

Dividing Fractions By Fractions Worksheet Questions and Answers PDF

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Part 1: Building a Foundation

What is the reciprocal of the fraction $\frac{3}{4}$?

Hint: Recall the definition of a reciprocal.

- $\frac{4}{3}$ ✓
- $\frac{3}{4}$
- $\frac{1}{4}$
- $\frac{1}{3}$

■ The reciprocal of a fraction is obtained by flipping the numerator and denominator.

Which of the following are steps in dividing fractions?

Hint: Think about the process involved in fraction division.

- Multiply the numerators** ✓
- Find the reciprocal of the divisor** ✓
- Subtract the numerators
- Simplify the result** ✓

■ The steps include finding the reciprocal of the divisor and multiplying the numerators.

Explain why we use the reciprocal when dividing fractions.

Hint: Consider the relationship between division and multiplication.

We use the reciprocal because dividing by a fraction is equivalent to multiplying by its reciprocal.

List the two main components of a fraction.

Hint: Think about the parts that make up a fraction.

1. What are the two components?

Numerator and Denominator

The two main components of a fraction are the numerator and the denominator.

If you divide $\frac{5}{6}$ by $\frac{2}{3}$, what is the first step?

Hint: Consider what you need to do with the divisor.

- Add the fractions
- Find the reciprocal of $\frac{5}{6}$
- Find the reciprocal of $\frac{2}{3}$** ✓
- Subtract the fractions

The first step is to find the reciprocal of the divisor, which is $\frac{2}{3}$.

Part 2: Application and Analysis

If a recipe requires $\frac{3}{4}$ cup of sugar and you want to make half the recipe, how much sugar do you need?

Hint: Think about how to halve a fraction.

- $\frac{3}{8}$ ✓
- $\frac{1}{2}$
- $\frac{1}{4}$
- $\frac{3}{2}$

You need to multiply $\frac{3}{4}$ by $\frac{1}{2}$ to find the amount of sugar needed.

You have $\frac{5}{6}$ of a pizza and want to share it equally among 3 friends. How much pizza does each friend get?

Hint: Consider how to divide a fraction by a whole number.

- $\frac{5}{18}$
- $\frac{5}{9}$ ✓
- $\frac{1}{2}$
- $\frac{1}{3}$

To find out how much each friend gets, divide $\frac{5}{6}$ by 3.

A tank is $\frac{2}{3}$ full of water. If you use $\frac{1}{4}$ of the water, how much water is left in the tank? Show your calculations.

Hint: Calculate the amount of water used and subtract it from the total.

First, calculate $\frac{1}{4}$ of $\frac{2}{3}$ and then subtract that from $\frac{2}{3}$.

What is the result of dividing $\frac{9}{10}$ by $\frac{3}{5}$?

Hint: Remember to multiply by the reciprocal of the divisor.

- $\frac{3}{2}$
- $\frac{5}{6}$
- $\frac{1}{2}$
- $\frac{3}{10}$ ✓

The result is found by multiplying $\frac{9}{10}$ by the reciprocal of $\frac{3}{5}$.

Which of the following statements are true about dividing fractions?

Hint: Consider the properties of division and multiplication.

- The result is always a smaller fraction
- You multiply by the reciprocal of the divisor ✓
- The result can be greater than 1 ✓
- Division of fractions is the same as subtraction

Some statements about dividing fractions are true, while others are not.

Part 3: Evaluation and Creation

Which scenario best represents dividing fractions in a real-world context?

Hint: Think about practical applications of dividing fractions.

- Splitting a cake into equal parts
- Calculating the area of a rectangle
- Determining how many $\frac{1}{3}$ cup servings are in $\frac{2}{3}$ cup of yogurt ✓
- Adding ingredients to a recipe

Determining how many $\frac{1}{3}$ cup servings are in $\frac{2}{3}$ cup of yogurt is a real-world application of dividing fractions.

Evaluate the following statements about dividing fractions and select those that are correct:

Hint: Consider the properties of division and multiplication.

- Dividing by a fraction is the same as multiplying by its reciprocal ✓
- The quotient of two fractions is always a fraction ✓
- The division of fractions can result in a whole number ✓
- The reciprocal of a fraction is always greater than the original fraction

Some statements about dividing fractions are true, while others are not.

Create a real-world problem involving the division of fractions and provide a solution to your problem.

Hint: Think about a scenario where you need to divide a quantity.

Your problem should involve dividing a quantity represented by a fraction and include a clear solution.

Design a step-by-step guide for a classmate who is struggling with dividing fractions. Include at least three key tips.

Hint: Think about the common challenges faced when dividing fractions.

1. What is the first key tip?

Always find the reciprocal of the divisor.

2. What is the second key tip?

Multiply the numerators and denominators.

3. What is the third key tip?

Simplify the result if possible.

Your guide should include clear steps and tips to help someone understand how to divide fractions.