

2.6 #s 8, 40, 44, 53, 68

2.7 #s 12, 22, 65, 66, 74, 77

$$3x - 2 > 5$$

OR

$$2x - 7 > 1$$

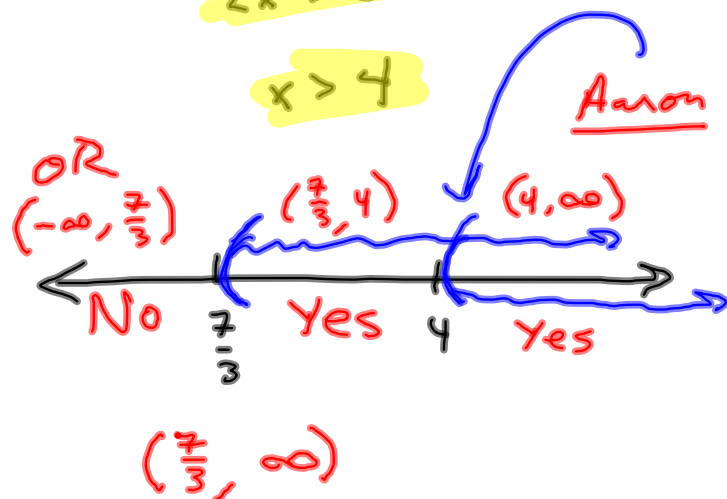
$$3x > 7$$

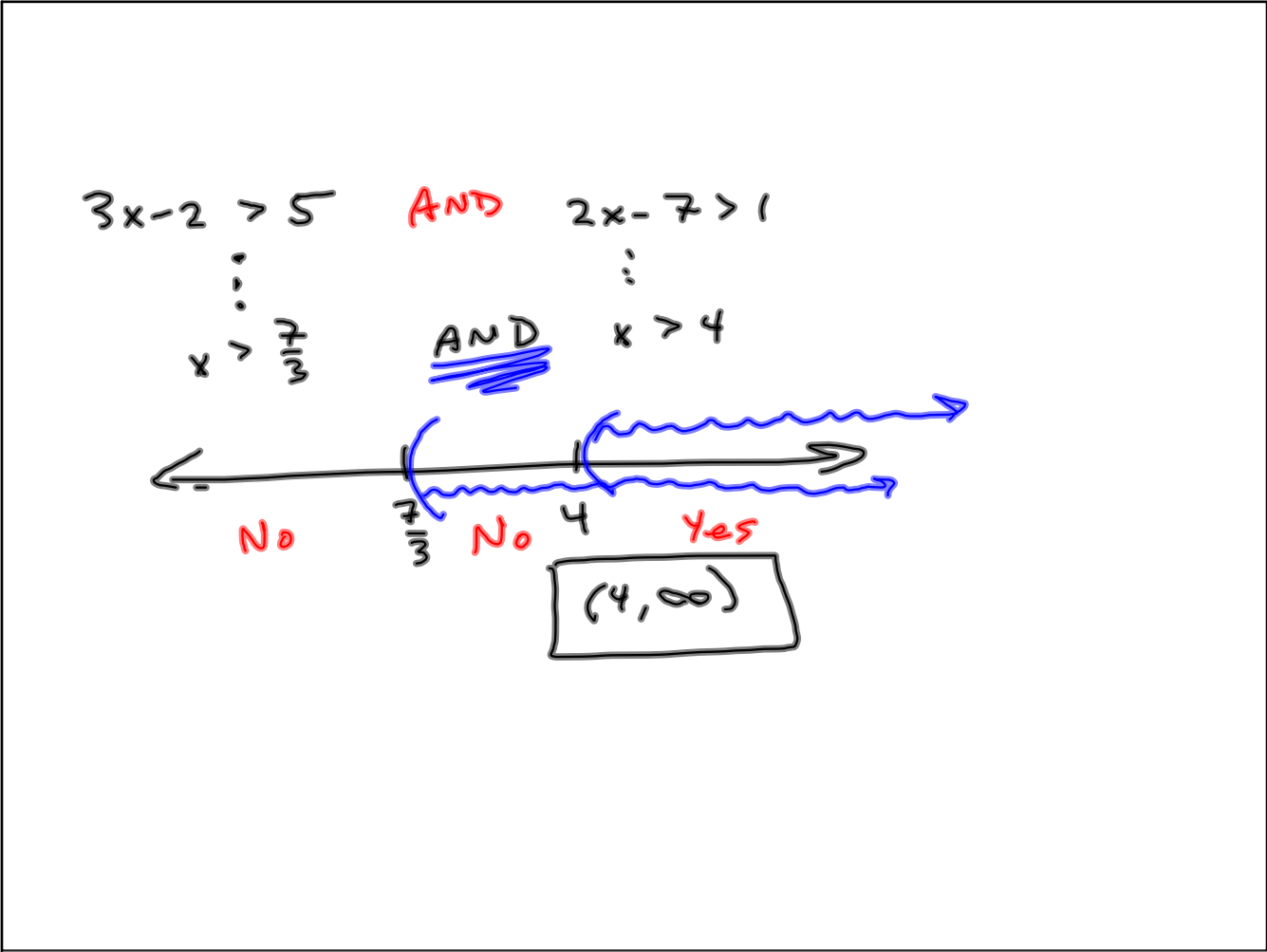
$$2x > 8$$

$$\frac{3x}{3} > \frac{7}{3}$$

$$x > 4$$

$$x > \frac{7}{3}$$



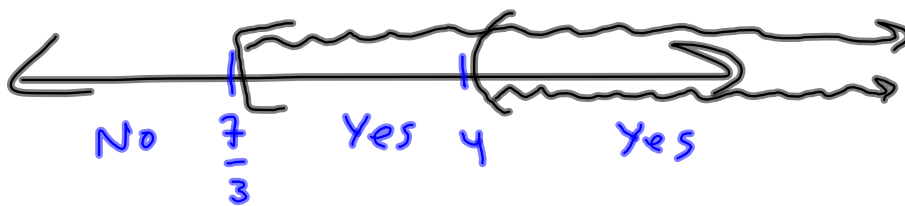


$$3x - 2 \geq 5 \quad \text{OR} \quad 2x - 7 > 1$$

$$\vdots$$
$$x \geq \frac{7}{3}$$

OR

$$\vdots$$
$$x > 4$$



$$\left[ \frac{7}{3}, \infty \right)$$

$$|3x-2| < -6$$

Never!  $\emptyset$

$$|\text{Smiley Face}| \geq 0$$

$$|3x-2| > -6 \text{ Always, } \mathbb{R} = (-\infty, \infty)$$

$$|3x-2| = 0$$

→ Redundant

$$3x-2 = 0$$

etc.

OR

$$3x-2 = -0$$

$$|3x-2| < 0 \text{ Never!}$$

$$|3x-2| \leq 0 \text{ only when } 3x-2 = 0 \text{ etc.}$$

$$|3x-2| \geq 0 \text{ Always}$$

$$|3x-2| > 0 \text{ Always, except when it equals zero.}$$

$$3x-2 \neq 0$$

$$3x \neq 2$$

$$x \neq \frac{2}{3}$$

All real numbers,  
EXCEPT  $x = \frac{2}{3}$

$$|3x-2| > 0$$

True except if

$$3x-2=0$$

∴

$$\{x \mid x \neq \frac{2}{3}\} = \mathbb{R} \setminus \left\{ \frac{2}{3} \right\}$$

$$= (-\infty, \frac{2}{3}) \cup (\frac{2}{3}, \infty)$$

$$|3(\frac{2}{3})-2| > 0?$$

$$|0| > 0?$$

$$0 > 0?$$

No way.

$$|3x-2| \geq 0 \text{ Always}$$

$\Sigma 2.$ 

$$-5x \leq 10 \quad \text{OR} \quad 3x - 5 \geq 1$$

$$x \geq \frac{10}{-5} = -2$$

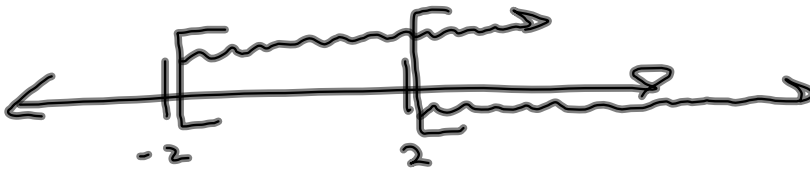
$$x \geq -2$$

OR

$$3x \geq 6$$

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

$$x \geq 2$$



$$-5x \geq 10$$

$$x \leq \frac{10}{-5}$$

$$x \leq -2$$

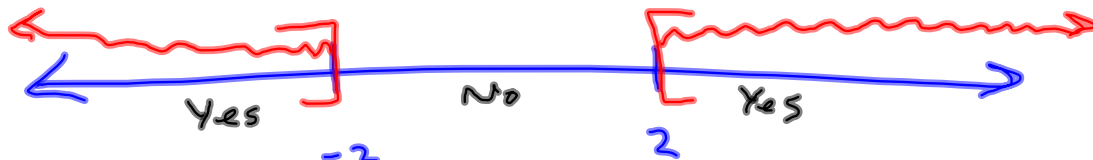
OR

$$3x - 5 \geq 1$$

$$3x \geq 6$$

$$x \geq 2$$

OR



$$(-\infty, -2] \cup [2, \infty)$$

$$[-2, -\infty)$$

$$< \quad ( \quad )$$

$$\leq \quad [ \quad ]$$

