

Ordering Fractions, Decimals, and Percents

Reporting Category Number and Number Sense

Topic Ordering fractions, decimals, and percents

Primary SOL 7.1c The student will compare and order fractions, decimals, percents, and numbers written in scientific notation.

Materials

- Fractions, Decimals, and Percents handout (attached)
- Activity 1, Activity 2, and Activity 3 sheets (attached)
- Glue sticks
- Scissors

Vocabulary

least, greatest, fraction, decimal, percent (earlier grades)

Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

1. Place students in pairs. Review converting among fractions, decimals, and percents. A fraction, decimal, and percent chart might be useful for this review.
2. Distribute copies of the Activity 1 sheet. Ask students to cut out their squares. They should then arrange the squares in order from least to greatest. Have students paste the squares in the proper order on their sheet. Teacher will circulate to each group, giving assistance as required.
3. Lead a group discussion on how each group approached their task.
4. Distribute copies of the Activity 2 sheet. Students should follow the same procedure as before.
5. Lead a group discussion on how each group approached their task. Ask, "Was this sort more difficult? Why? Did you convert the numbers to the same form (example: rewrite as decimals)? Is that the only way to approach the task?"
6. Distribute copies of the Activity 3 sheet. Students should follow the same procedure as before with a group discussion at the conclusion of the task.

Assessment

- **Questions**
 - How are fractions, decimals, and percents related?
 - Do you have to convert all your numbers to the same form before ordering them? Why, or why not?
- **Journal/Writing Prompts**
 - Explain to another student how to order numbers written as fractions, decimals, or percents.
 - Explain which sorting activity was the easiest.
 - Give examples of when you might use fractions, decimals, and percents in real-life situations.

- **Other**
 - Students can create lists of three fractions, decimals, and percents, and ask a partner to place them in order from least to greatest.

Extensions and Connections (for all students)

- Give students an activity sheet with ten fractions, decimals, and percents to correctly order.
- Students can work individually or in groups to create a deck of equivalent fraction, decimal, and percent cards.
- Give each student a card with a rational number on it, and have students create a human number line.

Strategies for Differentiation

- Give students a number line written in tenths with the numbers labeled in decimal, fraction, and percent form.
- Begin the class with a brainstorming vocabulary activity. Place students in small groups, and have groups brainstorm to identify terms associated with fractions. One person from each group will write a word on the board. The class will discuss whether that word is a pertinent word for fraction and decide whether to accept the word. If it is accepted, each student adds it to their list of words.
- Before this lesson, students will create equivalency cards. Using a sheet of colored paper, label it as 1, $\frac{1}{1}$, and 100%. Use another color, fold the paper in half, and cut on the line. Label each section with the fraction, decimal, and percent. Continue to create equivalencies for one-fourth, one-sixteenth, etc.
- Use grid paper for activity sheets. Students can be encouraged to change all numbers to decimals before comparing.
- On the Fractions, Decimals, and Percents chart, start with only two columns.

Fractions, Decimals, and Percents

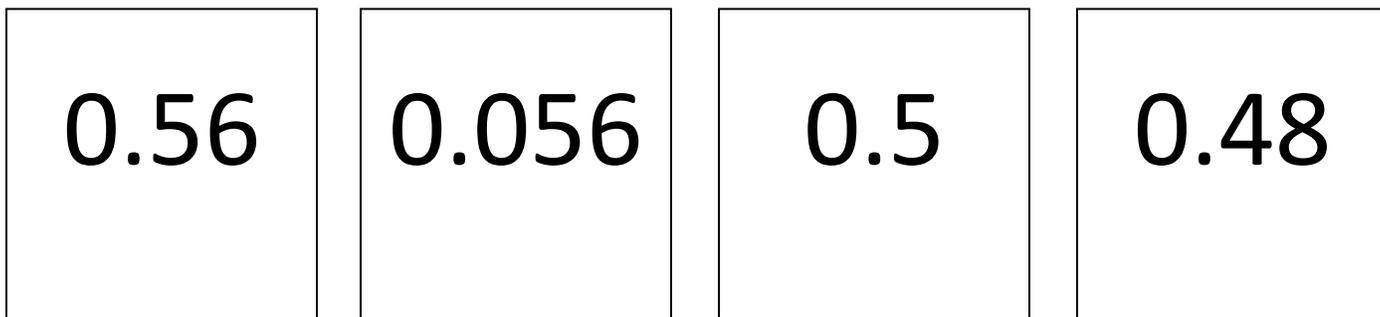
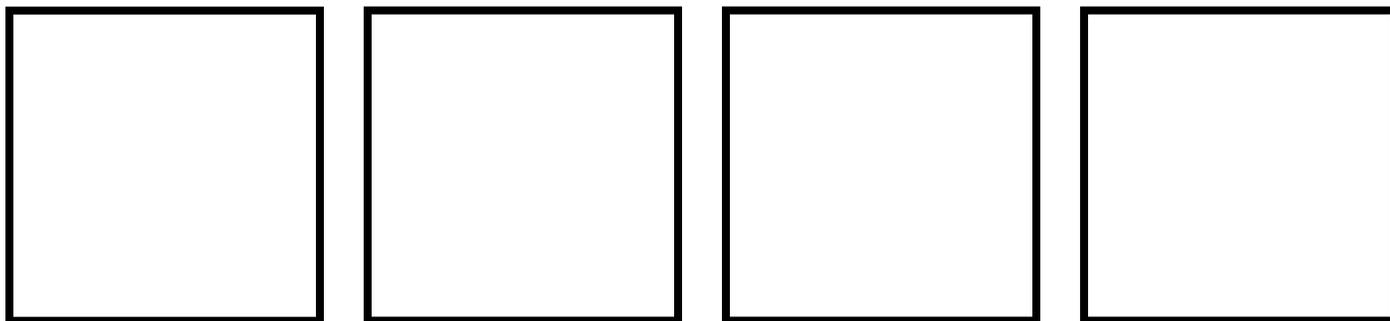
Name _____ Date _____

Fraction	Decimal	Percent
$\frac{7}{28}$		
	0.007	
		125%
$\frac{2}{3}$		
		0.5%

Activity 1

Name _____ Date _____

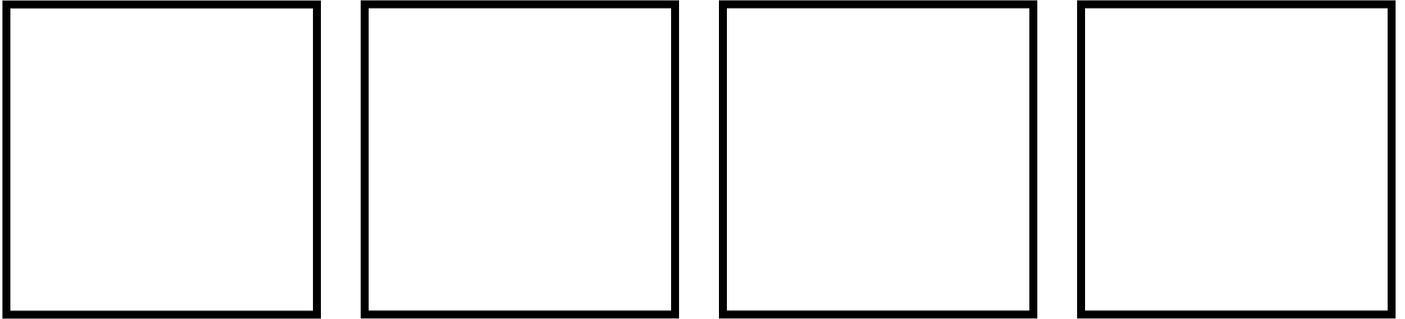
Cut out the squares at the bottom of this sheet. Glue them in the boxes in order from **least to greatest**.



Activity 2

Name _____ Date _____

Cut out the squares at the bottom of this sheet. Glue them in the boxes in order from **least to greatest**.



0.24

25%

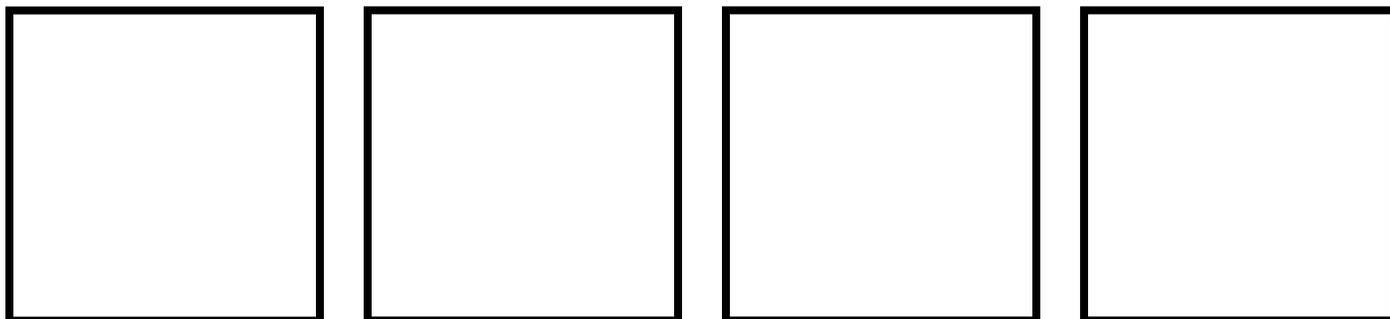
$\frac{1}{5}$

0.251

Activity 3

Name _____ Date _____

Cut out the squares at the bottom of this sheet. Glue them in the boxes in order from **greatest to least**.



$$\frac{1}{3}$$

$$0.3$$

$$35.5\%$$

$$\frac{9}{25}$$