

# Section Overview



## Determining Solutions of Equations

Lesson 1-7

**Why?** Because equations are used to represent mathematical relationships in real situations, students can strengthen their problem-solving skills by learning to recognize and identify solutions to equations.

**Situation:** The Ferris wheel ride costs 3 tokens. After riding the Ferris wheel, Bailey had 5 tokens remaining. How many tokens did Bailey have before riding the Ferris wheel?

$$t - 3 = 5$$

$t = 9$  **is not** a solution because  $9 - 3 = 5$  **is not** true.

$t = 8$  **is** a solution because  $8 - 3 = 5$  **is** true.

## Solving One-Step Equations

Lesson 1-8 through 1-11

**Why?** Many students can figure out the answers to problems without solving one-step equations. However, they will need to use the concepts learned at this level to solve equations involving fractions and decimals later in this course.

Equation	Operation	Inverse Operation	Isolating the Variable
$a + 9 = 17$	Addition	Subtraction	$a + 9 = 17$ $\quad \underline{-9} \quad \underline{-9}$ $a = 8$
$y - 11 = 25$	Subtraction	Addition	$y - 11 = 25$ $\quad \underline{+11} \quad \underline{+11}$ $y = 36$
$7b = 21$	Multiplication	Division	$7b = 21$ $\quad \underline{7b} = \underline{21}$ $b = 3$
$\frac{x}{3} = 12$	Division	Multiplication	$\frac{x}{3} = 12$ $\frac{x}{3}(\mathbf{3}) = 12(\mathbf{3})$ $x = 36$