

Solve each.

1. $5|x + 2.1| - 7 = 20$

2. $-3|2x - 9| + 4.7 = 1.1$

3. $\frac{4c - 5}{11} + 3 > 9$

4. $8 - \frac{5}{7}w \leq -47$

Solve each.

Answers

1. $5|x + 2.1| - 7 = 20$
 $\quad \quad \quad +7 \quad +7$

$$\frac{5|x + 2.1|}{5} = \frac{27}{5}$$

$x = -7.5,$
 3.3

$$|x + 2.1| = 5.4$$

$$x + 2.1 = 5.4 \quad \text{or} \quad x + 2.1 = -5.4$$

$$\begin{array}{r} x + 2.1 = 5.4 \\ -2.1 \quad -2.1 \\ \hline x = 3.3 \end{array} \quad \text{or} \quad \begin{array}{r} x + 2.1 = -5.4 \\ -2.1 \quad -2.1 \\ \hline x = -7.5 \end{array}$$

3. $\frac{4c - 5}{11} + 3 > 9$
 $\quad \quad \quad -3 \quad -3$

$$11 \cdot \frac{4c - 5}{11} > 6.11$$

$$\frac{4c - 5}{11} > 6.11$$

$$\begin{array}{r} 4c - 5 > 66.6 \\ +5 \quad +5 \\ \hline 4c > 71.6 \end{array}$$

$c > 17.75$

$$\frac{4c}{4} > \frac{71.6}{4}$$

2. $-3|2x - 9| + 4.7 = 1.1$
 $\quad \quad \quad -4.7 \quad -4.7$

$$\frac{-3|2x - 9|}{-3} = \frac{-3.6}{-3}$$

$$|2x - 9| = 1.2$$

$$\begin{array}{r} 2x - 9 = 1.2 \\ +9 \quad +9 \\ \hline 2x = 10.2 \end{array}$$

$$\frac{2x}{2} = \frac{10.2}{2} \quad x = 5.1$$

$$\begin{array}{r} 2x - 9 = -1.2 \\ +9 \quad +9 \\ \hline 2x = 7.8 \end{array}$$

$$\frac{2x}{2} = \frac{7.8}{2}$$

$$x = 3.9$$

4. $8 - \frac{5}{7}w \leq -47$
 $\quad \quad \quad -8 \quad -8$

$$\left(-\frac{7}{5}\right)\left(-\frac{5}{7}w\right) \leq (-55)\left(-\frac{7}{5}\right)$$

$w > 77$