

Decimal Detective

Compare and order decimals through the thousandths place.

GRADE 5 • 5.NR.4.2

5.NR.4.2 "Represent, compare, and order decimal numbers to the thousandths place based on the meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons."

NAME _____

DATE _____

COMPARE PLACE BY PLACE

Line up decimal points, then compare digits from left to right: ones, tenths, hundredths, and thousandths. You may add zeros to the right of a decimal without changing its value, then use $<$, $>$, or $=$.

WORKED EXAMPLE

Compare 4.507 and 4.57.

1. Write 4.57 as 4.570.
2. The ones and tenths digits match.
3. At the hundredths place, 0 is less than 7.

Answer: $4.507 < 4.57$

PRACTICE 6 problems

1 Fill in the symbol: 0.638 ____ 0.683

ANSWER _____

2 Fill in the symbol: 7.205 ____ 7.205

ANSWER _____

3 Fill in the symbol: 9.41 ____ 9.409

ANSWER _____

4 Order from least to greatest: 2.718, 2.781, 2.708

ANSWER _____

5 Fill in the symbol: 5.999 ____ 6.000

ANSWER _____

6 Order from greatest to least: 0.125, 0.152, 0.105

ANSWER _____

APPLY IT Show your work

- 1** Jalen recorded two bike rides. On Saturday, he rode 1.284 miles. On Sunday, he rode 1.248 miles. Which ride was farther? Write a comparison sentence using a symbol.

WORK SPACE

ANSWER _____

- 2** Two games need space on a tablet. Game A needs 0.875 gigabytes, and Game B needs 0.857 gigabytes. Which game needs less space? Write a comparison sentence using a symbol.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Order these numbers from least to greatest: 8.09, 8.009, 8.9, 8.090. Then explain why 8.09 and 8.090 are equal.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Fill in the symbol: 0.638 ____ 0.683	$0.638 < 0.683$
2	Fill in the symbol: 7.205 ____ 7.205	$7.205 = 7.205$
3	Fill in the symbol: 9.41 ____ 9.409	$9.41 > 9.409$
4	Order from least to greatest: 2.718 , 2.781 , 2.708	$2.708 < 2.718 < 2.781$
5	Fill in the symbol: 5.999 ____ 6.000	$5.999 < 6.000$
6	Order from greatest to least: 0.125 , 0.152 , 0.105	$0.152 > 0.125 > 0.105$

PART 2 • APPLY IT

1. **Saturday's ride was farther. $1.284 > 1.248$.** Compare the digits from left to right. The tenths match, and 8 hundredths is greater than 4 hundredths.
2. **Game B needs less space. $0.857 < 0.875$.** The tenths match. At the hundredths place, 5 is less than 7, so 0.857 is less than 0.875.

CHALLENGE

$8.009 < 8.09 = 8.090 < 8.9$. The zero at the end of 8.090 does not change its value, so $8.09 = 8.090$.

Accept comparison statements with equivalent trailing-zero forms, such as $9.410 > 9.409$. For the challenge explanation, accept any accurate statement that adding a zero to the right of a decimal does not change its value.