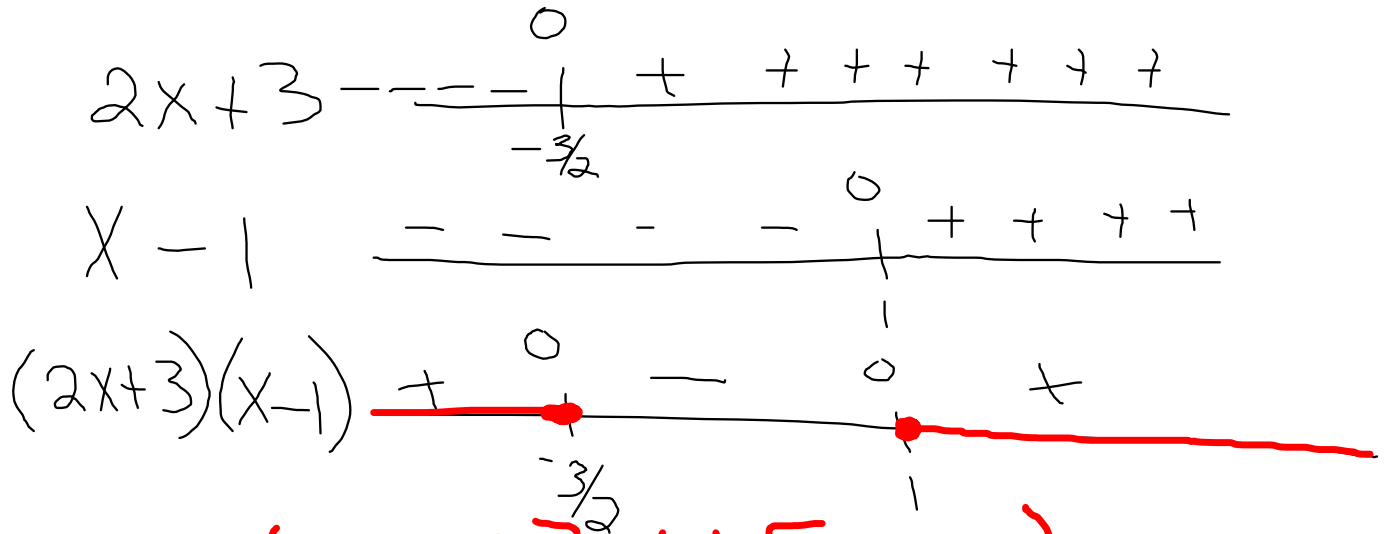
$$(2x+3)(x-1) \geq 0$$



ans $(-\infty, -\frac{3}{2}] \cup [1, \infty)$

$x^2 + x + 1 \geq 0$

doesn't factor

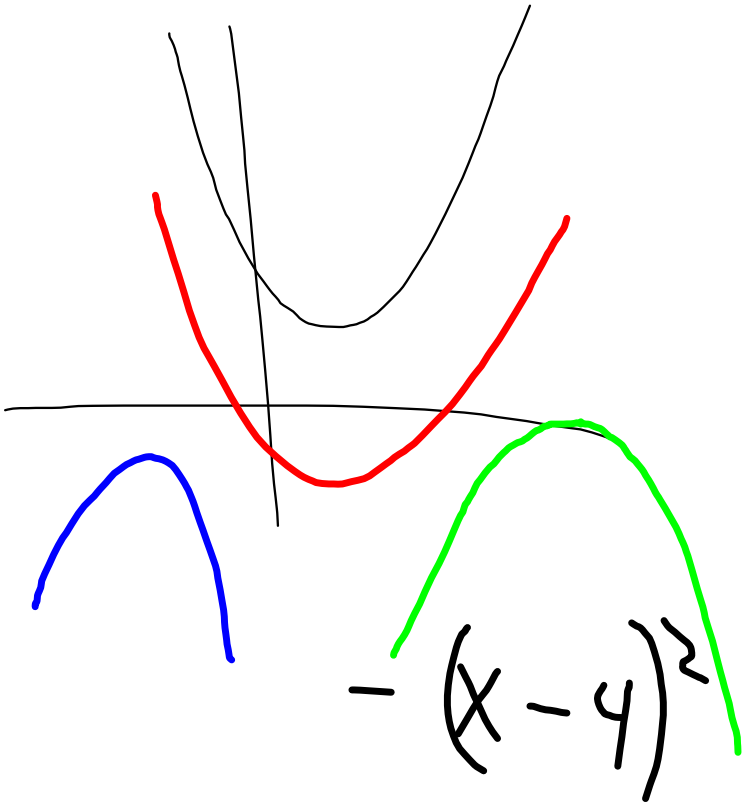
so no roots

so must always be +

or always be −

when $x = 0$, get 1, so

$x^2 + x + 1$ is always +,



ans $(-\infty, \infty)$

$x^2 \leq 2x + 8$

$x^2 - 2x - 8 \leq 0$

factor & do intervals as in 1st example.

Recall that if you divide/mult through by a neg number, you have to flip the inequality sign

$$\frac{1}{x} < 4$$

2 cases

1. $x > 0$

$x \cdot \frac{1}{x} < 4x$

$1 < 4x$

$\frac{1}{4} < x$

2. $x < 0$

switch sign

$1 > 4x$

$\frac{1}{4} > x$

(always true if $x < 0$)

Ans $(-\infty, 0) \cup (\frac{1}{4}, \infty)$

$$\frac{1}{x} < 4$$

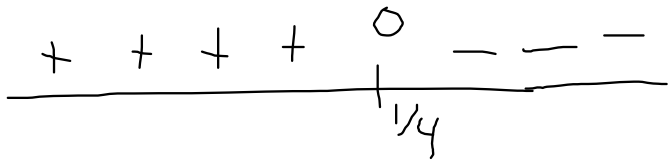
(move junk to left, then factor)

$$\frac{1}{x} - 4\frac{x}{x} < 0$$

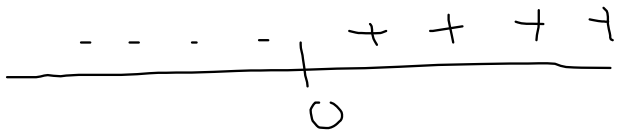
$$\frac{1}{x} - \frac{4x}{x} < 0$$

$$\frac{1-4x}{x} < 0$$

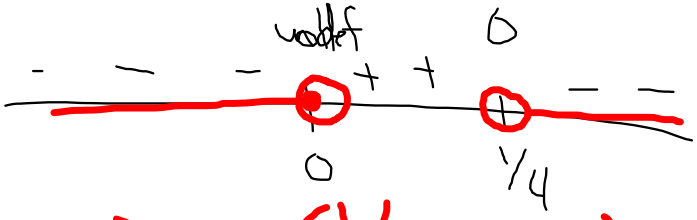
$1-4x$



x



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



ans $(-\infty, 0) \cup (1/4, \infty)$

For Friday

Appendix A1:

13-37 odd
47-55 odd