

Lesson 5: Comparing Decimals (2 Days)

☐ Getting Started

Using the laminated decimal grid and a dry-erase marker, show 0.4 on the Tenths and the Hundredths grids. Keep in mind that both grids should show the same amount, so they should look the same. How many spaces should you color on the Tenths grid? How many should you color on the Hundredths grid?

You should have colored 4 spaces on the Tenths grid and 40 spaces on the Hundredths grid. Now, use the grids to do the following, and write your numbers on a piece of paper. Keep in mind that when you showed 0.4 on both the Tenths and Hundredths grids, you showed that 0.4 is the same as 0.40.

- Name 2 decimals to the tenths place that are greater than 0.4.
- Name 2 decimals to the tenths place that are less than 0.4.
- Name 2 decimals to the hundredths place that are greater than 0.4.
- Name 2 decimals to the hundredths place that are less than 0.4.

Once you finish writing all of the numbers, share them with a parent.

Stuff You Need

- fine point dry-erase markers (kit)
- laminated decimal grid (kit)
- laminated decimal place value chart (kit)
- number cards (kit)

Ideas to Think About

- How do you read and write decimal numbers?
- How can you compare decimals?

Activities

☐ Activity 1: Using a Decimal Place Value Chart

Using the laminated decimal place value chart and a dry-erase marker, write 873 in the first row, making sure to place each digit in the correct column, as shown in the following image.

millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones	.	tenths	hundredths	thousandths
				8	7	3	.			

Now, write 973 in the second row on the chart. Which of the numbers on the chart, 873 and 973, is greater? You know that 973 is greater because nine hundreds is greater than eight hundreds.

Now, write 843 in the third row on the chart. Which is greater, 873 or 843? You should find that 873 is greater because, when comparing multi-digit numbers, if the digits in the highest places are the same you look to the next highest place and compare those digits.

Guess what? Comparing decimals works in just the same way. Watch the following video for an explanation of how decimal number comparison works.



Comparing Decimals

www.beyondthepage.com/link/9297/

Now it's your turn. Erase the numbers on the laminated decimal value chart and write 0.152 in the first row.

millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones	.	tenths	hundredths	thousandths
						0	.	1	5	2

Then, in the next rows, write the following numbers: 0.267 and 0.289. To compare 0.152 and 0.267, begin by looking at the highest place. In this case, it's the ones place, but both numbers have zero in the ones place. So, next, look at the tenths place. Which number has more tenths? That is the greater of the two numbers. You should find that 0.267 is greater than 0.152.

Next, compare 0.267 and 0.289. Which is greater? You should find that 0.289 is greater because both numbers have 2 in the tenths place but the 8 in the hundredths place in 0.289 is more than the 6 in the hundredths place in 0.267.

Now, erase the numbers on the laminated decimal place value chart. Write 0 in each row in the ones column. Using number cards 1 through 9, shuffle the cards, and place them face down. Draw 2 cards, and use the numbers showing to create a decimal to the hundredths place. Write this number in the first row on the chart. For example, if you draw 3 and 8, you can write either 0.38 or 0.83. Repeat this process until the chart is full, reshuffling the cards when you need to.

Use the numbers on the chart to complete the "Comparing Decimals: Hundredths" sheet. When you finish the sheet, share your answers with a parent, and explain the steps in comparing decimals.

☐ **Activity 2: Comparing Thousandths**

Complete the "Comparing Decimals: Thousandths" sheet. Use the laminated decimal grid or laminated decimal place value chart as needed to help you with the comparisons.

Day 2

☐ **Activity 3: Problem Solving**

Use what you know about comparing decimals to complete the "Comparing Decimals: Problem Solving" sheet. Use the laminated decimal grid or laminated decimal place value chart as needed.

☐ **Activity 4: Basic Skills Review #1**

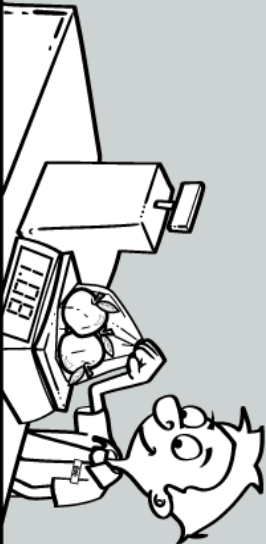
You will complete the "Basic Skills Review #1" sheet. This review includes skills that you've already practiced in previous levels of math. Use scratch paper as needed. Be sure to label units. For example, if a problem is about time, your answer should include a unit of time such as "seconds" or "minutes."

Wrapping Up

Now that you've worked with decimals to thousandths, you're ready to move on to rounding numbers ranging from millions to thousandths. You'll practice this skill in the next lesson.

Learning Gates

Take the [Learning Gates quiz](#) for this lesson.



Comparing Decimals: Hundredths

Instructions: Fill in the blanks. Use the numbers you wrote on the decimal place value chart to create true statements.

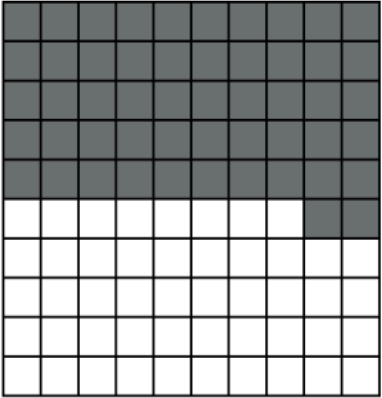
	>			>			>	
	>			>		0.50	>	
	>			>		0.90	>	

What is the greatest number on the chart? _____ What is the smallest number on the chart? _____

Instructions: Answer the questions.

Circle the decimal that is less than the one shown.

0.52 0.36 0.59 0.65



Circle the decimal that is more than the one shown.

0.35 0.46 0.50 0.42



Comparing Decimals: Thousandths

Instructions: Write $>$ or $<$ to make each statement true.

0.364 **0.318** **1.358** **1.360** **2.646** **2.645**

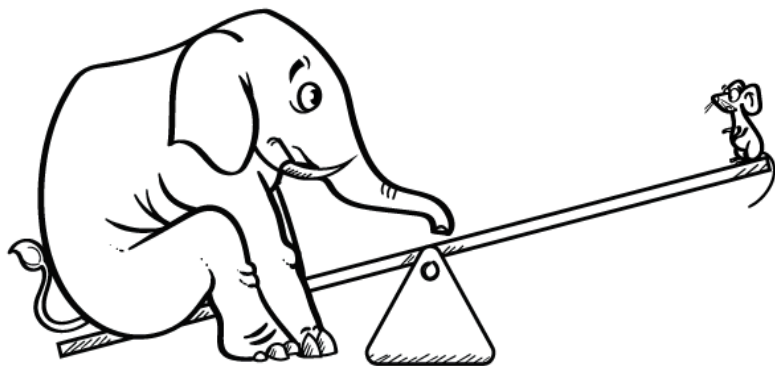
1.757 **1.750** **1.040** **1.400**

Instructions: Place each group of numbers in order from least to greatest.

1.774 2.774 2.770 2.604

0.806 0.860 0.086 0.068

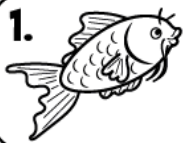
Think About It! A number is less than 0.846 and greater than 0.837. The digit in the hundredths place is odd. The digit in the thousandths place is a factor of 24. What's the number?



Comparing Decimals: Problem Solving

Instructions: Read each problem carefully, and write your answers in the blanks.

1.



Mrs. Cooke bought 0.65 pounds of catfish, 0.78 pounds of ground beef, and 0.70 pounds of chicken. Did she buy more chicken or more beef? _____

2.

Frankie, Laurie, Marty, and Sloan ran in a 5K race. Here are their times:

Race Times	
Frankie	33.56
Laurie	33.59
Marty	33.39
Sloan	33.41



Who finished the race first?

Who finished after Frankie?

Who finished the race last?

3.

The Boomers little league players have the following batting averages:

Batting Averages	
Mark	0.250
Jake	0.267
Cedric	0.259
José	0.273
Hugh	0.269
Craig	0.260
Dixon	0.265
William	0.251
Manny	0.255
Franklin	0.280
Nico	0.276



Who has the highest batting average on the team?

Whose batting average is closest to Franklin's?

Of Cedric, José, Dixon, and Mark, who has the lowest batting average?

Whose batting average is between Manny and Craig's averages?

Put the following players' averages in order from least to greatest: Craig, Jake, William, Nico, and José.



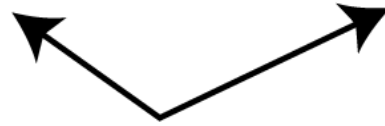
Basic Skills Review #1

1.

$$364 \times 51 = \underline{\hspace{2cm}}$$

2.

Is this angle acute or obtuse?



3.

The Smiths recycled 15,392 cans last year. The Jacksons recycled 15,938 cans. How many more cans did the Jacksons recycle?

4.

Carly started practicing guitar at 3:12. She stopped at 3:40. Then she started again at 4:07 and stopped at 4:45. How long, in hours and minutes, did she practice in all?

5.

$$27 \text{ feet} = \underline{\hspace{2cm}} \text{ yards}$$

6.

Mr. Walker bought a can of paint that will cover 400 square feet. He's painting his living room, which is 16 feet by 20 feet. Will he have enough paint left over to also paint his 8 foot by 10 foot bathroom?

7.

What's the remainder? $\underline{\hspace{2cm}}$

$$6,452 \div 6$$

8.

Molly bought 6 notebooks. One notebook costs \$1.25. She paid \$10.00. How much change did she get back?

9.

Callie made a snack mix using $1\frac{2}{3}$ cups of peanuts, $1\frac{1}{3}$ cups of cereal, $1\frac{1}{3}$ cups of pretzels, and $\frac{1}{3}$ cups of M&Ms. How much snack mix did Callie make?

10.

Marco poured 3,600 ml of water in a bucket. Then he added 2 more liters of water. How many milliliters of water are now in the bucket?

Lesson 5: Comparing Decimals (2 Days)

Getting Started

? Ideas to Think About

- How do you read and write decimal numbers?
- How can you compare decimals?

• Skills

- Read, write, and compare decimals to thousandths
- Read and write decimals to thousandths using base-ten numerals, number names, and expanded form
- Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons

Introducing the Lesson

In this lesson, your child will compare decimals to the thousandths place using different methods, including decimal grids and a place value chart. Be ready to listen to his answers to the following:

- Name 2 decimals to the tenths place that are greater than 0.4. (Examples: 0.5, 0.7)
- Name 2 decimals to the tenths place that are less than 0.4. (Examples: 0.3, 0.1)
- Name 2 decimals to the hundredths place that are greater than 0.4. (Examples: 0.56, 0.48)
- Name 2 decimals to the hundredths place that are less than 0.4. (Examples: 0.35, 0.28)

Activities

Activity 1: Using a Decimal Place Value Chart

Your child will now use a decimal place value chart to compare decimals by looking at specific digits and places in numbers. Once he completes the "Comparing Decimals: Hundredths" sheet, he will share his answers with you and will explain how to compare decimals. Make sure that his work is correct and that he can identify the steps in comparing decimals: look at the highest place first, and compare the digits there. If those digits are the same, move to the next highest place, and compare the digits there. As needed, remind him that tenths are bigger than hundredths, and hundredths are bigger than thousandths, and encourage him to use the laminated decimal grid if he needs help picturing any of the numbers.

The answers to the questions at the bottom of the sheet are follows:

- Circle the decimal that is less than the one shown: (0.36)
- Circle the decimal that is more than the one shown: (0.50)

Activity 2: Comparing Thousandths

Your child will work on comparing decimals to thousandths.

Answer Key:

- $0.364 > 0.318$
- $1.358 < 1.360$
- $2.646 > 2.645$
- $1.757 > 1.750$
- $1.040 < 1.400$
- Place each group of numbers in order from least to greatest.
(1.774, 2.604, 2.770, 2.774)
(0.068, 0.086, 0.806, 0.860)
- Think About It! A number is less than 0.846 and greater than 0.837. The digit in the hundredths place is odd. The digit in the thousandths place is a factor of 24. What's the number? (0.838)

Day 2**Activity 3: Problem Solving**

During this activity, your child will use what he knows about comparing decimals to solve real-world problems.

Answer Key:

1. Mrs. Cooke bought 0.65 pounds of catfish, 0.78 pounds of ground beef, and 0.70 pounds of chicken.
Did she buy more chicken or more beef? (beef)
2. Frankie, Laurie, Marty, and Sloan ran in a 5K race. Here are their times [chart is on the student activity page]:
Who finished the race first? (Marty)
Who finished after Frankie? (Laurie)
Who finished the race last? (Laurie)
3. The Boomers little league players have the following batting averages [chart is on the student activity page]:
Who has the highest batting average on the team? (Franklin)
Whose batting average is closest to Franklin's? (Nico)
Of Cedric, José, Dixon, and Mark, who has the lowest batting average? (Mark)
Whose batting average is between Manny and Craig's averages? (Cedric)
Put the following players' averages in order from least to greatest: Craig, Jake, William, Nico, and José. (William 0.251, Craig 0.260, Jake 0.267, José 0.273, Nico 0.276)

Activity 4: Basic Skills Review #1

Over the course of this year, your child will complete many "Basic Skills Review" pages. The number of these reviews will vary per unit based on the length of each unit. The purpose of these reviews is to keep fundamental math skills that your child should have already mastered (such as basic computation, telling time, and counting money) "fresh" in his mind so that he doesn't lose them over time. As your child learns new skills this year, these skills will also be incorporated into the reviews. If your child struggles with

specific items on the reviews, you may want to look back to previous units and lessons and provide time for him to revisit activities. He can also refer to his Interactive Notebook for review of previous material, but encourage him to complete the review sheets from memory by using what he knows as he's able.

Answer Key:

1. $364 \times 51 = (18,564)$
2. Is this angle acute or obtuse? (obtuse)
3. The Smiths recycled 15,392 cans last year. The Jacksons recycled 15,938 cans. How many more cans did the Jacksons recycle? ($15,938 - 15,392 = \mathbf{546 \text{ cans}}$)
4. Carly started practicing guitar at 3:12. She stopped at 3:40. Then she started again at 4:07 and stopped at 4:45. How long, in hours and minutes, did she practice in all? (3:12 to 3:40 is 28 minutes; 4:07 to 4:45 is 38 minutes; $28 + 38 = 66$ minutes, or **1 hour and 6 minutes**)
5. 27 feet = _____ yards (27 feet $\div$ 3 feet in a yard = **9 yards**)
6. Mr. Walker bought a can of paint that will cover 400 square feet. He's painting his living room, which is 16 feet by 20 feet. Will he have enough paint left over to also paint his 8 foot by 10 foot bathroom? (**yes**, $16 \times 20 = 320$ square feet, $8 \times 10 = 80$ square feet, $320 + 80 = 400$ square feet)
7. $6,452 \div 6$. What's the remainder? (The quotient is 1,075 r. 2; the remainder is **2**)
8. Molly bought 6 notebooks. One notebook costs \$1.25. She paid \$10.00. How much change did she get back? ($\$1.25 \times 6 = \$7.50$, $\$10.00 - \$7.50 = \mathbf{\$2.50}$)
9. Callie made a snack mix using $1 \frac{2}{3}$ cups of peanuts, $1 \frac{1}{3}$ cups of cereal, $1 \frac{1}{3}$ cups of pretzels, and $\frac{1}{3}$ cups of M&Ms. How much snack mix did Callie make? ($1 \frac{2}{3} + 1 \frac{1}{3} + 1 \frac{1}{3} + \frac{1}{3} = 3 \frac{5}{3}$, or **4 $\frac{2}{3}$ cups**)
10. Marco poured 3,600 ml of water in a bucket. Then he added 2 more liters of water. How many milliliters of water are now in the bucket? (**5,600 ml**, $2 \text{ l} = 2,000 \text{ ml}$, so $3,600 + 2,000 = 5,600$)

Wrapping Up

Questions to Discuss

- Ask your child to write the following decimal numbers: five hundred six thousandths; fifty-six thousandths (0.506, 0.056)
- Which of these decimals is greater? (0.506)
- Write 0.378 on a piece of paper, and ask your child to read it aloud: "three hundred seventy-eight thousandths."

Things to Review

Review the steps for comparing whole numbers and decimals