TEST POINT $(0,0)$ FOR EQUATION #1

$$0 < 6 \quad \text{TRUE}$$

TEST POINT $(0,0)$ FOR EQUATION #2

$$0 \geq 12 \quad \text{FALSE}$$

Ex ① $5x - 6y \geq 6$, ② $3x + y \leq 4$, ③ $y \geq -3$



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

② $3x + y \leq 4$
 $y \leq -3x + 4$

③ $y \geq -3$

① T.P. (0,0) $0 \geq 6$ FALSE

② T.P. (0,0) $0 \leq 4$ TRUE

③ T.P. (0,0) $0 \geq -3$ TRUE

Ex #27 Q# 1-11, 13-15