

Name \_\_\_\_\_

## Divide Fractions by a Whole Number

**Essential Question** How do you divide a fraction by a whole number?

### UNLOCK the Problem REAL WORLD

Four friends share  $\frac{2}{3}$  of a quart of ice cream equally. What fraction of a quart of ice cream does each friend get?

- What operation will you use to solve the problem?

\_\_\_\_\_

**Divide.**  $\frac{2}{3} \div 4$

**STEP 1**

Let the rectangle represent 1 quart of ice cream. Divide it into thirds by drawing vertical lines. Shade 2 of the thirds.



**STEP 2**

Divide the rectangle into fourths by drawing horizontal lines. Shade  $\frac{1}{4}$  of the  $\frac{2}{3}$  already shaded.

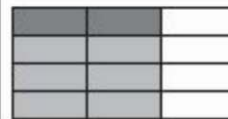


**STEP 3**

The rectangle is now divided into \_\_\_\_\_ equal parts.

Each part is \_\_\_\_\_ of the rectangle. Of the 12 equal parts, \_\_\_\_\_ parts are shaded twice. So,

\_\_\_\_\_ of the rectangle is shaded twice.



So, each friend gets \_\_\_\_\_ of a quart of ice cream.

**Math Talk** Explain why you divided the rectangle into fourths in Step 2.

**Try This!** Divide.  $\frac{3}{4} \div 2$

**STEP 1**

Divide the rectangle into fourths. Shade 3 of the fourths.



**STEP 2**

Divide the rectangle into halves. Shade  $\frac{1}{2}$  of the  $\frac{3}{4}$  already shaded.



**STEP 3**

Of the 8 equal parts, \_\_\_\_\_ parts are shaded twice. So, \_\_\_\_\_ of the rectangle is shaded twice.



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

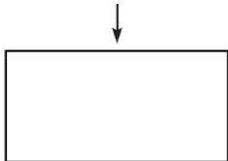
## Share and Show



Complete the model to find the quotient. Write the quotient in simplest form.

1.  $\frac{5}{6} \div 2 =$  \_\_\_\_\_

Divide the rectangle into sixths.  
Shade 5 of the sixths.



Divide the rectangle into halves. Shade  $\frac{1}{2}$  of  $\frac{5}{6}$ .

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



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



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



## On Your Own

Complete the model to find the quotient. Write the quotient in simplest form.

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



6.  $\frac{5}{8} \div 3 =$  \_\_\_\_\_



Draw a model to find the quotient. Write the quotient in simplest form.

7.  $\frac{4}{9} \div 2 =$  \_\_\_\_\_

8.  $\frac{4}{5} \div 3 =$  \_\_\_\_\_

## Problem Solving



9. Heather, Jocelyn, and Dane are each swimming one leg of a  $\frac{9}{10}$ -mile race. They will divide the distance equally. How far will each team member swim?

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