

Decimal Detectives

Compare decimals to hundredths with confidence.

GRADE 4 • 4.NF.C.7

CCSS.Math.Content.4.NF.C.7 "Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$."

NAME _____

DATE _____

COMPARE THE SAME WHOLE

Compare decimals only when they name parts of the same whole. Write tenths as hundredths when needed, then compare the tenths first. If the tenths are equal, compare the hundredths.

WORKED EXAMPLE

Compare 0.47 and 0.52. Write $>$, $=$, or $<$.

1. Both decimals name parts of the same whole.
2. Compare the tenths: 4 tenths is less than 5 tenths.
3. So 0.47 is less than 0.52.

Answer: $0.47 < 0.52$

PRACTICE 6 problems

1 Compare 0.6 and 0.58. Write $>$, $=$, or $<$.

ANSWER _____

2 Compare 0.34 and 0.39. Write $>$, $=$, or $<$.

ANSWER _____

3 Compare 0.72 and 0.72. Write $>$, $=$, or $<$.

ANSWER _____

4 Compare 0.09 and 0.10. Write $>$, $=$, or $<$.

ANSWER _____

5 Compare 0.85 and 0.8. Write $>$, $=$, or $<$.

ANSWER _____

6 Compare 0.41 and 0.14. Write $>$, $=$, or $<$.

ANSWER _____

APPLY IT Show your work

- 1** In a 1-meter sprint practice, Kai ran 0.63 meter before stopping, and Lena ran 0.68 meter before stopping. Who ran farther? Write a comparison sentence.

WORK SPACE

ANSWER _____

- 2** Two friends are filling identical one-liter water bottles. Ava's bottle is 0.75 full, and Omar's bottle is 0.78 full. Whose bottle has more water? Write a comparison sentence.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Mia says, "0.82 is greater than 0.79, so 0.82 of a 1-liter bottle is more than 0.79 of a 1-gallon jug." Can Mia compare the amounts by looking only at the decimal digits? Explain.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Compare 0.6 and 0.58. Write $>$, $=$, or $<$.	0.6 > 0.58
2	Compare 0.34 and 0.39. Write $>$, $=$, or $<$.	0.34 < 0.39
3	Compare 0.72 and 0.72. Write $>$, $=$, or $<$.	0.72 = 0.72
4	Compare 0.09 and 0.10. Write $>$, $=$, or $<$.	0.09 < 0.10
5	Compare 0.85 and 0.8. Write $>$, $=$, or $<$.	0.85 > 0.8
6	Compare 0.41 and 0.14. Write $>$, $=$, or $<$.	0.41 > 0.14

PART 2 • APPLY IT

1. **Lena ran farther. $0.68 > 0.63$.** Both distances are measured in meters, so they refer to the same whole unit. Compare the tenths, then the hundredths.
2. **Omar's bottle has more water. $0.78 > 0.75$.** The bottles are the same size, so the decimals refer to the same whole. The tenths are equal, and 8 hundredths is greater than 5 hundredths.

CHALLENGE

No. The decimals refer to different wholes, a 1-liter bottle and a 1-gallon jug. You cannot compare the amounts by looking only at 0.82 and 0.79.

Accept comparisons with added zeros, such as $0.60 > 0.58$ and $0.85 > 0.80$. For the challenge, accept any explanation that states the wholes must be the same before comparing decimal parts directly.