

## Fraction Times Fraction Worksheet

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### Part 1: Building a Foundation

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**What is the result of multiplying the fractions  $\frac{2}{3}$  and  $\frac{3}{4}$ ?**

*Hint: Remember to multiply the numerators and denominators.*

- $\frac{5}{7}$
- $\frac{6}{12}$
- $\frac{1}{2}$
- $\frac{1}{3}$

**Which of the following are types of fractions? (Select all that apply)**

*Hint: Think about the different ways fractions can be categorized.*

- Proper Fractions
- Decimal Fractions
- Improper Fractions
- Mixed Numbers

**Explain in your own words how to multiply two fractions together. Include an example in your explanation.**

*Hint: Consider the steps involved in the multiplication process.*

List the steps to convert a mixed number into an improper fraction.

Hint: Think about how to express the whole number and the fraction together.

1. Step 1

2. Step 2

3. Step 3

What is the first step in multiplying mixed numbers?

Hint: Consider how you would handle mixed numbers before multiplication.

- Add the fractions
- Convert them to improper fractions
- Simplify the fractions
- Multiply the numerators

## Part 2: Application and Analysis

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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 find half of a fraction.

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

You have  $\frac{2}{3}$  of a pizza and you eat  $\frac{1}{2}$  of what you have. Which of the following represent the amount of pizza you ate? (Select all that apply)

Hint: Calculate  $\frac{1}{2}$  of  $\frac{2}{3}$ .

- $\frac{1}{3}$

- $\frac{1}{6}$
- $\frac{2}{6}$
- $\frac{1}{2}$

A garden is  $\frac{3}{5}$  of an acre in size. If you plant flowers in  $\frac{2}{3}$  of the garden, how much of the acre is used for flowers? Show your calculations.

*Hint: Multiply the fraction of the garden by the total size.*

Which of the following best describes the relationship between the numerators and denominators when multiplying fractions?

*Hint: Consider how the multiplication process works.*

- Numerators are added, and denominators are multiplied.
- Numerators and denominators are both added.
- Numerators are multiplied, and denominators are added.
- Numerators and denominators are both multiplied.

When simplifying the product of  $\frac{6}{8}$  and  $\frac{4}{9}$ , which of the following steps are necessary? (Select all that apply)

*Hint: Think about the process of simplifying fractions.*

- Cross-cancel common factors
- Multiply numerators and denominators
- Convert to mixed numbers
- Simplify the resulting fraction

### Part 3: Evaluation and Creation

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Which of the following is the most efficient method to simplify the product of  $\frac{8}{12}$  and  $\frac{3}{4}$ ?

*Hint: Consider the order of operations for simplification.*

- Multiply directly and simplify the result
- Simplify before multiplying
- Convert to decimals and multiply
- Use estimation to find an approximate answer

**Evaluate the following scenarios and select those where multiplying fractions is necessary. (Select all that apply)**

*Hint: Think about situations involving area or parts of a whole.*

- Dividing a pizza into equal parts
- Calculating the area of a rectangle with fractional dimensions
- Adding fractions with different denominators
- Determining the amount of fabric needed for a quilt

**Create a real-world problem involving the multiplication of fractions and provide a detailed solution.**

*Hint: Think about everyday situations where fractions are used.*

**Propose two different methods to verify the result of multiplying  $\frac{5}{7}$  by  $\frac{2}{3}$  and explain each method briefly.**

*Hint: Consider both numerical and visual methods.*

1. Method 1

2. Method 2