

## Fraction Circles

### Purpose

Students will compare unit fractions and understand that when all fractional parts are included, the parts are equal to the whole and to one.

### Materials

*For the teacher:* 1 white cardboard circle, 2 blue one-half parts, 3 yellow one-third parts, 4 red one-fourth parts (all parts should fit exactly into the circle)

*For each student:* 1 white cardboard circle, 2 blue one-half parts, 3 yellow one-third parts, 4 red one-fourth parts (all parts should fit exactly into the circle); copy of Black Line Master (BLM) *Fractions of Circles*

### Activity

#### A. Pre-Activity Preparation

Make four circles that are the same size: a white cardboard circle, a blue circle divided in half, a yellow circle divided into thirds, and a red circle divided into fourths.

#### B. Introduction

1. Give students their copies of the cardboard circles and the fractional pieces.
2. Explain to them that a fraction is named according to the number of pieces that are required to fit exactly into the whole.
3. Hold up the whole circle and ask the class if it is a “whole circle.”
4. Hold up some of the fractional pieces and ask if any of the pieces are whole circles.
5. Show that the two halves fit exactly into the whole circle.
6. Tell the class that, since it takes two pieces to fit exactly into the whole circle, the fraction that represents one of the pieces is written as one over two.
7. Write the fraction on the board.
8. Explain the meaning of the numerator and denominator without using the names of the terms themselves. Instead use terminology such as “one out of two” or “one of two” and “the number on top.”
9. Tell the students that the fraction is read as “one-half” as opposed to “one-twos” or “one-seconds.”

(continued)



#### INCORPORATING TECHNOLOGY

Use a software program or Web site that enables students to complete activities involving fractions.



#### EXTENDING THE ACTIVITY

Have students make their own fractional shapes by folding paper. Have the students cut out the sections and use the pieces to practice making fractions.

**Standards Link**  
**2.1.8**

**Activity (continued)** 

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**C. Student Activity**


1. Hand one copy of the BLM *Fractions of Circles* to each student.
2. After giving instructions, have students work individually to complete the BLM, using the cardboard circles and fractional pieces.
3. Review the answers to the BLM with the class.


**Questions for Review** 

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**Basic Concepts and Processes**

After students have completed the BLM *Fractions of Circles*, discuss the following questions with them to gauge their understanding of the Standard Indicators:

 If you could divide a circle into 10 parts, how would you write the fraction that represents one part?

 How did you find that fraction?

 Which fractional piece would be bigger:  $\frac{1}{8}$  or  $\frac{1}{12}$ ?

 What part of these fractions do you look at to find the bigger piece?

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

## Fractions of Circles

Using the cardboard circle and fractional pieces that the teacher has given you, do the steps below:

1. **Fit the yellow pieces onto the white card.**

Do they fit exactly? \_\_\_\_\_

How many yellow pieces fit into the circle?  
\_\_\_\_\_

Write the numbers in the boxes to make the fraction for one yellow piece.

Write the fraction name on each yellow piece.


2. **Fit the red pieces onto the white card.**

Do they fit exactly? \_\_\_\_\_

How many red pieces fit into the circle?  
\_\_\_\_\_

Write the numbers in the boxes to make the fraction for one red piece.

Write the fraction name on each red piece.


3. **Lay one red piece, one yellow piece, and one blue piece next to each other on your desk.**

Which is the biggest? \_\_\_\_\_

Which is the smallest? \_\_\_\_\_

Now that you know the fraction names for each of these pieces, which is larger:  $\frac{1}{2}$  or  $\frac{1}{4}$ ?

Write the numbers in the boxes to make the bigger fraction.


# Fractions of Circles

## Teacher Directions

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Have the students complete the BLM *Fractions of Circles* using the cardboard circles and fractional pieces.

## Answer Key

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### 1. Fit the yellow pieces onto the white card.

Do they fit exactly? yes

How many yellow pieces fit into the circle? 3

Write the numbers in the boxes to make the fraction for one yellow piece.

Write the fraction name on each yellow piece.

1

3

### 2. Fit the red pieces onto the white card.

Do they fit exactly? yes

How many red pieces fit into the circle? 4

Write the numbers in the boxes to make the fraction for one red piece.

Write the fraction name on each red piece.

1

4

### 3. Lay one red piece, one yellow piece, and one blue piece next to each other on your desk.

Which is the biggest? blue

Which is the smallest? red

Now that you know the fraction names for each of these pieces, which is larger:  $1/2$  or  $1/4$ ?

Write the numbers in the boxes to make the bigger fraction.

1

2