

Lesson 9: Solve Two-Step Inequalities

11-2-15

Remember: 1) Solve using inverse operations to isolate variable

2) Add/subtract first, then multiply/divide

3) When multiplying or dividing both sides by a negative number → **FLIP THE SYMBOL**

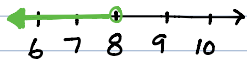
Ex. 1: Solve and graph.

A)  $2x + 8 < 24$

$$\begin{array}{r} -8 \quad -8 \\ \hline 2x < 16 \end{array}$$

$$\begin{array}{r} \frac{2x}{2} < \frac{16}{2} \\ \hline \end{array}$$

$$\boxed{x < 8}$$



B)  $\frac{-y}{7} - 3 \leq 9$

$$\begin{array}{r} \frac{-y}{7} + 3 + 3 \\ \hline \end{array}$$

$$\boxed{y \geq -84}$$



C)  $6 - 10x < 36$

$$\begin{array}{r} -6 \quad -6 \\ \hline -10x < 30 \end{array}$$

$$\begin{array}{r} \frac{-10x}{-10} < \frac{30}{-10} \\ \hline \end{array}$$

$$\boxed{x > -3}$$



HW: Lesson 9 WS - Integers