LESSON 5

Objective

Identify and show halves, thirds, and fourths of regions.

Common Core State Standards

- **2.G.3** Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words *halves, thirds, half of, a third of,* etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

Geometry

Identifying Unit Fractions

Fractions will play an important role in children's lives, and learning the basic concepts of unit fractions will give them a foundation on which they can build in the future. Being able to recognize that one-half, one-third, and one-fourth each represent equal parts of a whole will help children understand a variety of concepts, including telling time, counting money, and measurement.

Try It! *Perform the Try It! activity on the next page.*

Talk About It

Discuss the Try It! activity.

- **Ask:** *How many parts were there when you first made the square?* Help children understand that the square represented one whole.
- **Ask:** *When you added another rubber band, how many parts were there? Were the parts the same size? How could you tell?*
- **Ask:** *What do we call two equal parts of one whole?*
- **Ask:** *Can you divide your Geoboard into 4 equal parts that are not the same shape?*

Solve It

With children, reread the problem. Then have children draw a square to represent the gym. Have children draw a line to divide the gym in half. Extend the activity by having children draw two more squares and show what it would look like if the gym were divided into fourths and thirds. Instruct children to write one sentence about each drawing explaining which fraction is represented.

More Ideas

For other ways to teach about identifying simple fractions—

- Have children trace different Pattern Blocks shapes and then practice dividing the tracings into halves, fourths, and thirds.
- Have children work with a partner. Distribute Snap Cubes® to children and have them build a train. Have children trace their train four times, and divide one tracing into halves, one into fourths, and one into thirds. Have them compare the divided tracings with the undivided one so they can track the fractional division.

Formative Assessment

Have children try the following problem.

Draw lines in the squares so they match the labels.

A. halves **B.** thirds **C.** fourths

Try It! 20 minutes | Groups of 3

Here is a problem about identifying simple fractions.

It was raining, so Billy's class had to play in the gym for recess instead of going outside. Billy's teacher asked Billy and his friends to use a rope to divide the gym in half, one side for basketball and one side for dodgeball. How will Billy and his friends know how to place the rope?

Introduce the problem. Then have children do the activity to solve the problem.

Distribute Geoboards and rubber bands to children.

Materials

- Geoboard (1 per group)
- rubber bands (5 per group)

1. Have children make a square that is 4 units by 4 units on the Geoboard. Tell them to use another rubber band to divide the square into two equal parts. Explain that each smaller part is called a *half*.

2. Instruct children to count the units in each half of the square to verify that the parts are equal.

3. Have children divide the square into four equal parts. Explain that each part is called a *fourth*. Have children count the units in each section. To repeat with thirds, adjust the size to a 3 × 3 square or 3 × 2 rectangle.

⚠ Look Out!

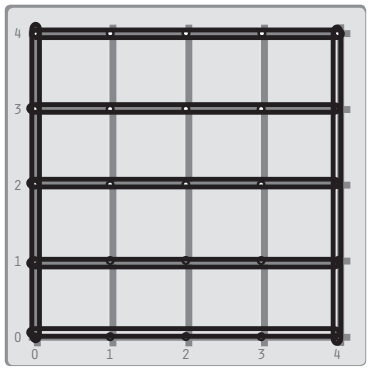
Children may believe that any shape divided into two parts represents two halves, or that any shape divided into three parts represents thirds, and so on. Remind children that the parts must be equal. Reinforce this as children count the units in each section of the square during the Geoboard activity.

Answer Key

Use a Geoboard. Make the model shown. Into how many equals parts is the shape divided? (Check students' work.)

1. 

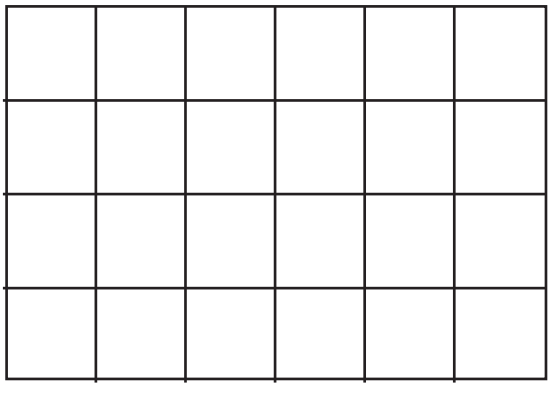
_____2_____ equal parts

2. 

_____4_____ equal parts

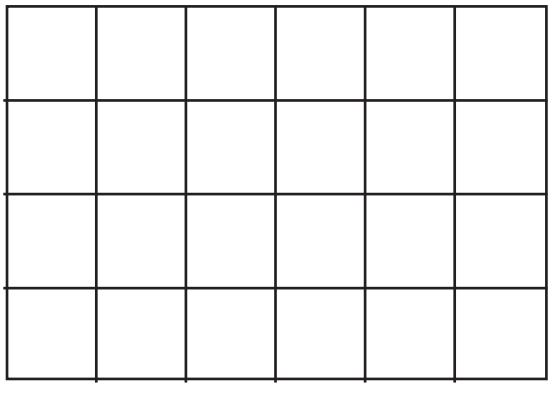
Make a model on the grid that has equal parts. Use the number given. Draw the model. (Check students' work.)

3. 3



How many grid squares are in each part? 8

4. 4



How many grid squares are in each part? 6

Answer Key

Challenge! If a shape is divided into five equal parts, what part of the whole shape is each part?

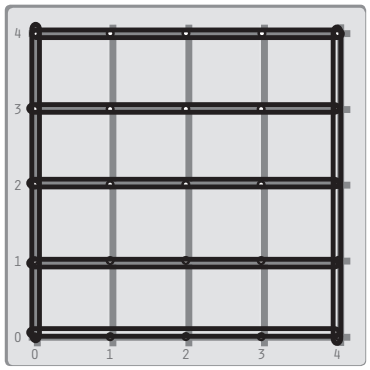
Challenge: $\frac{1}{5}$

Name _____

Use a Geoboard. Make the model shown. Into how many equals parts is the shape divided?

1. 

_____ equal parts

2. 

_____ equal parts

Make a model on the grid that has equal parts. Use the number given. Draw the model.

3. 3

How many grid squares are in each part? ____

4. 4

How many grid squares are in each part? ____

Name _____

Challenge! If a shape is divided into five equal parts, what part of the whole shape is each part?