NAME _____ DATE _____ PERIOD _____

Lesson 3 Reteach

Solve Equations with Rational Coefficents

Multiplicative inverses, or **reciprocals**, are two numbers whose product is 1. To solve an equation in which the coefficient is a fraction, multiply each side of the equation by the reciprocal of the coefficient.

Example 1

Solve $15 = 0.5n$. Check the solution.

$15 = 0.5n$	Write the equation.
$\frac{15}{0.5} = \frac{0.5n}{0.5}$	Division Property of Equality
$30 = n$	Simplify.

Example 2

Solve $\frac{4}{5}x = 8$. Check your solution.

$\frac{4}{5}x = 8$	Write the equation.
$\left(\frac{5}{4}\right)\frac{4}{5}x = \left(\frac{5}{4}\right)8$	Multiply each side by the reciprocal of $\frac{4}{5}$, $\frac{5}{4}$.
$x = 10$	Simplify.

The solution is 10.

Exercises

Solve each equation. Check your solution.

1. $4.9 = 0.7m$ **7**

2. $-\frac{1}{2} = -\frac{6}{18}h$ $\mathbf{1\frac{1}{2}}$

3. $-2.8 = 4b$ **0.7**

4. $\frac{3}{5}x = 12$ **20**

5. $16 = \frac{10}{3}a$ $\mathbf{4\frac{4}{5}}$

6. $9 = 0.3n$ **30**

7. $\frac{15}{7}y = 3$ $\mathbf{1\frac{2}{5}}$

8. $21 = 0.75a$ **28**

9. $\frac{14}{3} = -\frac{7}{9}b$ **−6**