

## 2-Step Inequalities Video Guide

Solve each inequality.

$$\begin{array}{r|l} 1) 7 > 6 + \frac{n}{10} & \\ -6 & -6 \\ \hline 10 \times 1 > \frac{n}{10} \times 10 & \\ \hline 10 > n & \end{array}$$

$$n < 10$$

$$\begin{array}{r|l} 2) 70 < 5x + 5 & \\ -5 & -5 \\ \hline \frac{65}{5} < \frac{5x}{5} & \\ \hline 13 < x & \end{array}$$

$$x > 13$$

$$\begin{array}{r|l} 3) -5k - 3 \geq 52 & \\ +3 & +3 \\ \hline -5k \geq 55 & \\ -5 & -5 \\ \hline k \leq -11 & \end{array}$$

$$k \leq -11$$

$$\begin{array}{r|l} 4) \frac{b}{18} - 4 < -5 & \\ +4 & +4 \\ \hline 18 \times \frac{b}{18} < -1 \times 18 & \\ \hline b < -18 & \end{array}$$

$$b < -18$$

$$\begin{array}{r|l} 5) 10 - 6x \geq -38 & \\ -10 & -10 \\ \hline -6x \geq -48 & \\ -6 & -6 \\ \hline x \leq 8 & \end{array}$$

$$x \leq 8$$

$$\begin{array}{r|l} 6) -3 < -1 + \frac{m}{2} & \\ +1 & +1 \\ \hline 2 \times -2 < \frac{m}{2} \times 2 & \\ \hline -4 < m & \end{array}$$

$$m > -4$$

$$7) \begin{array}{r} 2 - 9a \leq -70 \\ -2 \quad -2 \\ \hline -9a \leq -72 \\ -9 \quad -9 \\ \hline a \geq 8 \end{array}$$

$$a \geq 8$$

$$9) \begin{array}{r} -8 + \frac{a}{16} > -7 \\ +8 \quad +8 \\ \hline 16 \times \frac{a}{16} > 1 \times 16 \\ \hline a > 16 \end{array}$$

$$a > 16$$

$$11) -5x - 6 \leq -71$$

- A)  $x \geq 13$       B)  $x \leq -48$   
 C)  $x \leq -42$       D)  $x \leq 13$

$$\begin{array}{r} -5x - 6 \leq -71 \\ +6 \quad +6 \\ \hline -5x \leq -65 \\ -5 \quad -5 \\ \hline x \geq 13 \end{array}$$

$$13) -9 \geq 1 + \frac{m}{2}$$

- A)  $m \leq -32$        B)  $m \leq -20$   
 C)  $m \leq 3$       D)  $m \leq -34$

$$\begin{array}{r} -9 \geq 1 + \frac{m}{2} \\ -1 \quad -1 \\ \hline 2 \times -10 \geq \frac{m}{2} \times 2 \\ \hline -20 \geq m \\ m \leq -20 \end{array}$$

$$8) \begin{array}{r} -82 > -10 - 6n \\ +10 \quad +10 \\ \hline -72 > -6n \\ -6 \quad -6 \\ \hline 12 < n \end{array}$$

$$n > 12$$

$$10) \begin{array}{r} -8 > \frac{x}{14} - 7 \\ +7 \quad +7 \\ \hline 14 \times -1 > \frac{x}{14} \times 14 \\ \hline -14 > x \end{array}$$

$$x < -14$$

$$12) -7 + \frac{a}{4} \geq -4$$

- A)  $a \leq -24$       B)  $a \geq -24$   
 C)  $a \geq 12$       D)  $a \geq -34$

$$\begin{array}{r} -7 + \frac{a}{4} \geq -4 \\ +7 \quad +7 \\ \hline 4 \times \frac{a}{4} \geq 3 \times 4 \\ \hline a \geq 12 \end{array}$$

$$14) 90 > -5 - 5p$$

- A)  $p < -19$       B)  $p < -37$   
 C)  $p > -19$       D)  $p < 4$

$$\begin{array}{r} 90 > -5 - 5p \\ +5 \quad +5 \\ \hline 95 > -5p \\ -5 \quad -5 \\ \hline -19 < p \\ p > -19 \end{array}$$