1. **FOCUS**

**5-Minute Check** (Chapter 5)

1. Replace \( \bullet \) with \(<\), \(\), or = to make \(-5 \bullet 1\) a true sentence. \(<\)
2. \(3 + (-5) = a -2\)
3. \(-10 - 4 = b -14\)
4. \(c = -7(-3) = 21\)
5. \(d = -16 \div 4 = -4\)

The 5-Minute Check is also available on Transparency 6-1A for this lesson.

**Motivating the Lesson**

**Hands-On Activity** Construct an array showing the location on a grid of four golf balls shot: from a 150 meters from the hole. Ball is 5 meters short of the hole, ball is 3 meters short, ball c is 4 meters past the hole, and ball d is 4 meters past. Have students use an equation to calculate the length of each shot.

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**Solving Addition and Subtraction Equations**

**What you'll learn**
You will learn to solve addition and subtraction equations.

**1. Concept Check**

1. What is the definition of an equation?
2. How do you solve an equation?

**2. Concept Check**

- When solving equations, what is the goal?
- How do you check your solution?

**Word Wise**
subtraction property of equality
addition property of equality

**Example 1**

Solve \(x + 4 = 6\).

**Method 1** Use symbols.

\[
x + 4 = 6
\]

Subtracting 4 from each side of the equation is like removing 4 yellow counters from each side of the equation mat.

\[
x + 4 - 4 = 6 - 4
\]

\[
x = 2
\]

The solution is 2.

In Example 1, you used the **subtraction property of equality**.

**Subtraction Property of Equality**

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

**Symbols:**

- Arithmetic: \(a - c = b - c\)
- Algebra: \(x - 4 = 2\)

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**Classroom Vignette**

"To reinforce the Addition and Subtraction Properties of Equality, I use the example of a teeter-totter. You and a friend are perfectly balanced on a teeter-totter. What happens if your friend jumps off? Or what happens if someone else jumps on with your friend?"

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