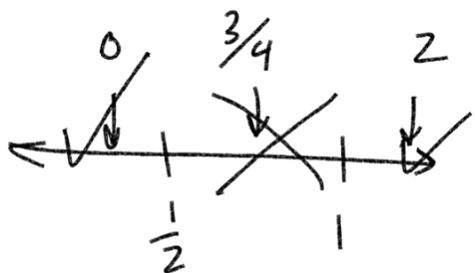


quadratic  $\oplus$   
 $2x^2 - 3x + 1 > 0$

$a=2$   $b=-3$   $c=1$   $(-)$



$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\frac{-(-3) \pm \sqrt{(-3)^2 - 4(2)(1)}}{2(2)}$$

$$\frac{3 \pm \sqrt{9 - 8}}{4} = \frac{3 \pm \sqrt{1}}{4} = \frac{3 \pm 1}{4}$$

$0: 2(0)^2 - 3(0) + 1$   
 $\boxed{1}$

$\frac{3+1}{4} = \frac{4}{4}$      $\frac{3-1}{4} = \frac{2}{4} = \frac{1}{2}$

$\frac{3}{4}: 2(\frac{3}{4})^2 - 3(\frac{3}{4}) + 1$

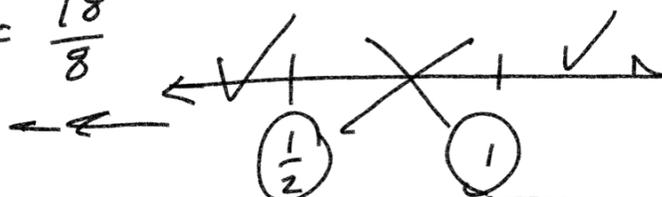
$\boxed{1}$

~~$\frac{9}{8}$~~   $-\frac{9}{4} + 1$

Interval Notation

$\frac{9}{4} = \frac{18}{8}$

$\frac{9}{8} - \frac{9}{4} + 1$



$\frac{9}{8} - \frac{18}{8} + 1$

$-\frac{9}{8} + 1 = -\frac{9}{8} + \frac{8}{8} = -\frac{1}{8}$

$(-\infty, \frac{1}{2}) \cup (1, \infty)$

$2: 2(2)^2 - 3(2) + 1$

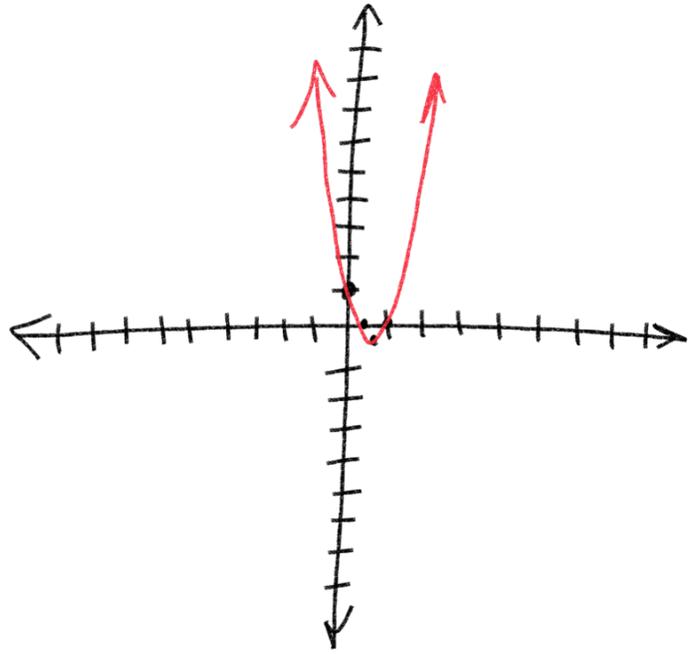
$2(4) - 3(2) + 1$

$8 - 6 + 1 = 2 + 1 = 3$

$$2x^2 - 3x + 1 = 0 \quad \text{y-int}$$

$$(2x^2 - 3x) + 1 = 0$$

$$\left\{ 2 \left( x^2 - \frac{3}{2}x \right) + 1 = 0 \right.$$



$$\left( \frac{\frac{3}{2}}{2} \right)^2 = \left( \frac{3}{4} \right)^2 = \frac{3^2}{4^2} = \frac{9}{16}$$

$$\textcircled{2} \left( x^2 - \frac{3}{2}x \right) + 1 = 0$$

$$+ \frac{9}{16} \quad \left( -\frac{9}{16} \right) \cdot 2 \quad \left( -\frac{9}{16} \right) \cdot 2$$

$$2 \left( x^2 - \frac{3}{2}x + \frac{9}{16} \right) + 1 - \frac{9}{8} \quad \frac{8}{8} - \frac{9}{8} = -\frac{1}{8}$$

$$\sqrt{x^2} \quad \downarrow \quad \downarrow \quad \downarrow \quad \sqrt{\frac{9}{16}}$$

vertex:  $(h, k)$

$$2 \left( x - \frac{3}{4} \right)^2 - \frac{1}{8} = 0$$

$$\left( \frac{3}{4}, -\frac{1}{8} \right)$$

$$\left\{ 2 \left( x - \frac{3}{4} \right)^2 - \frac{1}{8} = 0 \right.$$

$$+ \frac{1}{8} \quad + \frac{1}{8}$$

$$x - \frac{3}{4} = \pm \frac{1}{4}$$

$$+ \frac{5}{4} \quad + \frac{5}{4}$$

$$\frac{1}{2} \left( 2 \left( x - \frac{3}{4} \right)^2 \right) = \left( \frac{1}{8} \right) \left( \frac{1}{2} \right)$$

$$\sqrt{\left( x - \frac{3}{4} \right)^2} = \sqrt{\frac{1}{16}}$$

$$x = \frac{3}{4} + \frac{1}{4}$$

$$x = \frac{3}{4} - \frac{1}{4}$$

$$\boxed{x = 1}$$

$$x = \frac{2}{4} = \frac{1}{2}$$

22.)  $-17x + 5 > 6x^2$

Solve each rational inequality and express the solution set in interval notation.

23.)  $\frac{x^2-36}{x+6} \geq 0$

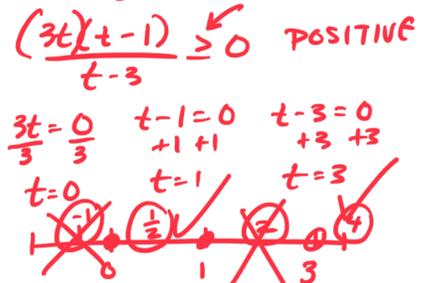
24.)  $\frac{2t^2}{t-3} \geq -t$

$$\frac{2t^2}{t-3} + t \frac{(t-3)}{(t-3)} \geq 0$$

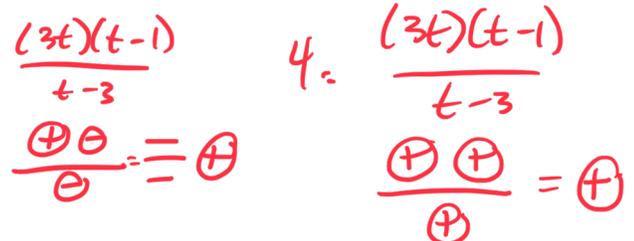
$$\frac{2t^2}{t-3} + \frac{t(t-3)}{t-3} \geq 0$$

$$\frac{2t^2 + t^2 - 3t}{t-3} \geq 0$$

$$\frac{3t^2 - 3t}{t-3} \geq 0$$



interval  $[0, 1] \cup (3, \infty)$



$$-1 \quad \frac{\frac{(3t)(t-1)}{t-3}}{\frac{(3(-1))(-1-1)}{-1-3}} = \frac{+}{-} = -$$

$$2 \quad \frac{(3t)(t-1)}{t-3} = \frac{\oplus \oplus}{\ominus} = \frac{+}{-} = -$$

Solve the absolute value inequality and express the solution set in interval notation.

25.)  $|x + 2| < 5$