

SECTION

4B

Ready to Go On? Skills Intervention**4-6 Solving Equations Containing Fractions**

Solving an equation with fractions is just like solving an equation with whole numbers. Use inverse operations to isolate the variable.

$$x - \frac{2}{3} = 7\frac{5}{6}$$

$$x = 7\frac{5}{6} + \frac{2}{3}$$

The variable is **not** isolated. The variable **is** isolated.

Solving Equations by Adding and Subtracting

Solve. Write the answer in simplest form.

$$x - \frac{5}{9} = \frac{2}{3}$$

$$x - \frac{5}{9} + \underline{\quad} = \frac{2}{3} + \underline{\quad}$$

How do you undo subtraction? _____

$$x = \underline{\quad} + \frac{5}{9}$$

Add.

$$x = \underline{\quad} + \frac{5}{9}$$

What is the common denominator of 3 and 9? _____

$$x = \frac{\underline{\quad}}{9}$$

Add.

$$\underline{\quad} = \underline{\quad}$$

Write the improper fraction as a mixed number.

Explain how to check your solution.

Solving Equations by Multiplying

Solve. Write the answer in simplest form.

$$\frac{3}{4} = \frac{5}{6}w$$

$$\underline{\quad} \cdot \frac{3}{4} = \frac{5}{6}w \cdot \underline{\quad}$$

What is the reciprocal of $\frac{5}{6}$? _____

$$\underline{\quad} = w$$

Simplify the product.

Is your answer in simplest form? Explain.

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Ready to Go On? Problem Solving Intervention

4-6 Solving Equations Containing Fractions

You can use equations with fractions to model situations and solve problems.

Ana has hiked $4\frac{1}{4}$ miles. She is $\frac{2}{3}$ of the way along the trail. How long is the trail?

Understand the Problem

1. Make a rough sketch and label it with the information in the problem. Use x to label the distance you need to find.

Make a Plan

2. Write an equation you can use to find x , the length of the trail in miles.

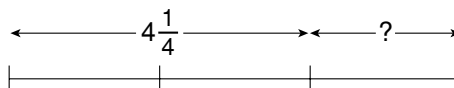
Solve

3. Solve your equation to find the length of the trail. Show each step.

4. How long is the trail?

Check

5. Solve a different way. If Ana hiked $\frac{2}{3}$ of the way, what fraction does she have left to hike? How many miles is that? *Hint:* $\frac{1}{3}$ is half of $\frac{2}{3}$.



6. Add the distance Ana hiked to the distance she has left. Does that match your answer for the length of the trail?

Solve

7. On a different trail, $4\frac{1}{4}$ miles is $\frac{3}{4}$ of the way. How long is the trail?
