Lesson 2 Reteach

Solve Two-Step Equations

A **two-step equation** contains two operations. To solve a two-step equation, undo each operation in reverse order.

Example 1

Solve $2a + 6 = 14$. Check your solution.

$2a + 6 = 14$	Write the equation.
$\underline{\quad -6 = -6}$	Subtraction Property of Equality
$2a \quad = \quad 8$	Simplify.
$\dfrac{2a}{2} = \dfrac{8}{2}$	Division Property of Equality
$a = 4$	Simplify.

Check $\quad 2a + 6 = 14 \qquad$ Write the equation.

$\qquad\qquad 2(4) + 6 \overset{?}{=} 14 \qquad$ Replace a with 4 to see if the sentence is true.

$\qquad\qquad\qquad 14 = 14 ✓ \qquad$ The sentence is true.

The solution is 4.

Sometimes it is necessary to combine like terms before solving an equation.

Example 2

Solve $5 = 8x - 2x - 7$. Check your solution.

$5 = 6x - 7$	Write the equation.
$5 + 7 = 6x - 7 + 7$	Addition Property of Equality
$12 = 6x$	Simplify.
$\dfrac{12}{6} = \dfrac{6x}{6}$	Division Property of Equality
$2 = x$	Simplify.

The solution is 2. Check this solution.

Exercises

Solve each equation. Check your solution.

1. $2d + 7 = 9$ 　　　　　　　　　　　 **2.** $11 = 3z + 5$ 　　　　　　　　　　　 **3.** $2s - 4 = 6$

4. $-12 = 5r + 8$

5. $-6p - 3 = 9$

6. $-14 = 4x - 2$

7. $2c + 2 = 10$

8. $3 + 9n = 21$

9. $21 = 5 - r$

10. $8 - 5b = -7$

11. $-10 = 6 - 4m$

12. $-3t + 4 = 19$

13. $2 + \dfrac{a}{6} = 5$

14. $-\dfrac{1}{3}q - 7 = -3$

15. $4 - \dfrac{v}{5} = 0$