

## Chapter 7 Lesson 3:

### Solve and Write Subtraction Equations

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

Addition and Subtraction

Multiplication and Division

#### Key Concept

#### Addition Property of Equality

##### Words

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

##### Examples

##### Numbers

$$\begin{array}{r} 5 = 5 \\ + 3 = + 3 \\ \hline 8 = 8 \end{array}$$

##### Algebra

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

Use the Addition Property of Equality to solve for variable.

Examples:

$$y - 7 = 4$$

$$\underline{+ 7 = + 7}$$

$$y = 11$$

$$\begin{array}{r} y - 6 = 8 \\ + 6 \quad + 6 \\ \hline \end{array}$$

$$y = 14$$

$$\begin{array}{r} 9 = a - 5 \\ + 5 \quad + 5 \\ \hline \end{array}$$

$$14 = a$$

$$\begin{array}{r} a - 2.1 = 5.8 \\ + 2.1 \quad + 2.1 \\ \hline \end{array}$$

$$a = 7.9$$

Pete is 15 years old. This is 6 years younger than his sister Victoria. Write and solve a subtraction equation to find Victoria's age. (Example 2)

$$\begin{aligned} a - 15 &= 6 \\ a - 15 &= 6 \\ a &= 21 \end{aligned}$$

$$\begin{array}{r|l} a - 15 & = 6 \\ + 15 & \quad + 15 \\ \hline a & = 21 \end{array}$$

A CD costs \$14.95. This is \$7.55 less than the cost of a DVD. Write and solve a subtraction equation to find the cost of the DVD. (Example 3)

$$\begin{aligned} d - \$14.95 &= \$7.55 \\ d &= \$22.50 \end{aligned}$$

$$\begin{array}{r|l} d - 14.95 & = 7.55 \\ + 14.95 & \quad + 14.95 \\ \hline d & = 22.5 \end{array}$$