

Reteaching Page

5.4 Equations with Fractions (Multiply and Divide)

To solve an equation, you use the inverse operation to get the variable alone. In the case of equations with fractions, multiply the constant by the reciprocal and you will have found the inverse operation.

1. Find the Reciprocal
2. Multiply **both** sides by the reciprocal
3. Simplify
4. Check with Substitution

$$\frac{3}{4}n = 6\frac{3}{4}$$

Find the Reciprocal [The reciprocal is $\frac{4}{3}$]

$$\frac{4}{3} * \frac{3}{4}n = 6\frac{3}{4} * \frac{4}{3}$$

$$n = \frac{27}{4} * \frac{4}{3}$$

$$n = \frac{9}{1} * \frac{1}{1}$$

$$n = 9$$

Check

$$\frac{3}{4} \text{ of } 9 = 6\frac{3}{4}$$

$$\frac{3}{4} \text{ of } \frac{9}{1} = 6\frac{3}{4}$$

$$\frac{27}{4} = 6\frac{3}{4}$$

$$27 \div 4 = 6\frac{3}{4}$$

$$\frac{2n}{7} = 4 * 2\frac{1}{2}$$

$$\frac{2}{7}n = \frac{4}{1} * \frac{5}{2}$$

$$\frac{2}{7}n = 10$$

The reciprocal is $\frac{7}{2}$

$$\frac{7}{2} * \frac{2}{7}n = \frac{10}{1} * \frac{7}{2}$$

$$n = \frac{5}{1} * \frac{7}{1}$$

$$n = 35$$

Check

$$2 * \frac{35}{7} = 10$$

$$\frac{70}{7} = 10$$

$$10 = 10$$

Try a few.

$$\frac{8}{9}n = \frac{2}{3}$$

Reciprocal = _____

$$\frac{2n}{3} = 14$$

Reciprocal = _____

$$\frac{3}{4} = \frac{n}{4}$$

Reciprocal = _____
