

## Chapter 7 Lesson 2:

### Solve and Write Addition Equations

**Inverse Operations:** operations that undo each other.

Addition and Subtraction

Multiplication and Division

### Key Concept Subtraction Property of Equality

#### Words

If you subtract the same number from each side of an equation, the two sides remain equal.

#### Examples

##### Numbers

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

##### Algebra

$$\begin{array}{r} x + 2 = 3 \\ -2 = -2 \\ \hline x = 1 \end{array}$$

Use the Subtraction Property of Equality to solve for variable.

Examples:  $8 = y + 3$

$$\underline{-3 = -3}$$

$$5 = y$$

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

$$c = 3$$

$$\begin{array}{r} 3.5 + y = 12.75 \\ -3.5 \quad | \quad -3.5 \\ \hline y = 9.25 \end{array}$$

$$\begin{array}{r} 10 = 6 + e \\ -6 \quad | \quad -6 \\ \hline 4 = e \end{array}$$

A board that measures 19.5 meters in length is cut into two pieces. One piece measures 7.2 meters. Write and solve an equation to find the length of the other piece. (Example 2)

$$\cancel{19.5} \quad 19.5 = 7.2 + b$$

$$12.3 = b$$

$$19.5 = 7.2 + b$$

$$\begin{array}{r} 19.5 \\ -7.2 \\ \hline 12.3 = b \end{array}$$

It takes 43 facial muscles to frown. This is 26 more muscles than it takes to smile. Write and solve an equation to find the number of muscles it takes to smile. (Example 3)

$$\cancel{43} \quad 43 = s + 26$$

$$26 + s = 43$$

$$s = 17$$

$$\begin{array}{r} 43 \\ -26 \\ \hline 17 \end{array}$$

$$26 + s = 43$$

$$\begin{array}{r} 26 + s \\ -26 \\ \hline s = 17 \end{array}$$