

# Dividing Unit Fractions by Whole Numbers

Grade 5 Math • Section 6.1

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

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

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

## Quick Review and Helpful Hints

**Rule:**  $\frac{1}{b} \div c = \frac{1}{b \times c}$ . Dividing a unit fraction by a whole number makes the pieces **smaller**.

Think of it as splitting each  $\frac{1}{b}$  piece into  $c$  equal parts.  $\frac{1}{3} \div 4$  means “split a third into 4 equal pieces” =  $\frac{1}{12}$ .

Do **not** flip the fraction that is being divided.

**Example:** Find  $\frac{1}{4} \div 3$ .

Imagine splitting a  $\frac{1}{4}$  piece of a pie into 3 equal parts. Each part is  $\frac{1}{4 \times 3} = \frac{1}{12}$  of the whole pie.

**Answer:**  $\frac{1}{12}$

## Practice Problems

Divide. Write your answer in simplest form.

1.  $\frac{1}{2} \div 3 =$  \_\_\_\_\_

6.  $\frac{1}{8} \div 2 =$  \_\_\_\_\_

11.  $\frac{1}{6} \div 5 =$  \_\_\_\_\_

2.  $\frac{1}{3} \div 5 =$  \_\_\_\_\_

7.  $\frac{1}{3} \div 7 =$  \_\_\_\_\_

12.  $\frac{1}{5} \div 8 =$  \_\_\_\_\_

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

8.  $\frac{1}{2} \div 5 =$  \_\_\_\_\_

13.  $\frac{1}{9} \div 3 =$  \_\_\_\_\_

4.  $\frac{1}{5} \div 4 =$  \_\_\_\_\_

9.  $\frac{1}{10} \div 4 =$  \_\_\_\_\_

14.  $\frac{1}{7} \div 2 =$  \_\_\_\_\_

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

10.  $\frac{1}{4} \div 6 =$  \_\_\_\_\_

15.  $\frac{1}{3} \div 10 =$  \_\_\_\_\_

## Word Problems

16. A pizza has  $\frac{1}{4}$  left. Three friends share it equally. What fraction of the whole pizza does each friend get? \_\_\_\_\_

17. A  $\frac{1}{2}$ -pound bag of trail mix is split equally among 6 hikers. How much does each hiker get? \_\_\_\_\_



## Answer Keys

1.  $\frac{1}{6}$

2.  $\frac{1}{15}$

3.  $\frac{1}{8}$

4.  $\frac{1}{20}$

5.  $\frac{1}{18}$

6.  $\frac{1}{16}$

7.  $\frac{1}{21}$

8.  $\frac{1}{10}$

9.  $\frac{1}{40}$

10.  $\frac{1}{24}$

11.  $\frac{1}{30}$

12.  $\frac{1}{40}$

13.  $\frac{1}{27}$

14.  $\frac{1}{14}$

15.  $\frac{1}{30}$

16.  $\frac{1}{12}$

17.  $\frac{1}{12}$  lb

### Step-by-Step Explanations

1. Start with the main idea. For dividing unit fractions by whole numbers, divide by multiplying by the reciprocal, then simplify. The result is  $\frac{1}{6}$ . Fractions are easier to combine when the pieces are the same size.

2. Keep the work tidy. For dividing unit fractions by whole numbers, divide by multiplying by the reciprocal, then simplify. The result is  $\frac{1}{15}$ . Always simplify at the end so the answer is clean and useful.

3. Look at what the numbers mean. For dividing unit fractions by whole numbers, divide by multiplying by the reciprocal, then simplify. The result is  $\frac{1}{8}$ . For mixed numbers, converting to improper fractions can make the arithmetic calmer.

4. Use the setup first. For dividing unit fractions by whole numbers, divide by multiplying by the reciprocal, then simplify. The result is  $\frac{1}{20}$ . Fractions are easier to combine when the pieces are the same size.

5. Check the size of the answer. For dividing unit fractions by whole numbers, divide by multiplying by the reciprocal, then simplify. The result is  $\frac{1}{18}$ . Always simplify at the end so the answer is clean and useful.

6. Match the operation to the words. For dividing unit fractions by whole numbers, divide by multiplying by the reciprocal, then simplify. The result is  $\frac{1}{16}$ . For mixed numbers, converting to improper fractions can make the arithmetic calmer.

7. Write the important values first. For dividing unit fractions by whole numbers, divide by multiplying by the reciprocal, then simplify. The result is  $\frac{1}{21}$ . Fractions are easier to combine when the pieces are the same size.

8. Follow the pattern carefully. For dividing unit fractions by whole numbers, divide by multiplying by the reciprocal, then simplify. The result is  $\frac{1}{10}$ . Always simplify at the end so the answer is clean and useful.

9. Start with the main idea. For dividing unit fractions by whole numbers, di-

vide by multiplying by the reciprocal, then simplify. The result is  $\frac{1}{24}$ . For mixed numbers, converting to improper fractions can make the arithmetic calmer.

10. Keep the work tidy. For dividing unit fractions by whole numbers, divide by multiplying by the reciprocal, then simplify. The result is  $\frac{1}{30}$ . Fractions are easier to combine when the pieces are the same size.

11. Look at what the numbers mean. For dividing unit fractions by whole numbers, divide by multiplying by the reciprocal, then simplify. The result is  $\frac{1}{30}$ . Always simplify at the end so the answer is clean and useful.

12. Use the setup first. For dividing unit fractions by whole numbers, divide by multiplying by the reciprocal, then simplify. The result is  $\frac{1}{40}$ . For mixed numbers, converting to improper fractions can make the arithmetic calmer.

13. Check the size of the answer. For dividing unit fractions by whole numbers, divide by multiplying by the reciprocal, then simplify. The result is  $\frac{1}{27}$ . Fractions are easier to combine when the pieces are the same size.

14. Match the operation to the words. For dividing unit fractions by whole numbers, divide by multiplying by the reciprocal, then simplify. The result is  $\frac{1}{14}$ . Always simplify at the end so the answer is clean and useful.

15. Write the important values first. For dividing unit fractions by whole numbers, divide by multiplying by the reciprocal, then simplify. The result is  $\frac{1}{30}$ . For mixed numbers, converting to improper fractions can make the arithmetic calmer.

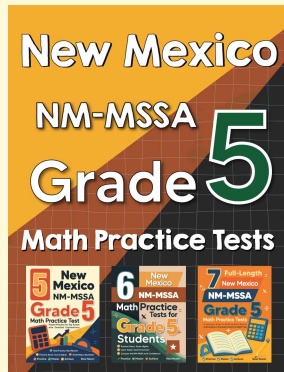
16. Follow the pattern carefully. For dividing unit fractions by whole numbers, share  $\frac{1}{4}$  equally among 3:  $\frac{1}{4} \div 3 = \frac{1}{12}$ . Fractions are easier to combine when the pieces are the same size.

17. Start with the main idea. For dividing unit fractions by whole numbers,  $\frac{1}{2} \div 6 = \frac{1}{12}$  pound per hiker. 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!**