

## Lesson 1-4

### Example 1 Identify Properties

Name the property used in each equation. Then find the value of  $n$ .

a.  $n \cdot 5 = 0$

Multiplicative Property of Zero

$n = 0$ , since  $0 \cdot 5 = 0$ .

b.  $\frac{1}{3} \cdot n = 1$

Multiplicative Inverse Property

$n = 3$ , since  $\frac{1}{3} \cdot 3 = 1$

c.  $1 \cdot n = 7$

Multiplicative Identity Property

$n = 7$ , since  $1 \cdot 7 = 7$ .

### Example 2 Evaluate Using Properties

Evaluate  $14 + 3\left(2 - 4 \cdot \frac{1}{2}\right) + 7 \cdot \frac{1}{7}$ . Name the property used in each step.

$$\begin{aligned} 14 + 3\left(2 - 4 \cdot \frac{1}{2}\right) + 7 \cdot \frac{1}{7} &= 14 + 3(2 - 2) + 7 \cdot \frac{1}{7} && \text{Substitution; } 4 \cdot \frac{1}{2} = 2 \\ &= 14 + 3(0) + 7 \cdot \frac{1}{7} && \text{Substitution; } 2 - 2 = 0 \\ &= 14 + 0 + 1 && \text{Multiplication Property of Zero; } 3 \cdot 0 = 0, \\ &&& \text{Multiplicative Inverse; } 7 \cdot \frac{1}{7} \\ &= 14 + 1 && \text{Additive Identity; } 14 + 0 = 14 \\ &= 15 && \text{Substitution; } 14 + 1 = 15 \end{aligned}$$