

# Rational Number Project

## Level 1 / Lesson 5 / Overview

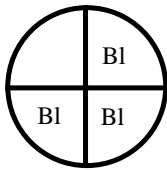
Students are introduced to fraction symbols.

## Materials

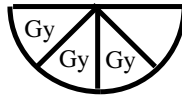
- Fraction Circles for students and teacher
- Student Pages A - E

## Teaching Actions

1. Ask students to use fraction circles to show 3-fourths. They are to show two models. For example:



3 blues are 3-fourths of 1 black.



3 grays are 3-fourths of 1 yellow.

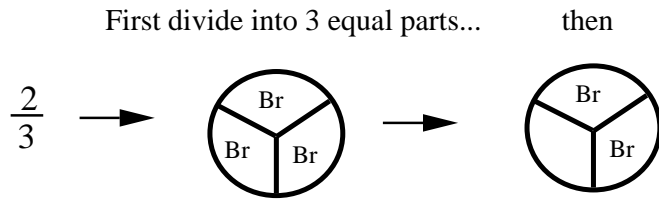
2. Ask how the two models are alike.
3. Record in words fraction name: 3-fourths. Explain that there is also a symbol name for 3-fourths and it is  $\frac{3}{4}$ .
4. Discuss the meaning of  $\frac{3}{4}$ . Ask how many equal parts each unit is divided into? Point to the bottom of the fraction symbol and explain that this 4 tells us that. The 3 tells us that we are interested in 3 of these 4 equal parts. The fraction means  $\frac{1}{4}$  and  $\frac{1}{4}$  and  $\frac{1}{4}$ .

## Comments

1. It's not important for students to memorize words: numerator and denominator.

## Teaching Actions

5. Write  $\frac{2}{3}$  on board and ask students to show that fraction with the fraction circles. Have them verbalize why their model does indeed represent  $\frac{2}{3}$ .



"I divided the circle into 3 equal parts to find what color is thirds. Then I only want 2 of them so

shows 2 of 3 equal parts. It is  $\frac{1}{3}$  and  $\frac{1}{3}$  more."

6. Repeat for  $\frac{3}{5}$ ,  $\frac{2}{6}$ ,  $\frac{4}{8}$ ,  $\frac{3}{3}$ .

Embed examples in context:

A spinner for a game was divided into 5 equal parts.  $\frac{3}{5}$  of the spinner was blue. Show that amount with the fraction circles.

A pizza was cut into 6 equal parts. You ate  $\frac{2}{6}$  of the pizza. Show that amount with the fraction circles.

7. Student pages that follow reinforce the meaning of the symbol. **Select most appropriate (and amount of) practice your students need.**

## Comments

2. It's very important to help children verbalize the meaning of fraction symbols.

**Have them talk through what they are doing with the fraction circles.**

The action on the manipulative reinforces the meaning of the symbol.

3. You can also return to previous student pages and have students record answers in symbol form.

Name \_\_\_\_\_

1. Write each fraction in words.

a.  $\frac{2}{4}$  \_\_\_\_\_

e.  $\frac{7}{10}$  \_\_\_\_\_

b.  $\frac{3}{7}$  \_\_\_\_\_

f.  $\frac{7}{15}$  \_\_\_\_\_

c.  $\frac{6}{8}$  \_\_\_\_\_

g.  $\frac{3}{12}$  \_\_\_\_\_

d.  $\frac{3}{11}$  \_\_\_\_\_

h.  $\frac{7}{9}$  \_\_\_\_\_

2. Write the word name and the symbol name for each fraction described.

a. 3 of 5 equal-size parts are shaded. \_\_\_\_\_

b. 5 of 7 equal-size parts are shaded. \_\_\_\_\_

c. 3 of 13 equal-size parts are shaded. \_\_\_\_\_

d. 12 of 17 equal-size parts are shaded. \_\_\_\_\_

e. 0 of 3 equal-size parts are shaded. \_\_\_\_\_

3. Write the fraction symbol for each fraction word.

a. 9-tenths \_\_\_\_\_

e. 13-twenty-firsts \_\_\_\_\_

b. 7-eighths \_\_\_\_\_

f. 17-eighteenths \_\_\_\_\_

c. 6-sixths \_\_\_\_\_

g. 0-fourths \_\_\_\_\_

d. 15-nineteenths \_\_\_\_\_

4. Imagine a circle divided into 4 equal parts.

Three  $\frac{1}{4}$  parts are shaded!

What fraction tells how much is shaded in all? \_\_\_\_\_

Draw a picture.

5. Imagine a rectangle divided into 5 equal parts.

Four  $\frac{1}{5}$  parts are shaded!

What fraction tells how much is shaded in all? \_\_\_\_\_

Draw a picture.








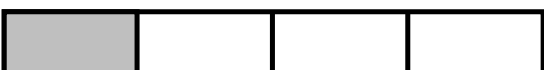




6. Write the word name and the symbol name each fraction describes.

a. A rectangle is folded into 7 equal-size parts.  
5 parts are shaded.

b. A circle is folded into 8 equal-size parts.  
4 parts are shaded.

Directions:

Match each picture with its symbol or word name by writing the letter of the picture next to its symbol. The first one is done for you.

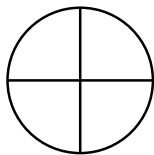
- |    |   |                                    |
|----|---|------------------------------------|
| A. |    | $\frac{1}{6}$ <u>    </u> <i>F</i> |
| B. |    | 2-halves <u>    </u>               |
| C. |    | $\frac{3}{4}$ <u>    </u>          |
| D. |    | 2-thirds <u>    </u>               |
| E. |    | $\frac{3}{3}$ <u>    </u>          |
| F. |  | 1-fourth <u>    </u>               |
| G. |  | $\frac{6}{6}$ <u>    </u>          |
| H. |  | $\frac{1}{3}$ <u>    </u>          |
| I. |  | 3-sixths <u>    </u>               |
| J. |  | $\frac{4}{6}$ <u>    </u>          |
| K. |  | 2-fourths <u>    </u>              |
| L. |  | $\frac{1}{2}$ <u>    </u>          |

Name \_\_\_\_\_

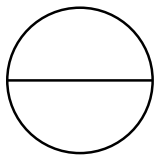
**Lesson 5**  
**Student Page D**

Shade each circle to show the fractional amount.

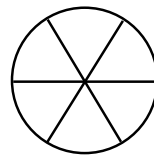
$\frac{1}{4}$



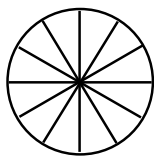
$\frac{2}{2}$



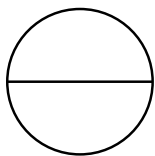
$\frac{1}{6}$



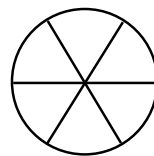
$\frac{5}{12}$



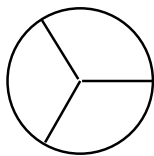
$\frac{0}{2}$



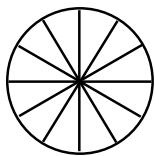
$\frac{5}{6}$



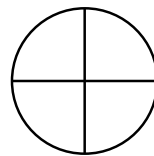
$\frac{1}{3}$



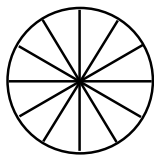
$\frac{11}{12}$



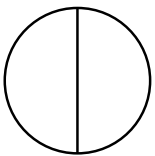
$\frac{4}{4}$



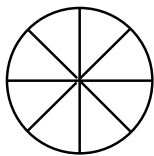
$\frac{2}{12}$



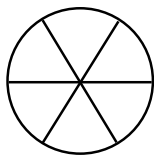
$\frac{1}{2}$



$\frac{6}{8}$



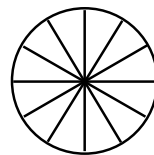
$\frac{1}{6}$



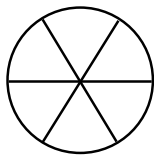
$\frac{0}{3}$



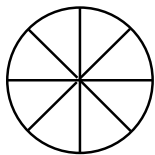
$\frac{6}{12}$



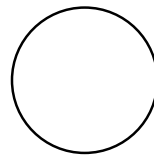
$\frac{6}{6}$



$\frac{8}{8}$



















You  
Decide



Name \_\_\_\_\_

**Lesson 5**  
**Student Page E**

Write the name for the shaded part of each rectangle in words and then in symbols.

1. <b>1 - half</b> $\frac{1}{2}$ 	9. 
2. 	10. 
3. 	11. 
4. 	12. 
5. 	13. 
6. 	14. 
7. 	15. 
8. 	16. 

## Post Lesson Reflection

Lesson \_\_\_\_\_

1) Number of class periods allocated to this lesson: \_\_\_\_\_

2) Student pages used: \_\_\_\_\_

3) Adaptations made in lesson development part:

[For example: added extra problems, eliminated problems, changed fractions used]

4) Adaptations made on Student pages:

5) To improve lesson, next time I should: