

Decimal Detectives

Compare decimals by checking each place value.

GRADE 4 • 4.NR.5.3

4.NR.5.3 "Compare two decimal numbers to the hundredths place by reasoning about their size. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions."

NAME _____

DATE _____

COMPARE PLACE BY PLACE

Compare the whole-number parts first. If they are equal, compare tenths, then compare hundredths. You can write a zero in an empty hundredths place, so 2.4 is the same as 2.40.

WORKED EXAMPLE

Compare 3.47 and 3.52. Write $>$, $=$, or $<$.

1. The whole-number parts are both 3.
2. Compare the tenths: 4 tenths is less than 5 tenths.
3. The hundredths do not need to be compared.

Answer: $3.47 < 3.52$

PRACTICE 6 problems

- 1** Compare 4.06 and 4.60. Write $>$, $=$, or $<$.
Then write a short reason.

ANSWER _____

- 2** Compare 7.35 and 7.35. Write $>$, $=$, or $<$.
Then write a short reason.

ANSWER _____

- 3** Compare 0.89 and 0.90. Write $>$, $=$, or $<$.
Then write a short reason.

ANSWER _____

- 4** Compare 12.18 and 12.12. Write $>$, $=$, or $<$.
Then write a short reason.

ANSWER _____

- 5** Compare 5.07 and 5.70. Write $>$, $=$, or $<$.
Then write a short reason.

ANSWER _____

- 6** Compare 9.41 and 9.14. Write $>$, $=$, or $<$.
Then write a short reason.

ANSWER _____

APPLY IT Show your work

- 1** At the school fun run, Jalen ran 1.86 miles. Priya ran 1.68 miles. Whose distance was greater? Write a comparison sentence using $>$, $=$, or $<$ and explain why.

WORK SPACE

ANSWER _____

- 2** Two students tracked the weight of rocks for science class. Elena's rock weighed 2.50 pounds, and Marcus's rock weighed 2.05 pounds. Which rock was heavier? Write a comparison sentence using $>$, $=$, or $<$ and explain why.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Kira says $6.09 > 6.9$ because 09 is greater than 9. Is Kira correct? Write the correct comparison and explain your reasoning.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Compare 4.06 and 4.60. Write $>$, $=$, or $<$. Then write a short reason.	4.06 $<$ 4.60 because 0 tenths is less than 6 tenths.
2	Compare 7.35 and 7.35. Write $>$, $=$, or $<$. Then write a short reason.	7.35 = 7.35 because every place value is the same.
3	Compare 0.89 and 0.90. Write $>$, $=$, or $<$. Then write a short reason.	0.89 $<$ 0.90 because 8 tenths is less than 9 tenths.
4	Compare 12.18 and 12.12. Write $>$, $=$, or $<$. Then write a short reason.	12.18 $>$ 12.12 because 8 hundredths is greater than 2 hundredths.
5	Compare 5.07 and 5.70. Write $>$, $=$, or $<$. Then write a short reason.	5.07 $<$ 5.70 because 0 tenths is less than 7 tenths.
6	Compare 9.41 and 9.14. Write $>$, $=$, or $<$. Then write a short reason.	9.41 $>$ 9.14 because 4 tenths is greater than 1 tenth.

PART 2 • APPLY IT

- 1.86 $>$ 1.68, so Jalen ran farther.** The ones digits are both 1. Compare tenths: 8 tenths is greater than 6 tenths.
- 2.50 $>$ 2.05, so Elena's rock was heavier.** The whole-number parts are both 2. Compare tenths: 5 tenths is greater than 0 tenths.

CHALLENGE

Kira is not correct. 6.09 $<$ 6.9 because 6.9 is the same as 6.90, and 0 tenths is less than 9 tenths.

Accept correct comparison symbols with place-value reasons. Accept 6.9 or 6.90 as equivalent forms in the challenge.