

$$\textcircled{12} \begin{array}{r} x + 3 < -4 \\ -3 \quad -3 \\ \hline x < -7 \end{array}$$

$x < -7$

$$\begin{array}{r} -8 + 3 < -4 \\ -5 < -4 \checkmark \end{array}$$

$$\textcircled{13} \begin{array}{r} -7x - 15 \geq 34 \\ +15 \quad +15 \\ \hline -7x \geq 49 \\ -7 \quad -7 \\ \hline x \leq -7 \end{array}$$

$x \leq -7$

$$\begin{array}{r} -7(-8) - 15 \geq 34 \\ 56 - 15 \geq 34 \\ 41 \geq 34 \checkmark \end{array}$$

ck from original problem

$$\textcircled{14} \begin{array}{r} -16q \leq 64 \\ -16 \quad -16 \\ \hline q \geq -4 \end{array}$$

$q \geq -4$

$$\begin{array}{r} -16(0) \leq 64 \\ 0 \leq 64 \checkmark \end{array}$$

$$\textcircled{15} \begin{array}{r} a - 4 < -6 \\ -5 \quad -5 \\ \hline a < -10 \end{array}$$

$(-5) \frac{a}{-5} < -2(-5)$

$a > 10$

$$\begin{array}{r} \frac{15}{-5} - 4 < -6 \\ -3 - 4 < -6 \\ -7 < -6 \checkmark \end{array}$$

$$\textcircled{16} \begin{array}{r} -2x + 4 \leq 3 \\ -4 \quad -4 \\ \hline -2x \leq -1 \\ -2 \quad -2 \\ \hline x \geq \frac{1}{2} \end{array}$$

$x \geq \frac{1}{2}$

$$\begin{array}{r} -2(1) + 4 \leq 3 \\ -2 + 4 \leq 3 \\ 2 \leq 3 \checkmark \end{array}$$

$$\textcircled{17} \begin{array}{r} x + 7 < -10 \\ -7 \quad -7 \\ \hline x < -17 \end{array}$$

$x < -17$

$$\begin{array}{r} -18 + 7 < -10 \\ -11 < -10 \checkmark \end{array}$$

$$\textcircled{18} \begin{array}{r} -18w \geq -54 \\ -18 \quad -18 \\ \hline w \leq 3 \end{array}$$

$w \leq 3$

$$\begin{array}{r} -18(0) \geq -54 \\ 0 \geq -54 \checkmark \end{array}$$

$$\textcircled{19} \begin{array}{r} a < 14(7) \\ -7 \quad -7 \\ \hline a > -98 \end{array}$$

$a > -98$

$$\begin{array}{r} \frac{0}{-7} < 14 \\ 0 < 14 \checkmark \end{array}$$

$$\textcircled{20} \begin{array}{r} -2 - 3z > 1 \\ +2 \quad +2 \\ \hline -3z > 3 \\ -3 \quad -3 \\ \hline z < -1 \end{array}$$

$z < -1$

$$\begin{array}{r} -2 - 3(-2) > 1 \\ -2 + 6 > 1 \\ 4 > 1 \checkmark \end{array}$$