

# Discover!

## Math

# 5

**SAMPLE  
PDF**



## LESSON 4

# Comparing Decimals

### Lesson Objectives





By the end of this lesson, your student will be able to:

- compare decimals to the thousandths

### Supporting Your Student

#### Read (Compare Decimals Using Place Value)

Before your student uses the place value chart, ask your student to represent these decimals using base 10 blocks. Remember that for decimals, a thousand block represents one whole, a flat hundred block represents a tenth, a ten block represents a hundredth, and a single cube represents a thousandth.

PLACE	ones	tenths	hundredths	thousandths
VALUE				
	1	0.1	0.01	0.001

As your student represents each decimal number with blocks, they may begin to see which one has a greater value and which one has the least value.

#### Practice (Compare Decimals Using Place Value)

To support your student, show them how to create a blank place value chart like the example shown so they can write each set of numbers before comparing them. Once they have answered the first question, they can erase the numbers and reuse the same chart for the remaining questions.

ONES	.	TENTHS	HUNDREDTHS
	.		
	.		

Remind your student to fill in any empty boxes with zeros so each pair has the same amount of digits. Then, help them compare the value of each digit starting on the left and moving across the chart to the right.

### Read (Compare and Order Decimals)

Support your student by reminding them to look at each digit in all three decimal numbers. Your student should always start from the left and move right across the number, stopping to compare the value of each digit along the way.

#### Practice (Compare and Order Decimals)

Remind your student that a good strategy for completing this practice is to find the decimal with the *least* value first. Write that decimal on the line underneath and cross it out in the list. Then, continue finding the next decimal in order and crossing it out after writing it on the next line.

### Learning Styles

**Auditory learners** may enjoy explaining to others their reasoning of why a certain number is greater or lesser than another.

**Visual learners** may enjoy color-coding each digit of a decimal number to compare values.

**Kinesthetic learners** may enjoy writing decimal numbers on index cards and moving them around to place in order from least to greatest.

### Sharpening Your Skills Support

Math facts and skills are included in each lesson to provide your student with opportunities to practice the skills they need to be successful in their coursework. Flash cards can be used to sharpen your student's math facts and skills.

To help your student with their math facts or skills, use the digital content or physical flash cards to practice. If your student has already mastered this math fact or skill, challenge them with another math fact or skill they still struggle to understand.

### Co-Op Activities

#### Who Ran the Fastest?

Get your students ready to move their bodies and race each other.

**Materials:** stopwatch, paper and pencil, space to run a short distance, a finish line



# Comparing Decimals

## Directions:

1. Write down the name of everyone racing.
2. One at a time, have each person run the same distance.
3. Use the stopwatch to time the run. Stop the time when each person crosses the finish line.
4. Write down each runner's time.
5. Have the students compare the times.
6. Have them order the decimal numbers from least to greatest.
7. The runner with the lesser time is the winner!

## Line Up in Order

Have your students work together to get in a line from least to greatest.

**Materials:** pieces of paper with each decimal number written largely across the page: 5.6, 4.89, 4.893, 5, 5.602, 6.317, 5.721, 5.57 (You can add or remove numbers based on the number of players you have.)

## Directions:

1. Make the cards by using blank pieces of paper and writing each decimal above on a different page.
2. Give one paper to each player.
3. The players need to order themselves from least to greatest.
4. Have the students talk to each other and compare their number.
5. Support the students by checking their work once every player has found their place in line.

## Extension Activities

### Timed Science Experiment

Help your student see how scientists compare decimals every day.

**Materials:** two small containers of the exact same size and shape, baking soda, vinegar, measuring spoons, stopwatch

## Directions:

1. Measure two tablespoons of baking soda and place in one container.

2. Measure six tablespoons of baking soda and place in the other container.
3. Place containers on a surface where it is ok to make a small mess.
4. Get your stopwatch ready.
5. Have your student slowly pour vinegar into the first container.
6. Use your stopwatch to time how long it takes for the mixture to bubble out of the container.
7. Write down the time.
8. Now, have your student pour vinegar into the second container.
9. Use your stopwatch to time how long it takes for the mixture to bubble out of the second container.
10. Write down the time.
11. Have your student compare the two times.

## Measure Plants

Have your student compare the different heights of plants around your house or neighborhood.

**Materials:** ruler or tape measure with  $\frac{1}{4}$ ,  $\frac{1}{2}$ , and  $\frac{3}{4}$  marks, paper and pencil, plants that are safe to touch

## Directions:

1. Have your student identify the marks for  $\frac{1}{4}$ ,  $\frac{1}{2}$ , and  $\frac{3}{4}$  inches.
2. Have them carefully measure the heights of the plants.
3. They should estimate their measurement to the closest 0.25, 0.5, or 0.75 mark.
4. Next, have them record the name of the plant and each measurement.
5. They will need to convert those fractions into decimals:  $\frac{1}{4} = 0.25$ ,  $\frac{1}{2} = 0.5$ ,  $\frac{3}{4} = 0.75$ .
6. Then, have them compare the measurements.
7. Finally, have your student order the decimal numbers from least to greatest.

# LESSON 4

## Comparing Decimals

### Answer Key

#### Explore

Answers may vary. Your student will discover the correct answer during this lesson.

#### Practice (Compare Decimals Using Place Value)

- <
- <
- >
- >
- Answers may vary. Possible answer: 4.3 is equal to 4.30 because, if you use a place value chart, the digits in the ones place, tenths place, and hundredths place are equal after you add a zero in the empty space ( $4.30 = 4.30$ ).
- Answers may vary. Possible answer: 5.67 is less than 5.9 because 5.67 has a 6 in the tenths place and 5.9 has a 9 in the tenths place.  $\frac{6}{10}$  is less than  $\frac{9}{10}$ .

#### Practice (Comparing Decimals to the Thousandths Place)

- <
- >
- <
- <
- Answers may vary. Possible answer: 7.500 is equal to 7.5 because if you use a place value chart, the digits in the ones place, tenths place, hundredths place, and thousandths place are equal. You add two zeros to 7.5 in order to compare the decimals so  $7.500 = 7.5$ .
- Answers may vary. Possible answer: 2.317 is greater than 2.31 because 2.317 has a 7 in the thousandths place, and after adding a zero, 2.31 will have a 0 in the thousandths place.  $\frac{7}{1000}$  is greater than  $\frac{0}{1000}$ .

#### Practice (Compare and Order Decimals)

- 1.367, 1.4, 1.82
- 12.63, 12.65, 12.682
- 6, 6.231, 6.5, 6.7
- 2.103, 2.163, 3.5, 3.56

- False. Answers will vary. Possible answer: House 3 uses the most water because its decimal has the greatest value in the hundredths place.

#### In the Real World

April 13th

#### Practice (Comparing Energy Use)

	ONES	.	TENTHS	HUNDREDTHS	THOUSANDTHS
TV 1	1	.	2	5	2
TV 2	1	.	1	6	8
TV 3	1	.	2	5	7
TV 4	1	.	3	1	0
TV 5	1	.	2	0	7
TV 6	1	.	2	9	0
TV 7	1	.	2	0	0

- TV 5;  $1.207 > 1.2$
- TV 2;  $1.168 > 1.29$
- TV 3;  $1.252 < 1.257$
- TV 4;  $1.310 > 1.2$
- 1.31, 1.29, 1.257, 1.252, 1.207, 1.2, 1.168
- TV 2

#### Skill Builder (Number and Operations in Base 10)

- <
- <
- >
- <
- <
- =

#### Skill Builder (Number and Operations: Fractions)

- >
- >
- =
- <
- <
- >

# LESSON 4

## Comparing Decimals

### Show What You Know

1.  $<$
2.  $=$
3.  $<$
4.  $>$
5.  $=$
6.  $<$
7.  $>$
8.  $>$
9.  $>$
10.  $<$
11. 13, 13.5, 13.567, 13.62, 14.2
12. 8.4, 8.42, 8.427, 8.429, 8.53
13. The high school had the lowest amount of rainfall  
because  $13.618 < 13.62$  and  $13.618 < 14.9$ .