

2.4 Solving Multi-Step Inequalities

Ex 1

a) $\frac{x}{-6} + 7 < 9$

$$\begin{array}{r} \frac{x}{-6} + 7 < 9 \\ -7 \quad -7 \\ \hline \frac{x}{-6} < 2 \quad : -6 \\ \hline x > -12 \end{array}$$

b) $2v - 4 > 8$

$$\begin{array}{r} 2v - 4 > 8 \\ +4 \quad +4 \\ \hline 2v > 12 \\ \div 2 \quad \div 2 \\ \hline v > 6 \end{array}$$

Try: Solve/Graph

1) $4b - 1 < 7$

$$\begin{array}{r} 4b - 1 < 7 \\ +1 \quad +1 \\ \hline 4b < 8 \\ \div 4 \quad \div 4 \\ \hline b < 2 \end{array}$$

\leftarrow

2) $+8 - 9c \geq -28$

$$\begin{array}{r} +8 - 9c \geq -28 \\ -8 \quad -8 \\ \hline -9c \geq -36 \\ \div -9 \quad \div -9 \\ \hline c \leq 4 \end{array}$$

\leftarrow

3) $\frac{n}{-2} + 11 > 12$

$$\begin{array}{r} \frac{n}{-2} + 11 > 12 \\ -11 \quad -11 \\ \hline \frac{n}{-2} > 1 \\ \cdot (-2) \quad \cdot (-2) \\ \hline n < -2 \end{array}$$

\leftarrow