

Place Value Detectives

Read, write, and compare big whole numbers.

GRADE 4 • 4.NBT.A.2

CCSS.Math.Content.4.NBT.A.2 "Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, $<$."

NAME _____

DATE _____

PLACE VALUES TELL

Each digit has a value based on its place. To compare two numbers, start at the greatest place and move right until the digits are different. The number with the greater digit in that place is greater.

WORKED EXAMPLE

Write 482,071 in expanded form and number-name form.

1. Read the places: 4 hundred-thousands, 8 ten-thousands, 2 thousands, 0 hundreds, 7 tens, and 1 one.
2. Write the value of each nonzero digit: $400,000 + 80,000 + 2,000 + 70 + 1$.
3. Write the number name: four hundred eighty-two thousand, seventy-one.

Answer: Expanded form: $400,000 + 80,000 + 2,000 + 70 + 1$; number name: four hundred eighty-two thousand, seventy-one

PRACTICE 6 problems

- 1** Write 63,405 in number-name form.

ANSWER _____

- 2** Write nine hundred seven thousand, twenty-six as a base-ten numeral.

ANSWER _____

- 3** Write $500,000 + 20,000 + 3,000 + 80 + 4$ as a base-ten numeral.

ANSWER _____

- 4** Write 710,309 in expanded form.

ANSWER _____

- 5** Write $<$, $>$, or $=$ to compare: 456,218 ____ 456,281

ANSWER _____

- 6** Write $<$, $>$, or $=$ to compare: 802,090 ____ 799,999

ANSWER _____

APPLY IT Show your work

- 1** During a school game tournament, Team Comet earned 125,406 points. Team Nova earned 125,460 points. Write a comparison using $<$, $>$, or $=$.

WORK SPACE

ANSWER _____

- 2** An animal rescue livestream received 340,708 views. Write this number in number-name form and expanded form.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Mia says that $608,415 > 680,145$ because 8 is greater than 0. In one sentence, explain Mia's error and write the correct comparison.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Write 63,405 in number-name form.	sixty-three thousand, four hundred five
2	Write nine hundred seven thousand, twenty-six as a base-ten numeral.	907,026
3	Write $500,000 + 20,000 + 3,000 + 80 + 4$ as a base-ten numeral.	523,084
4	Write 710,309 in expanded form.	$700,000 + 10,000 + 300 + 9$
5	Write $<$, $>$, or $=$ to compare: 456,218 ___ 456,281	$456,218 < 456,281$
6	Write $<$, $>$, or $=$ to compare: 802,090 ___ 799,999	$802,090 > 799,999$

PART 2 • APPLY IT

- $125,406 < 125,460$** Both totals match through the hundreds place. In the tens place, 0 is less than 6, so $125,406 < 125,460$.
- Number name: three hundred forty thousand, seven hundred eight; expanded form: $300,000 + 40,000 + 700 + 8$** The 3 is worth 300,000, the 4 is worth 40,000, the 7 is worth 700, and the 8 is worth 8.

CHALLENGE

$608,415 < 680,145$ because both numbers have 6 in the hundred-thousands place, and 0 is less than 8 in the ten-thousands place.

Accept expanded forms that include zero-value terms, such as 0 hundreds. Accept number names with or without hyphens in compound numbers, as long as the place values are correct.