

## LT #8: Quadratic Systems.

Solve by region testing and graph the following quadratic inequality on a number line. Show all work! Write your answer in set notation. (4 pts)

1.  $5x^2 + 2x - 3 > 0$

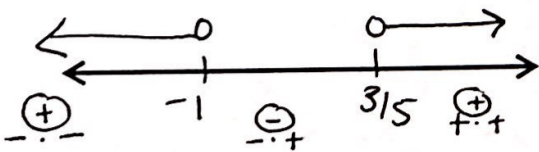
$$+1 (5x-3)(x+1) > 0$$

$$x = 3/5 \quad x = -1$$

$$\begin{array}{r} -15 \\ 5 \times -3 \\ 2 \end{array}$$

$$(x + \frac{5}{5})(x - \frac{3}{5}) > 0$$

$$(x+1)(5x-3) > 0$$

Greater OR2. Solve the system of quadratics by substitution.

$$\begin{aligned} y &= x^2 - 2x - 3 \\ \textcircled{y} &= 2x - 3 \end{aligned}$$

$$2x - 3 = x^2 - 2x - 3$$

$$0 = x^2 - 4x$$

$$0 = x(x-4)$$

$$x = 0 \quad x = 4$$

$$y = 2(0) - 3$$

$$y = 0 - 3$$

$$y = -3$$

$$y = 2(4) - 3$$

$$= 8 - 3$$

$$= 5$$

$$1. \{x: \overset{+1}{x} < -1 \text{ OR } \overset{+1}{x} > \overset{+1}{3/5}\}$$

Yes. you need the "OR"

$$2. \overset{+1}{(0, -3)} \overset{+1}{(4, 5)}$$

Need to write as ordered pair