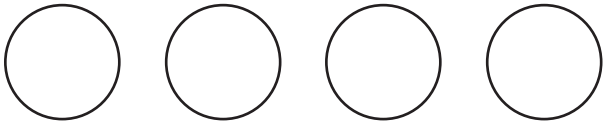
Name _____

Fraction and Whole-Number Division

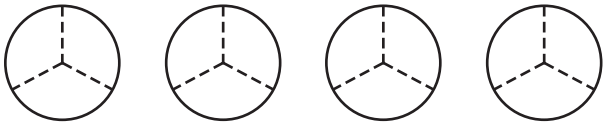
You can divide fractions by solving a related multiplication sentence.

Divide. $4 \div \frac{1}{3}$

Step 1 Draw 4 circles to represent the dividend, 4.



Step 2 Since the divisor is $\frac{1}{3}$, divide each circle into thirds.



Step 3 Count the total number of thirds.

When you divide the 4 circles into thirds, you are finding the number of thirds in 4 circles, or finding 4 groups of 3.

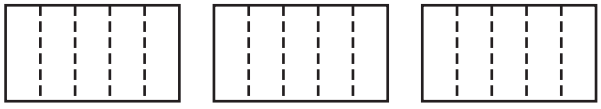
There are 12 thirds.

Step 4 Complete the number sentence.

$4 \div \frac{1}{3} = 4 \times \underline{3} = \underline{12}$

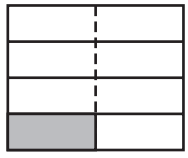
Use the model to complete the number sentence.

1.



$3 \div \frac{1}{5} = 3 \times \_\_\_\_ = \_\_\_\_$

2.



$\frac{1}{4} \div 2 = \frac{1}{4} \times \_\_\_\_ = \_\_\_\_$

Write a related multiplication sentence to solve.

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

4. $\frac{1}{3} \div 3$

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

6. $5 \div \frac{1}{4}$

Name _____

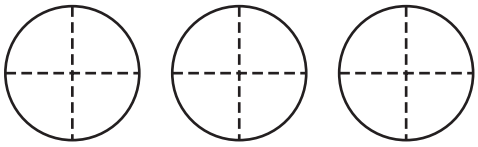
Interpret Division with Fractions

You can draw a diagram or write an equation to represent division with fractions.

Beatriz has 3 cups of applesauce. She divides the applesauce into $\frac{1}{4}$-cup servings. How many servings of applesauce does she have?

One Way Draw a diagram to solve the problem.

Draw 3 circles to represent the 3 cups of applesauce. Since Beatriz divides the applesauce into $\frac{1}{4}$-cup servings, draw lines to divide each "cup" into fourths.



To find $3 \div \frac{1}{4}$, count the total number of fourths in the 3 circles.

So, Beatriz has 12 one-fourth-cup servings of applesauce.

Another Way Write an equation to solve.

Write an equation. $3 \div \frac{1}{4} = n$

Write a related multiplication equation. $3 \times 4 = n$

Then solve. $12 = n$

So, Beatriz has 12 one-fourth-cup servings of applesauce.

1. Draw a diagram to represent the problem. Then solve.

Drew has 5 granola bars. He cuts the bars into halves. How many $\frac{1}{2}$-bar pieces does he have?

2. Write an equation to represent the problem. Then solve.

Three friends share $\frac{1}{4}$ of a melon. What fraction of the whole melon does each friend get?