LESSON MAKER PRO

Decimal Detectives

Read, write, and build numbers to the thousandths place.

GRADE 5 · 5.N.1.2

5.N.1.2 "Read, write, and represent decimals using place value to describe decimal numbers including fractional numbers as small as thousandths and whole numbers up to seven digits."

NAME _____ DATE _____

PLACE MAKES VALUE

A digit's place tells its value. To read a decimal, read the whole-number part, say "and" for the decimal point, then read the digits after the point as a number followed by the name of their last place.

WORKED EXAMPLE

Write 4,206,031.584 in words.

1. Read 4,206,031 as four million two hundred six thousand thirty-one.
2. Read 584 as five hundred eighty-four.
3. The last digit is in the thousandths place, so say five hundred eighty-four thousandths.

Answer: four million two hundred six thousand thirty-one and five hundred eighty-four thousandths

PRACTICE 6 problems

1 Write 63.209 in words.

ANSWER _____

2 Write seven million forty-two thousand six and five hundred three thousandths in standard form.

ANSWER _____

3 In 518,470.036, what is the value of the digit 3?

ANSWER _____

4 Use the place-value table to write the number in standard form.

PLACE-VALUE TABLE

Ones	Tenths	Hundredths	Thousandths
8	0	7	4

ANSWER _____

5 Write 902,005.061 as a sum of the values of its nonzero digits.

ANSWER _____

6 Write 800,000 + 70,000 + 40 + 0.2 + 0.009 in standard form.

ANSWER _____

APPLY IT Show your work

1 Your friend finishes a game level in 12.047 seconds. Write the time in words, naming the decimal place.

WORK SPACE

ANSWER _____

2 A game shows a team's lifetime distance as 1,305,024.608 meters. What is the value of the digit 6? Write the distance as a sum of the values of its nonzero digits.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A mystery number has 7 in the millions place, 2 in the thousands place, 4 in the tens place, 9 in the tenths place, and 5 in the thousandths place. All other digits are zero. Write the number in standard form and explain how you know its hundredths digit.

WORK SPACE AND ANSWER

ANSWER KEY

Decimal Detectives

GRADE 5 · 5.N.1.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Write 63.209 in words.	**sixty-three and two hundred nine thousandths**
2	Write seven million forty-two thousand six and five hundred three thousandths in standard form.	**7,042,006.503**
3	In 518,470.036, what is the value of the digit 3?	**0.03**
4	Use the place-value table to write the number in standard form.	**8.074**
5	Write 902,005.061 as a sum of the values of its nonzero digits.	**900,000 + 2,000 + 5 + 0.06 + 0.001**
6	Write 800,000 + 70,000 + 40 + 0.2 + 0.009 in standard form.	**870,040.209**

PART 2 · APPLY IT

1. **twelve and forty-seven thousandths seconds** The decimal digits are 047, or forty-seven thousandths.
2. **0.6; 1,000,000 + 300,000 + 5,000 + 20 + 4 + 0.6 + 0.008** The 6 is in the tenths place. Add the values of the nonzero digits to expand the distance.

CHALLENGE

7,002,040.905. The hundredths digit is 0 because it is not one of the listed nonzero digits.

Accept equivalent expanded forms with terms in a different order. In word answers, accept "zero hundred" before the nonzero decimal digits if the place name is correct.