

## SECTION 1.5 INEQUALITIES

$$\frac{3}{4}x - \frac{2}{3} \geq \frac{3}{5}(x-2) + 5$$

LCD: 60

$$60 \cdot \frac{3}{4}x - 60 \cdot \frac{2}{3} \geq 60 \cdot \frac{3}{5}(x-2) + 60(5)$$

$$45x - 40 \geq 36(x-2) + 300$$

$$45x - 40 \geq 36x - 72 + 300$$

$$45x - 40 \geq 36x + 228$$

$$\begin{array}{r} -36x \\ -36x \end{array}$$

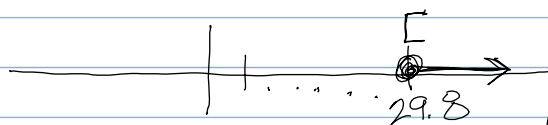
$$9x - 40 \geq 228$$

$$\begin{array}{r} +40 \\ +40 \end{array}$$

$$9x \geq 268$$

$$x \geq \frac{268}{9}$$

$$x \geq 29.8$$



$$[29.8, \infty)$$

EX

$$-2x \geq -12$$

$$\begin{array}{c} \uparrow \text{flip} \\ x < 6 \end{array}$$

EX:  $-2 \leq -2x + 4 < 10$

$$\begin{array}{ccc} \text{goal } x & & \\ -4 & -4 & -4 \end{array}$$

$$\begin{array}{ccc} -4 & -2x & 4 \\ \underline{-2} & \underline{-2} & \underline{-2} \end{array}$$

$$3 \geq x > -3$$

$$-3 < x \leq 3$$

Graph



$$(-3, 3]$$