

May 8

## Solving Inequalities

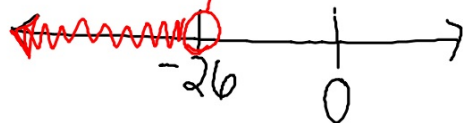
Ex 1 Solve & graph the solution:

$$2(5x - 4) < +8x - 60$$

$$10x - 8 < 8x - 60$$

$$2x < -52$$

$$x < -26$$



$<$  is less than

$>$  is greater than

$\leq$  is less than or  
= to

$\geq$  is greater than  
or = to

### SPECIAL RULE

If an inequality is multiplied or divided on both sides by a Negative #, Reverse the direction of the inequality symbol.

Ex 2 Solve + graph

$$\cancel{7} \left[ \cancel{\frac{-3}{7}}(x+6) \right] \leq \cancel{7} [4x] - \cancel{7} [2(x-3)]$$

$$-3(x+6) \leq 28x - 14(x-3)$$

$$-3x - 18 \leq 28x - 14x + 42$$

$$\begin{array}{r} -3x - 18 \leq 14x + 42 \\ -14x \quad + 18 \end{array}$$

$$\begin{array}{r} -17x \leq 60 \\ \frac{-17x}{-17} \geq \frac{60}{-17} \end{array}$$

