



# 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 the equation.

$$14 = x + 3$$
$$\underline{-3} \quad -3$$

$$11 = x$$

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check

$$14 = 11 + 3$$

$$14 = 14$$

✓

$$\downarrow$$
$$x - 16 = -20$$
$$+16 \quad +16$$

$$x = -4$$

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check

$$-4 - 16 = -20$$

$$-20 = -20$$

✓

## PROBLEM 1A:

Solve the equation.

$$\begin{array}{r} -27 = k - 15 \\ +15 \quad +15 \\ \hline \end{array}$$

$$\begin{array}{r} -12 = k \\ \checkmark \end{array}$$

$$\begin{array}{r} 18 + v = 37 \\ -18 \quad -18 \end{array}$$

$$\begin{array}{r} v = 19 \\ \checkmark \end{array}$$

## PROBLEM 2:

Solve the equation.

$$132 = -11x$$

$$\frac{132}{-11} = \frac{-11x}{-11}$$

$$-12 = x$$

Multiply

$$13k = 78$$

$$\frac{13k}{13} = \frac{78}{13}$$

$$k = 6$$

do the opposite operation

## PROBLEM 2A:

Solve the equation.

$$14 = \frac{n}{5} \text{ divide}$$

$$5 \cdot 14 = \frac{1}{5} n \cdot 5$$

$$70 = n$$

$$\frac{1}{5} \cdot \frac{5}{1} = \frac{1}{1} = 1$$

$$\cancel{3} \cdot \frac{1}{\cancel{3}} x = 15 \cdot 3$$

$$x = 45$$

## PROBLEM 2B:

Solve the equation.

$$11 \cdot 3 = \frac{x}{11} \cdot 11$$

$$33 = x$$

$$\cancel{2} \cdot \frac{1}{\cancel{2}} x = -17 \cdot 2$$

$$x = -34$$

### PROBLEM 3:

Solve the equation.

$$5x + 8 = 13$$

$$66 = -5x - 9$$

### PROBLEM 3A:

Solve the equation.

$$-4x - 4 = 68$$

$$-19 = -1 + 9x$$