

Decimal Detectives

Compare, order, and plot decimals through thousandths.

GRADE 5 • MA.5.NSO.1.4

MA.5.NSO.1.4 "Plot, order and compare multi-digit numbers with decimals up to the thousandths."

NAME _____

DATE _____

COMPARE PLACE BY PLACE

Line up decimal points. Compare the whole-number parts first, then compare tenths, hundredths, and thousandths from left to right. On a number line, numbers increase as you move right. You can add zeros at the end of a decimal, so $8.4 = 8.400$.

WORKED EXAMPLE

Compare 46.482 and 46.428.

1. The whole-number parts are both 46.
2. The tenths digits are both 4.
3. At the hundredths place, 8 is greater than 2.
4. Write $>$ between the numbers.

Answer: $46.482 > 46.428$

PRACTICE 6 problems

- 1** PRACTICE 1. Write $<$, $>$, or $=$. 14.305 ____
14.350

ANSWER _____

- 2** PRACTICE 2. Write $<$, $>$, or $=$. 27.091 ____
27.09

ANSWER _____

- 3** PRACTICE 3. Order from least to greatest:
29.608, 29.086, 29.68, 29.806

ANSWER _____

- 4** PRACTICE 4. Order from greatest to least:
43.219, 43.291, 43.129, 43.912

ANSWER _____

- 5** PRACTICE 5. Mark 18.475 on this number line. Each tick mark increases by 0.025.
18.400 |---|---|---|---| 18.500

ANSWER _____

- 6** PRACTICE 6. Plot and label these numbers on a number line from 62.000 to 62.700: 62.006, 62.06, 62.600, 62.606. Then list them from left to right.

ANSWER _____

APPLY IT Show your work

- 1** APPLY 1. In a racing game, Jada finished a lap in 2.406 minutes, Micah finished in 2.46 minutes, and Noor finished in 2.064 minutes. List the racers from fastest to slowest.

WORK SPACE

ANSWER _____

- 2** APPLY 2. At a science club launch, Comet traveled 34.125 meters, Spark traveled 34.152 meters, and Orbit traveled 34.215 meters. Plot and label the distances on a number line from 34.100 to 34.300. Which rocket traveled the farthest?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

CHALLENGE. Use the digits 3, 6, and 9 exactly once in each number to make the greatest and least decimals of the form 52.____. Explain how you know.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	PRACTICE 1. Write $<$, $>$, or $=$. 14.305 ____ 14.350	14.305 < 14.350
2	PRACTICE 2. Write $<$, $>$, or $=$. 27.091 ____ 27.09	27.091 > 27.09
3	PRACTICE 3. Order from least to greatest: 29.608, 29.086, 29.68, 29.806	29.086, 29.608, 29.68, 29.806
4	PRACTICE 4. Order from greatest to least: 43.219, 43.291, 43.129, 43.912	43.912, 43.291, 43.219, 43.129
5	PRACTICE 5. Mark 18.475 on this number line. Each tick mark increases by 0.025. 18.400 --- --- --- 18.500	The third tick mark to the right of 18.400.
6	PRACTICE 6. Plot and label these numbers on a number line from 62.000 to 62.700: 62.006, 62.06, 62.600, 62.606. Then list them from left to right.	62.006, 62.06, 62.600, 62.606

PART 2 • APPLY IT

- Noor, Jada, Micah** The fastest racer has the smallest time. Order the times as 2.064, 2.406, and 2.460.
- Left to right: Comet, Spark, Orbit. Orbit traveled the farthest.** Compare the decimal parts after the shared whole-number part, 34. The distances order as 34.125, 34.152, and 34.215.

CHALLENGE

Greatest: 52.963. Least: 52.369. Since the whole-number parts are the same, the greatest number has the greatest tenths digit, and the least number has the smallest tenths digit.

Accept decimals with equivalent trailing zeros, such as 27.090 for 27.09. For plotting items, accept points in the correct relative positions and labels placed accurately.