

$$\frac{3x}{3} = \frac{6}{3}$$

$$x = 2$$

$$\boxed{-3x < 6}$$

$$\frac{-3x}{-3} > \frac{6}{-3}$$

$$\boxed{x > -2}$$

$$-3x < 6$$

$$x > \frac{6}{-3}$$

$$-3x < 6$$

$$\frac{-3x}{-3} < \frac{6}{-3}$$

$$x > -2$$

>



S'1.2 #6 Sara won a ton.
 Gov't took a half ton.
 $\frac{1}{6}$ to 16% apr (Jeff's) Dummy
 $\frac{1}{3}$ to 18% apr (Kaiser's)
 she earned \$4750.

How much did she win?

Lexicon: Let $x =$ the amt Sara won (in U.S. \$)

"Lex" when you forget this. \rightarrow 2/10 or 3/10 just for this
 She earned \$4750
 Amt from Jeff's + Amt from Kaiser's = 4750

TIMES 100 $(.16)(\frac{1}{6}x) + (.18)(\frac{1}{3}x) = 4750$

$$\frac{16}{6}x + \frac{18}{3}x = 475000$$

$$\frac{8x}{3} + 6x = 475,000$$

ALL OVER LCD

$$\frac{8x + 6x \cdot 3}{3} = \frac{475000 \cdot 3}{3}$$

DITCH LCD

$$26x = 475000 \cdot 3$$

$$x = \frac{(475000)(3)}{26} = \frac{(237,500)(3)}{13}$$

$$= \frac{682,500}{3}$$

$$\approx 54,807.69231$$

$$\approx 54,807.69 \approx x$$

Most of the points for getting 2/3 for 2/10 or 3/10.

9/10 of points.

If you didn't

sign the roster sheet on Wednesday, please send me an e-mail, and thank you to those who already have! :o)

Or just come talk to me at the end of class. Duh.

$$\frac{x-1}{x^2-5x+6} - \frac{2x+1}{x^2+3x-24} < 0$$

$$LCD = (x-2)(x-3)(x+8)$$

This is one of our Chapter 3 goals.

$$\Rightarrow \left(\frac{x-1}{(x-3)(x-2)} \right) \left(\frac{x+8}{x+8} \right) - \left(\frac{2x+1}{(x+8)(x-3)} \right) \left(\frac{x-2}{x-2} \right) < 0$$

$$\Rightarrow \frac{x^2+7x-8 - [2x^2-3x-2]}{LCD} < 0$$

$$\Rightarrow \frac{x^2+7x-8-2x^2+3x+2}{LCD} < 0$$

Lay your foundations, properly.

$$\Rightarrow \frac{-x^2+10x-6}{LCD} < 0$$

Times "-1"

$$\Rightarrow \frac{x^2-10x+6}{(x-2)(x-3)(x+8)} > 0$$

$$x^2-10x+6=0$$

$$b^2-4ac =$$

$$(-10)^2-4(1)(6)$$

$$=100-24=76$$

$$\begin{array}{r} 2 \overline{) 76} \\ \underline{4} \\ 36 \\ \underline{38} \\ 19 \end{array}$$

$$\sqrt{76} = 2\sqrt{19}$$

$$x = \frac{10 \pm 2\sqrt{19}}{2(1)}$$

Cancel the "2"

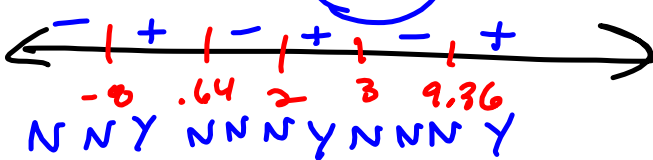
$$= 5 \pm \sqrt{19}$$

$$\frac{2(5 \pm \sqrt{19})}{2} =$$

$$\Rightarrow \frac{(x-(5+\sqrt{19}))(x-(5-\sqrt{19}))}{(x-2)(x-3)(x+8)} > 0$$

$$\Rightarrow \frac{(x-9.36)(x-.64)}{(x-2)(x-3)(x+8)} > 0$$

WANT > 0 ("+")



$$\Rightarrow x \in (-8, .64) \cup (2, 3) \cup (9.36, \infty)$$

$$\approx (-8, 5-\sqrt{19}) \cup (2, 3) \cup (5+\sqrt{19}, \infty)$$

Imprecise

PERFECT.