Name _____ Date _____ Class _____

# Skills Readiness

## Solve Equations with Variables on Both Sides

To solve an equation with variables on both sides:

Step 1: Move all the variable expressions to one side of the equals sign by adding or subtracting.

Step 2: Isolate the variable by adding or subtracting any constants and then multiplying or dividing by any coefficients.

Example: Solve $7x - 12 = 3x + 8$.

Step 1: Subtract $3x$ from both sides.
$$7x - 12 = 3x + 8$$
$$\underline{-3x \qquad\quad -3x}$$
$$4x - 12 = \qquad 8$$

Step 2: Add 12 to both sides, then divide both sides by 4.
$$4x - 12 = \quad 8$$
$$\underline{+12 \qquad +12}$$
$$\frac{4x}{4} = \frac{20}{4}$$
$$x = \quad 5$$

## Practice on Your Own
Solve.

**1.** $3y + 5 = 9y - 13$

**2.** $4 + 11m = 7m - 1$

**3.** $9x + 15 = 7 + x$

_____

_____

_____

**4.** $-1 - 3t = 9 - 8t$

**5.** $x - 11 = 7x - 8$

**6.** $3b + 5 = -2b + 5$

_____

_____

_____

**7.** $-k - 7 = -5k - 6$

**8.** $16 - 3x = 5x - 8$

**9.** $-6a - 4 = -7a - 5$

_____

_____

_____

## Check
Solve.

**10.** $15x + 1 = 13x + 17$

**11.** $9 - 4t = 2t - 1$

**12.** $6y - 5 = 7y + 1$

_____

_____

_____

**13.** $p + 13 = 5p + 5$

**14.** $-5b + 11 = 7 - 6b$

**15.** $-x - 8 = -5x - 10$

_____

_____

_____

Holt McDougal Algebra 1