

# Multiplying Fractions by Fractions

Grade 5 Math • Section 5.3

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 17

## Quick Review and Helpful Hints

**Rule:**  $\frac{a}{b} \times \frac{c}{d} = \frac{a \times c}{b \times d}$ . Multiply numerators; multiply denominators.

**Simplify before** multiplying (cross-cancel common factors) to keep numbers small.

**Always** write your answer in simplest form. Convert improper fractions to mixed numbers.

**Example:** Find  $\frac{3}{5} \times \frac{2}{9}$ .

**Cross-cancel:** 3 and 9 share a factor of 3.  $\frac{\overset{1}{\cancel{3}}}{5} \times \frac{2}{\underset{\cancel{3}}{9}} = \frac{1 \times 2}{5 \times 3} = \frac{2}{15}$ .

**Answer:**  $\frac{2}{15}$

## Practice Problems

Multiply. Write your answer in simplest form.

1.  $\frac{1}{2} \times \frac{3}{4} =$  \_\_\_\_\_

6.  $\frac{7}{12} \times \frac{4}{7} =$  \_\_\_\_\_

11.  $\frac{4}{5} \times \frac{5}{12} =$  \_\_\_\_\_

2.  $\frac{2}{3} \times \frac{5}{8} =$  \_\_\_\_\_

7.  $\frac{2}{5} \times \frac{5}{9} =$  \_\_\_\_\_

12.  $\frac{9}{10} \times \frac{2}{3} =$  \_\_\_\_\_

3.  $\frac{3}{7} \times \frac{2}{5} =$  \_\_\_\_\_

8.  $\frac{3}{4} \times \frac{8}{15} =$  \_\_\_\_\_

13.  $\frac{7}{8} \times \frac{4}{21} =$  \_\_\_\_\_

4.  $\frac{4}{9} \times \frac{3}{8} =$  \_\_\_\_\_

9.  $\frac{5}{8} \times \frac{2}{3} =$  \_\_\_\_\_

14.  $\frac{3}{11} \times \frac{11}{12} =$  \_\_\_\_\_

5.  $\frac{5}{6} \times \frac{3}{10} =$  \_\_\_\_\_

10.  $\frac{1}{6} \times \frac{3}{5} =$  \_\_\_\_\_

15.  $\frac{6}{7} \times \frac{7}{9} =$  \_\_\_\_\_

## Word Problems

16. A garden covers  $\frac{3}{4}$  of a yard. Flowers take up  $\frac{2}{5}$  of the garden. What fraction of the whole yard is flowers? \_\_\_\_\_

17. Sophia ate  $\frac{1}{3}$  of a pizza. Her brother ate  $\frac{1}{2}$  of what she left. What fraction of the whole pizza did her brother eat? \_\_\_\_\_



## Answer Keys

1.  $\frac{3}{8}$
2.  $\frac{5}{12}$
3.  $\frac{6}{35}$
4.  $\frac{1}{6}$
5.  $\frac{1}{4}$
6.  $\frac{1}{3}$
7.  $\frac{2}{9}$
8.  $\frac{2}{5}$
9.  $\frac{5}{12}$

10.  $\frac{1}{10}$
11.  $\frac{1}{3}$
12.  $\frac{3}{5}$
13.  $\frac{1}{6}$
14.  $\frac{1}{4}$
15.  $\frac{2}{3}$
16.  $\frac{3}{10}$
17.  $\frac{1}{3}$

### Step-by-Step Explanations

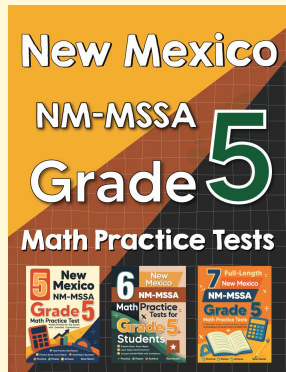
1. Start with the main idea. For multiplying fractions by fractions, multiply the numerators and denominators, then simplify. The result is  $\frac{3}{8}$ . Fractions are easier to combine when the pieces are the same size.
2. Keep the work tidy. For multiplying fractions by fractions, multiply the numerators and denominators, then simplify. The result is  $\frac{5}{12}$ . Always simplify at the end so the answer is clean and useful.
3. Look at what the numbers mean. For multiplying fractions by fractions, multiply the numerators and denominators, then simplify. The result is  $\frac{6}{35}$ . For mixed numbers, converting to improper fractions can make the arithmetic calmer.
4. Use the setup first. For multiplying fractions by fractions, multiply the numerators and denominators, then simplify. The result is  $\frac{1}{6}$ . Fractions are easier to combine when the pieces are the same size.
5. Check the size of the answer. For multiplying fractions by fractions, multiply the numerators and denominators, then simplify. The result is  $\frac{1}{4}$ . Always simplify at the end so the answer is clean and useful.
6. Match the operation to the words. For multiplying fractions by fractions, multiply the numerators and denominators, then simplify. The result is  $\frac{1}{3}$ . For mixed numbers, converting to improper fractions can make the arithmetic calmer.
7. Write the important values first. For multiplying fractions by fractions, multiply the numerators and denominators, then simplify. The result is  $\frac{2}{9}$ . Fractions are easier to combine when the pieces are the same size.
8. Follow the pattern carefully. For multiplying fractions by fractions, multiply the numerators and denominators, then simplify. The result is  $\frac{2}{5}$ . Always simplify at the end so the answer is clean and useful.
9. Start with the main idea. For multiplying fractions by fractions, multiply the

- numerators and denominators, then simplify. The result is  $\frac{5}{12}$ . For mixed numbers, converting to improper fractions can make the arithmetic calmer.
10. Keep the work tidy. For multiplying fractions by fractions, multiply the numerators and denominators, then simplify. The result is  $\frac{1}{10}$ . Fractions are easier to combine when the pieces are the same size.
11. Look at what the numbers mean. For multiplying fractions by fractions, multiply the numerators and denominators, then simplify. The result is  $\frac{1}{3}$ . Always simplify at the end so the answer is clean and useful.
12. Use the setup first. For multiplying fractions by fractions, multiply the numerators and denominators, then simplify. The result is  $\frac{3}{5}$ . For mixed numbers, converting to improper fractions can make the arithmetic calmer.
13. Check the size of the answer. For multiplying fractions by fractions, multiply the numerators and denominators, then simplify. The result is  $\frac{1}{6}$ . Fractions are easier to combine when the pieces are the same size.
14. Match the operation to the words. For multiplying fractions by fractions, multiply the numerators and denominators, then simplify. The result is  $\frac{1}{4}$ . Always simplify at the end so the answer is clean and useful.
15. Write the important values first. For multiplying fractions by fractions, multiply the numerators and denominators, then simplify. The result is  $\frac{2}{3}$ . For mixed numbers, converting to improper fractions can make the arithmetic calmer.
16. Follow the pattern carefully. For multiplying fractions by fractions, flowers cover  $\frac{2}{5}$  of  $\frac{3}{4}$ :  $\frac{3}{4} \times \frac{2}{5} = \frac{3}{10}$ . Fractions are easier to combine when the pieces are the same size.
17. Start with the main idea. For multiplying fractions by fractions, after Sophia eats  $\frac{1}{3}$ ,  $\frac{2}{3}$  remains; half of that is  $\frac{1}{2} \times \frac{2}{3} = \frac{1}{3}$ . Always simplify at the end so the answer is clean and useful.



# Want Even More Practice?

Check Out Our Other New Mexico NM-MSSA Test Books!



## New Mexico NM-MSSA Grade 5 Math Preparation Bundle

18 full-length practice tests across three books  
(5 + 6 + 7)

No repeated questions—maximum practice value!



**18 Tests!**  
**3 Books**  
**One Bundle**

**Important:** All our test books contain **unique, completely different tests** from each other! Each book offers fresh practice questions—no repeats!

### 5 Practice Tests

- ✓ 5 complete practice tests with detailed explanations
- ✓ Perfect foundation for NM-MSSA test preparation
- ✓ Builds confidence and test-taking skills
- ✓ High-quality questions aligned with state standards

**Start your practice journey!**

### 6 Practice Tests

- ✓ 6 complete practice tests with detailed explanations
- ✓ **Unique tests**—different from the 5 tests book
- ✓ Perfect for more practice after mastering 5 tests
- ✓ Builds even more confidence and test-taking skills
- ✓ Same high-quality questions aligned with standards

**Take your practice to the next level!**

### 7 Practice Tests

- ✓ 7 complete practice tests for maximum preparation
- ✓ **Unique tests**—different from 5 and 6 tests books
- ✓ The most comprehensive practice for Grade 5
- ✓ Ideal for students aiming for top scores
- ✓ Extensive practice builds mastery and confidence

**Go all the way with comprehensive practice!**