LESSON MAKER PRO

Decimal Detectives

Read, write, and compare decimals through thousandths.

GRADE 5 · NY-5.NBT.3

NY-5.NBT.3 "Read, write, and compare decimals to thousandths."

NAME _____ DATE _____

LINE UP THE PLACES

Each digit in a decimal has a place value: tenths, hundredths, or thousandths. When you compare decimals, line up the decimal points and compare digits from left to right. You can add zeros to the right of a decimal without changing its value.

WORKED EXAMPLE

Write 12.406 in word form and expanded form.

1. The whole-number part is 12.
2. The decimal digits show 4 tenths, 0 hundredths, and 6 thousandths.
3. Write the nonzero place values in expanded form.

Answer: twelve and four hundred six thousandths; 10 + 2 + 0.4 + 0.006

PRACTICE 6 problems

1 Write 4.307 in word form.

ANSWER _____

2 Write six and forty-two thousandths in standard form.

ANSWER _____

3 Write 8.509 in expanded form.

ANSWER _____

4 Write <, >, or = to compare: 3.175 ___ 3.157

ANSWER _____

5 Order these decimals from least to greatest: 0.9, 0.090, 0.909

ANSWER _____

6 What is the value of the digit 8 in 7.684?

ANSWER _____

APPLY IT Show your work

1 The table shows times, in seconds, for three students to finish a coding maze. Who had the shortest time? Write a comparison that puts all three times in order from least to greatest.

CODING MAZE TIMES

Student	Time (seconds)
Noah	18.602
Ava	18.625
Jin	18.650

ANSWER _____

2 A character upgrade in an online game costs 14.085 game coins. A special game card costs 14.850 game coins. Write each cost in word form. Then compare the costs using <, >, or =.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Mia says that 5.4 > 5.398 because 4 tenths is more than 3 tenths. Is Mia correct? Explain by writing 5.4 as an equivalent decimal to the thousandths place.

WORK SPACE AND ANSWER

ANSWER KEY

Decimal Detectives

GRADE 5 · NY-5.NBT.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Write 4.307 in word form.	**four and three hundred seven thousandths**
2	Write six and forty-two thousandths in standard form.	**6.042**
3	Write 8.509 in expanded form.	**8 + 0.5 + 0.009**
4	Write <, >, or = to compare: 3.175 ___ 3.157	**3.175 > 3.157**
5	Order these decimals from least to greatest: 0.9, 0.090, 0.909	**0.090, 0.9, 0.909**
6	What is the value of the digit 8 in 7.684?	**0.08**

PART 2 · APPLY IT

1. **Noah; 18.602 < 18.625 < 18.650** Compare the tenths, hundredths, and thousandths places. All three times have 18 ones and 6 tenths, so compare the remaining digits.
2. **fourteen and eighty-five thousandths; fourteen and eight hundred fifty thousandths; 14.085 < 14.850** Write each decimal using the place value of its last digit. Compare the decimals by lining up their decimal points.

CHALLENGE

Yes. 5.4 = 5.400, and 5.400 > 5.398 because 400 thousandths is greater than 398 thousandths.

Accept expanded forms that include zero-value terms, such as 0 hundredths. Accept equivalent decimals with added zeros when they are used correctly for comparison.