

What's in a Name?

Purpose

Students will compare the graphic representations for halves, fourths, tenths, and hundredths in order to write the decimal and fractional notations for each.

Materials

For the teacher: chalkboard, chalk, overhead projector, transparency of Black Line Master (BLM) *Decimal and Fraction Squares*

For each student: copies of BLMs *Decimals and Fractions* and *Decimal and Fraction Squares*

Activity

A. Introduction

1. Write " $\frac{3}{10}$ " and "0.3" on the chalkboard. Ask students to say the numbers that you have written on the board. Ask students if both numbers represent the same value.
2. Write "0.56" on the chalkboard and ask a student to write the fraction that represents the decimal you have written.
3. Write three or four more decimals and tenths or hundredths fractions on the chalkboard and have students convert to the fractions or decimals that represent the values.
4. Write " $\frac{1}{4}$ " on the chalkboard. Ask students if they know how to write the decimal that represents $\frac{1}{4}$. Ask students if they know another name for that fraction. (If no student offers the answer "one-quarter," offer the answer to the class.)
5. Tell students that they will be learning decimal names for some common fractions such as fourths and halves.

B. Class Activity

1. Place the overhead transparency of the BLM *Decimal and Fraction Squares* on the projector. Cover all squares except the halves fraction square.
2. Color in one half of the halves fraction square. Ask students how much of the square is colored. Write " $\frac{1}{2}$ " on the chalkboard when the correct answer is given.
3. Uncover the fourths fraction square. Color in two of the fourths bars. Ask students how much of the square is colored. (Some students may answer " $\frac{1}{2}$." If so, ask them to tell you the answer in fourths.) Write " $\frac{2}{4}$ " on the chalkboard, close to $\frac{1}{2}$.

(continued)

EXTENDING THE ACTIVITY



For a learning center, create cards with equivalent fractions and decimals on them. Have students play a matching game similar to "Go Fish" with a partner. Tell students that a match is made when equivalent fractions/decimals are drawn or "fished" from the partner's hand.

MEETING INDIVIDUAL NEEDS



Have students who need a greater challenge find equivalent decimals for fractions such as $\frac{1}{5}$ or $\frac{13}{20}$ by giving them fifths and twentieths fraction squares.

Standards Links
4.7.5, 4.7.10

Activity (continued)

4. Ask students if both squares have the same amount colored. When students answer correctly, place a “=” between the two fractions.
5. Continue in this manner by coloring in five of the tenths bars and fifty of the hundredths squares and comparing their fractional values to $\frac{1}{2}$ and $\frac{2}{4}$.
6. Ask students if they can write the decimal that represents $\frac{5}{10}$ and $\frac{50}{100}$. After noting that all of the fractions are equivalent, ask students if $\frac{1}{2}$ could also be written as 0.5 or 0.50. On the transparency, cover the fraction squares that you have been using.
7. Uncover the fourths fraction square that is under the “Quarter Comparisons” heading. Color in one of the fourths squares. Ask students how much of the square is colored. Write “ $\frac{1}{4}$ ” on the chalkboard when the correct answer is given.
8. Uncover the hundredths fraction square. Color in twenty-five squares in the same area that you colored in the fourths fraction square. Ask students how much of the square is colored. (Some students may answer “ $\frac{1}{4}$.” If so, ask them to tell you the answer in hundredths.) Write “ $\frac{25}{100}$ ” on the chalkboard, close to $\frac{1}{4}$.
9. Ask students if both squares have the same amount colored. When students answer correctly, place a “=” between the two fractions. Have a student write the decimal for $\frac{25}{100}$ and note that since $\frac{1}{4} = \frac{25}{100}$, then $\frac{1}{4} = 0.25$.
10. Repeat steps 9 and 10, comparing $\frac{3}{4}$ to 0.75.

C. Homework

Have students complete the BLM *Decimals and Fractions* and return it the following school day. Give each student a copy of BLM *Decimal and Fraction Squares* to assist them in completing the BLM *Decimals and Fractions*.

Questions for Review**Basic Concepts and Processes**

When students have finished, discuss the following questions to gauge their understanding of the Standard Indicator:



How do you say the decimal 0.3 as a fraction?
How do you write 0.3 as a fraction?



Write three-quarters as a fraction and as a decimal.

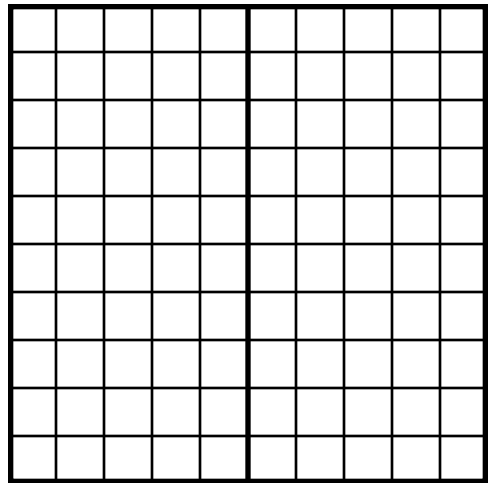
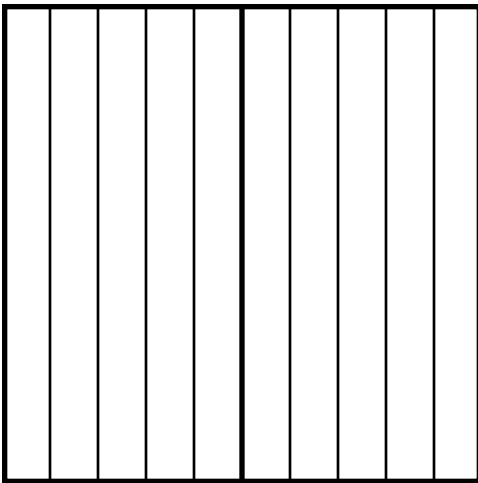
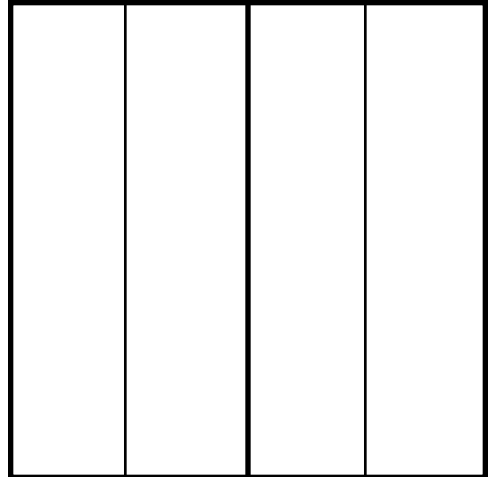
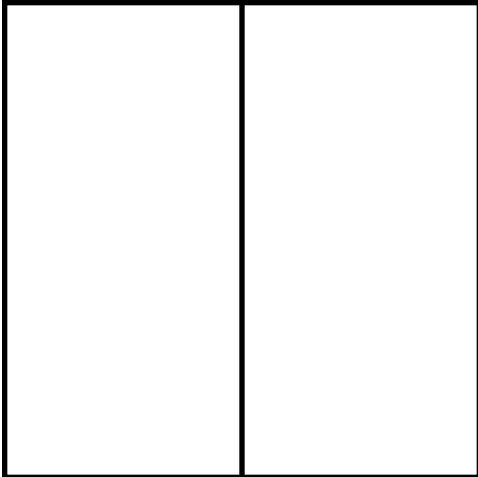


How did you know what to write?

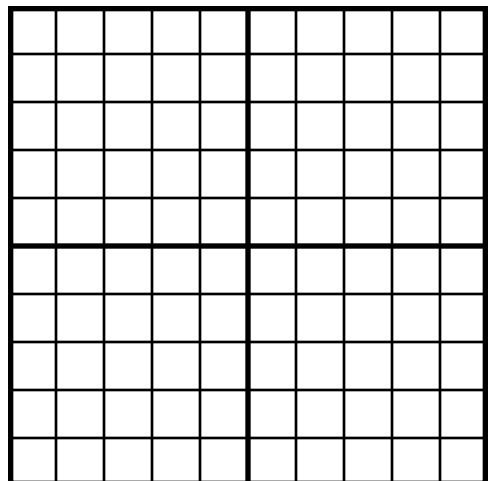
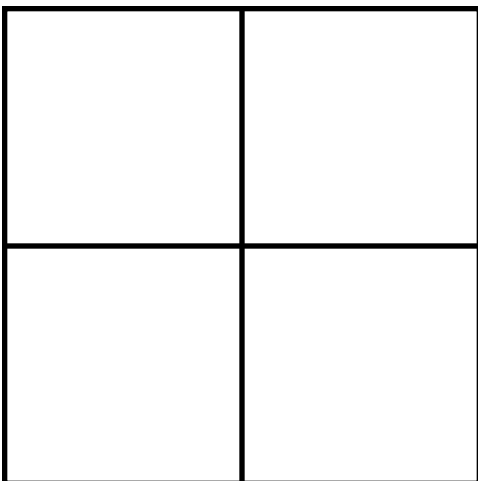


Why can't we show $\frac{1}{4}$ as a tenth?

Decimal and Fraction Squares



Quarters Comparison



Decimal and Fraction Squares

Teacher Directions

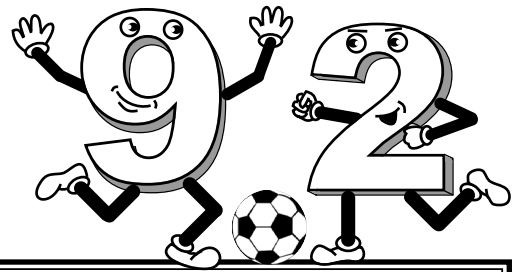
Make a transparency of the BLM *Decimal and Fraction Squares*, and distribute paper copies of the BLM to students to assist them in completing the BLM *Decimals and Fractions*. Use the fraction squares to compare fractions of different denominators and decimals.

Answer Key

Not applicable.

Name: _____

Decimals and Fractions



Write a decimal or fraction that is equivalent to the fraction or decimal given.

1. $\frac{1}{2} =$ _____

2. $0.89 =$ _____

3. $0.75 =$ _____

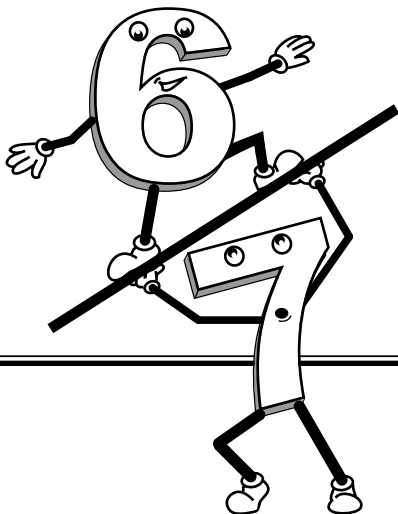
4. $\frac{19}{100} =$ _____

5. $\frac{1}{4} =$ _____

6. $\frac{7}{10} =$ _____

7. $0.2 =$ _____

8. $\frac{10}{10} =$ _____



Decimals and Fractions

Teacher Directions

Distribute copies of the BLM *Decimals and Fractions*, and have students write the decimal or fraction that is equivalent to the fraction or decimal given.

Answer Key

1. 0.5 or 0.50
2. $\frac{89}{100}$
3. $\frac{3}{4}$
4. 0.19
5. 0.25
6. 0.7 or 0.70
7. $\frac{2}{10}$ (or $\frac{1}{5}$)
8. 1 whole