



# LESSON 4.1 SOLVE EQUATIONS

**Goal:** To solve equations/inequalities in math and real world context and to write rules for arithmetic sequence.

**Obj:** SWBAT solve equations.

**PROBLEM 1:**

Solve each equation.

$$144 = -8m + 8$$
$$\begin{array}{r} \underline{-8} \qquad \qquad \qquad \underline{-8} \end{array}$$

$$\frac{136}{-8} = \frac{-8m}{-8}$$

$$\boxed{-17 = m}$$

$$-8 + 5k = 67$$
$$\begin{array}{r} \underline{+8} \qquad \qquad \qquad \underline{+8} \end{array}$$

$$\frac{5k}{5} = \frac{75}{5}$$

$$\boxed{k = 15}$$

**PROBLEM 1A:**

Solve each equation.

$$\begin{array}{r} -9 - 5x = -34 \\ +9 \qquad \qquad +9 \\ \hline -5x = -25 \\ \hline -5 \qquad \qquad -5 \end{array}$$

$$\boxed{x = 5}$$

$$\begin{array}{r} 124 = -10v + 4 \\ -4 \qquad \qquad -4 \\ \hline 120 = -10v \\ \hline -10 \qquad \qquad -10 \end{array}$$

$$\boxed{-12 = v}$$

**PROBLEM 2:**

Solve each equation.

$$2 \cdot \frac{x}{2} - 2 = -6 \cdot 2$$

$$\begin{array}{r} x - 4 = -12 \\ +4 \quad +4 \\ \hline \end{array}$$

$$\boxed{x = -8}$$

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

$$\begin{array}{r} -4 = \frac{v}{8} - 2 \\ +2 \quad +2 \\ \hline \end{array}$$

$$8 \cdot -2 = \frac{v}{8} \cdot 8$$

$$\boxed{-16 = v}$$

**PROBLEM 2A:**

Solve each equation.

$$-10 = -9 + \frac{n}{14}$$

~~$$9 + \frac{n}{4} = 7$$~~

**PROBLEM 3:**

Solve each equation.

$$\frac{x+9}{3} = -3$$

$$\frac{m+5}{6} = 0$$

**PROBLEM 3A:**

Solve each equation.

$$\frac{x+10}{3} = 9$$

$$2 = \frac{m+8}{12}$$

**PROBLEM 4:**

Solve each equation.

$$5(8 + m) = -5$$

$$8(x + 8) = 40$$



**PROBLEM 4A:**

Solve each equation.

$$-8(-10 + k) = 120$$

$$10(n - 6) = -170$$