



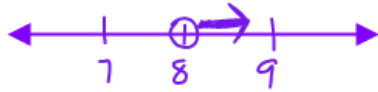




Balancing Multi-Step Inequalities (3-6)

Example: Solve the inequality. Then, graph.

I Do	You Do
$\begin{aligned} -2t + 4 &< 12 \\ \cancel{-4} + 4 & \downarrow +4 \\ \cancel{-2}t & < \frac{16}{-2} \\ t & > -8 \end{aligned}$ 	$\begin{aligned} \frac{y}{3} + 4 &\geq 28 \\ \cancel{-4} + 4 & \downarrow -4 \\ \frac{y}{3} &\geq 14 \cdot 3 \\ y &\geq 42 \end{aligned}$ 

I Do	You Do
$\begin{aligned} 2 &> -4 - x \\ +4 +4 & \\ \frac{6}{-1} & > \frac{-x}{-1} \\ -6 & < x \\ x & > -6 \end{aligned}$ 	$\begin{aligned} 7x + 14 - 9x &\leq 22 \\ -2x + 14 &\leq 22 \\ \cancel{-14} + 14 & \downarrow -14 \\ -2x &\leq 8 \\ \frac{-2x}{-2} &\leq \frac{8}{-2} \\ x &\geq -4 \end{aligned}$ 

I Do	You Do
$25 < 2t + 9$ $\begin{array}{r} 25 < 2t + 9 \\ -9 \downarrow \quad \cancel{+9} \\ \hline 16 < 2t \\ \frac{16}{2} < \frac{2t}{2} \\ 8 < t \\ t > 8 \end{array}$ 	$ x + 14 - 8x \leq 42$ $\begin{array}{r} x + 14 - 8x \leq 42 \\ \downarrow \\ \cancel{-7x} + 14 \leq 42 \\ \quad \quad \quad \downarrow -14 \\ \hline \cancel{-7x} \leq 28 \\ \frac{-7x}{-7} \leq \frac{28}{-7} \\ x \geq -4 \end{array}$ 

I Do	You Do
$48 < -2(2x - 6)$ $\begin{array}{r} 48 < -2(2x - 6) \\ \downarrow \\ 48 < -4x + 12 \\ -12 \downarrow \quad \cancel{+12} \\ \hline 36 < -4x \\ \frac{36}{-4} < \frac{-4x}{-4} \\ -9 > x \\ x < -9 \end{array}$ 	$3(y - 7) \leq 42$ $\begin{array}{r} 3(y - 7) \leq 42 \\ \downarrow \\ 3y - 21 \leq 42 \\ \quad \quad \quad \downarrow +21 \\ \hline 3y \leq 63 \\ \frac{3y}{3} \leq \frac{63}{3} \\ y \leq 21 \end{array}$ 