

8th Grade Lesson 95

- I can solve equations by first eliminating the variable from one side.

Some equations have a variable on both sides of the equation.

$$3x + 3 = x - 5$$

To solve, first add as necessary to eliminate the variable on one side.

$$\begin{array}{r} 3x + 3 = x - 5 \\ -x \quad -x \\ \hline 2x + 3 = -5 \end{array}$$

Then, add as necessary to place all of the constants on the other side.

$$\begin{array}{r} 2x + 3 = -5 \\ -3 \quad -3 \\ \hline 2x = -8 \end{array}$$

Solve as usual.

$$\begin{array}{r} 2x = -8 \\ \frac{2x}{2} = \frac{-8}{2} \\ \hline x = -4 \end{array}$$

Solve: $4x - 2 = -x$

$$\begin{array}{r} +x \qquad +x \\ \hline 5x - 2 = 0 \\ +2 \quad +2 \\ \hline 5x = 2 \\ \frac{5x}{5} = \frac{2}{5} \\ x = \frac{2}{5} \end{array}$$

Solve: $-4x + 3 = 7x - 8$

$$\begin{array}{r} -7x \qquad -7x \\ \hline -11x + 3 = -8 \\ -3 \quad -3 \\ \hline -11x = -11 \\ \frac{-11x}{-11} = \frac{-11}{-11} \\ \hline x = 1 \end{array}$$

Assignment

Problem Set 95

***A/B Optional:** #1-3, 5-6, 8, 11-12, 15-21, 24-26