Last Monday & Tuesday

Solve

$-3x+5 > 2$

$-3x > -3$

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

$x < 1$

$|\text{☺}| > \square$

$\text{☺} > \square$ OR $\text{☺} < -\square$

$|-3x+5| > 2$

$-3x+5 > 2$ OR $-3x+5 < -2$

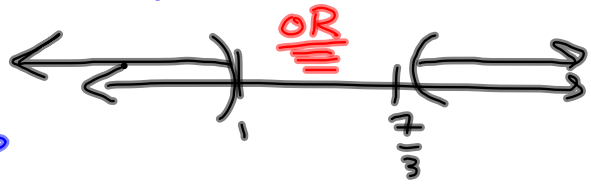
$-3x > -3$ OR $-3x < -7$

$x < 1$ OR $x > \frac{7}{3}$

Soln Set:

$\{x \mid x < 1 \text{ OR } x > \frac{7}{3}\}$

$= (-\infty, 1) \cup (\frac{7}{3}, \infty)$



$|3x-5| > 2$

$\{x \mid x < 1 \text{ OR } x > \frac{7}{3}\}$

$|-3x+5|$

$= |-1(3x-5)|$

$= |-1||3x-5|$

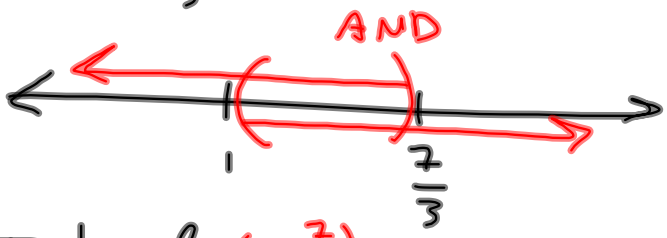
$= |3x-5|$

$|3x-5| < 2$

$3x-5 < 2$ AND $3x-5 > -2$

$3x < 7$ AND $3x > 3$

$x < \frac{7}{3}$ and $x > 1$ $\{x|$ $\}$



Interval $(1, \frac{7}{3})$

Solution Set: $\{x \mid x < \frac{7}{3} \text{ and } x > 1\}$

$|2x-17| > -1$

Always

$(-\infty, \infty)$

$|2x-17| < -1$

Nevah!

$\emptyset$

Solve $x^2 - 3x + 2 = 0$

$x^2 - 2x - 1x + 2$

$= x(x-2) - 1(x-2)$

$= (x-2)(x-1) = 0 \Longrightarrow$

$x-2=0$ OR $x-1=0$

$x=2$ OR $x=1$

Magic: 2

Sum

$-3x = -2x - 1x$

$-3 = -2 - 1$

Product

$(-2)(-1) = 2$

$-3 = -4 + 1$

$(-4)(1) = -4$

Wrong sign.

$x^2 - x - 6 = 0$

$x^2 + 3x + 2x - 6$

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

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

$\Rightarrow x = 3$ OR $x = -2$

Magic $= -6$

$-x$:

$-2 + 1$ $\quad -2$

$-3 + 2$ $\quad -6$ sweet

$x^2 + 3x - 28 = 0$

$x^2 + 7x - 4x - 28 = 0$

$x(x+7) - 4(x+7) = 0$

$(x+7)(x-4) = 0$

$x = -7$ OR $x = 4$

Magic: -28

	sum	product
$3 = 2 + 1$		$(2)(1)$ wrong sign

Have to be different signs, from product $= -28$

$3 = 4 - 1$	-4
$= 5 - 2$	-10
$= 6 - 3$	-18
$= 7 - 4$	-28 sweet.

Next lesson after Test is Quadratic Formula.