

Calculate the discriminant, determine the number and type of solutions based on the discriminant.

$$b^2 - 4ac$$
$$(-4)^2 - 4(7)(6)$$
$$16 - 168 =$$

$$7x^2 - 4x + 6 = 0$$

Discriminant -152

Number of solutions 2

Type (Real, Complex) _____

Use set notation to
answer

$$\{7, 8, 9\} \cup \{1, 2, 3\}$$

$$\{1, 2, 3, 7, 8, 9\}$$

Use set notation to
answer

$$\{1, 3, 5, 7\} \cap \{3, 4, 5, 6\}$$

$$\{3, 5\}$$

Solve

$$|2x + 3| = 4$$

$$\begin{array}{r} 2x + 3 = 4 \\ -3 \quad -3 \end{array}$$

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

$$x = \boxed{\frac{1}{2}}$$

$$\begin{array}{r} 2x + 3 = -4 \\ -3 \quad -3 \end{array}$$

$$\frac{2x}{2} = \frac{-7}{2}$$

$$x = \boxed{\frac{-7}{2}}$$

Solve for L

$$P = 2W + 2L$$

$$\begin{array}{r} -2W \quad -2W \\ \hline \end{array}$$

$$\frac{P - 2W}{2} = \frac{2L}{2}$$

$$\boxed{\frac{P - 2W}{2}} = L = \boxed{\frac{P}{2} - W}$$

Solve

$$8 < 2x + 3 \leq 13$$

$$\begin{array}{ccccccc} -3 & & & -3 & & & -3 \\ \hline \end{array}$$

$$\frac{5}{2} < \frac{2x}{2} \leq \frac{10}{2}$$

$$\boxed{\frac{5}{2} < x \leq 5}$$

Solve

$$\frac{(x+5)(\cancel{x-2}) \cdot 2}{\cancel{x-2}} = \frac{4}{\cancel{x+5}(\cancel{x-2})}$$

$$2(x+5) = 4(x-2)$$

$$\begin{array}{r} 2x + 10 = 4x - 8 \\ -2x \qquad -2x \\ \hline \end{array}$$

$$\begin{array}{r} 10 = 2x - 8 \\ +8 \qquad +8 \\ \hline \end{array}$$

$$\frac{18}{2} = \frac{2x}{2}$$

$$\boxed{9 = x}$$