LESSON MAKER PRO

Decimal Detectives

Compare decimals through thousandths.

GRADE 4 · 4.NS.4

4.NS.4 "The student will use mathematical reasoning and justification to represent, compare, and order decimals through thousandths, with and without models..."

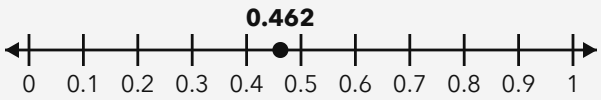
NAME _____ DATE _____

COMPARE PLACE BY PLACE

Each place to the right is worth one-tenth of the place before it. Line up decimal points and compare tenths, then hundredths, then thousandths. You can add zeros, so 0.4 = 0.400.

WORKED EXAMPLE

Use the number line. Compare the marked decimal to 0.5.



1. 0.462 is left of 0.5.
2. A number farther right is greater.
3. 0.462 < 0.5.

Answer: 0.462 < 0.5

PRACTICE 4 problems

1 What is the value of the 7 in 0.708?

ANSWER _____

2 Write <, >, or =. 0.349 ___ 0.354

ANSWER _____

3 Order from least to greatest: 0.901, 0.19, 0.91

ANSWER _____

4 Write six hundred twenty-five thousandths as a decimal.

ANSWER _____

APPLY IT Show your work

1 The table shows how far robots traveled in a coding-club race. Which robot went farthest? Write a comparison that proves it.

ROBOT RACE DISTANCES

Robot	Distance (m)
Bolt	0.703
Pixel	0.738
Zip	0.730
Nova	0.699

ANSWER _____

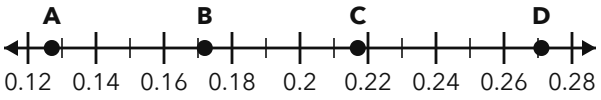
2 Ava's game download used 0.406 GB of data. Leo's used 0.46 GB. Which download used more data? Explain.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Use the number line. Order points A, B, C, and D from least to greatest. Explain.



WORK SPACE AND ANSWER

ANSWER KEY

Decimal Detectives

GRADE 4 · 4.NS.4

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	What is the value of the 7 in 0.708?	**0.7**
2	Write <, >, or =. 0.349 ___ 0.354	**0.349 < 0.354**
3	Order from least to greatest: 0.901, 0.19, 0.91	**0.19, 0.901, 0.91**
4	Write six hundred twenty-five thousandths as a decimal.	**0.625**

PART 2 · APPLY IT

1. **Pixel went farthest. 0.738 > 0.730, 0.703, and 0.699.** Compare tenths, hundredths, and thousandths. Pixel's distance is the greatest.
2. **Leo's download used more data because 0.460 > 0.406.** Write 0.46 as 0.460. Compare the hundredths digits, 6 is greater than 0.

CHALLENGE

A, B, C, D. The points are ordered from left to right, and numbers farther right are greater.

Accept trailing zeros in equivalent decimals, such as 0.460 for 0.46. For explanations, accept correct place-value language or a correct left-to-right number-line justification.