

Just in Time Quick Check

Standard of Learning 4.NS.1

Strand: Number and Number Sense

Standard of Learning 4.NS.1

The student will use place value understanding to read, write, and identify the place and value of each digit in a nine-digit whole number.

Students will demonstrate the following Knowledge and Skills:

- a) Read nine-digit whole numbers, presented in standard form, and represent the same number in written form.
- b) Write nine-digit whole numbers in standard form when the numbers are presented orally or in written form.
- c) Apply patterns within the base 10 system to determine and communicate, orally and in written form, the place and value of each digit in a nine-digit whole number (e.g., in 568,165,724, the 8 represents 8 millions and its value is 8,000,000).

Just in Time Quick Check

Just in Time Quick Check Teacher Notes

Supporting and Prerequisite SOL: 3.NS.1, 4.NS.2

Just in Time Quick Check 4.NS.1

1. Create the number shown below. Choose and write the digits from the box in the correct position in the place value chart. You may use digits more than once.

Three hundred two million, ninety-eight thousand, fifteen

0	1	2	3	4	5	6	7	8	9
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Hundred million	Ten million	Million	,	Hundred thousand	Ten thousand	Thousand	,	Hundred	Ten	One

2. What is the standard form for this number?

Twenty-one million, six hundred forty-two thousand, seven

3. What is the written form of this number?

4,509,302

4. What is the value of the digit in the ten thousands place?

23,527,891

4.NS.1 Just in Time Quick Check Teacher Notes

Common Errors/Misconceptions and their Possible Indications

1. Create the number shown below. Choose and write the digits from the box in the correct position in the place value chart. You may use digits more than once.

Three hundred two million, ninety-eight thousand, fifteen

0	1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---	---

Hundred million	Ten million	Million	,	Hundred thousand	Ten thousand	Thousand	,	Hundred	Ten	One

A common error students may make is to list the digits in the same order that is shown in the digit box above the chart. This would indicate the student did not read or comprehend the directions given to create the number shown in written form.

Some students may also place more than one digit in a place value slot. For example, students may write 302 in the slot below "Million," 98 in the slot below "Thousand," and 15 in the slot below "Ten" or "One."

In addition, some students may correctly place some digits, incorrectly place other digits, incorrectly place the zeros, or neglect to include zeros at all. For example, students who neglect to include zeros may fill in the chart as indicated below:

Hundred million	Ten million	Million	,	Hundred thousand	Ten thousand	Thousand	,	Hundred	Ten	One
3	2			9	8				1	5

For students who display these errors, it may be helpful to provide students with a place value chart up to the hundred millions place. Give students practice opportunities to use the chart as they read numbers in written form aloud to themselves and then build the number in standard form.

Teachers may also wish to start with smaller numbers and use Base 10 Blocks to help students understand how to represent zero in numbers (e.g., four thousand, seventeen). As students build numbers, they can see where there is no number to represent a specific place value. For example, with the number four thousand, seventeen, students will see that there are 0 hundreds in the number. Students can then progress to numbers having nine digits or less with zeros between place values.

2. What is the standard form for this number?

Twenty-one million, six hundred forty-two thousand, seven

Some students may omit the zeros in the tens and hundreds places when writing this number, using only six digits instead of eight, and writing 21,642,7. Teachers may wish to provide students with a place value chart to use as they read the number aloud to themselves. One strategy is to tell students to place the digits where they hear them and to place a zero where they do not hear a value. Additionally, teachers may engage students in guided practice using similar problems with a place value chart.

3. What is the written form of this number?

4,509,302

Some students may omit the word million or thousand when writing the written form of this number and only use the commas. Example: four, five hundred nine, three hundred two

Some students may also omit the commas after the words million and thousand. Example: four million five hundred nine thousand three hundred two

Students may have difficulty writing the number when zeros are included in numbers and may neglect to include them when writing the number. Example: four million, fifty-nine thousand, thirty-two

Students may also insert the word “zero” when they are unsure of how to describe place and value of zeros when they occur between other digits. Example: Four million, five hundred zero nine thousand, three hundred zero two

To address these errors, teachers may wish to provide students with a place value chart to place the digits in before reading them. Remind students to read the digits before each comma as an up- to three-digit number, substituting the word “million” for the first comma when there are two commas and the word “thousand” for the second comma. Engage students in guided practice by using numbers like this with a place value chart.

Teachers may wish to start with smaller numbers and have students use Base 10 Blocks when representing the zero in numbers. For example, if students are given the number 5,108, they can see that there are no tens in the number and thus, the tens place should have a 0. Teachers may use additional numbers with nine digits, or fewer than nine digits, with zeros between place values to provide concrete practice as needed.

4. What is the value of the digit in the ten thousands place?

23,527,861

Responses to this question will reveal students' foundational place value understanding or misconceptions. Some students may mistakenly focus on the 2 in the ten millions place, with 20,000,000 as the response; the 6 in the tens place, with 60 as the response; or may include the digit 7 in the thousands place and the digit 2 in the ten thousands place, with 27,000 as the response.

It may be helpful to provide students with a place value chart up to the hundred millions place, and provide them practice opportunities writing numbers in the chart and identifying the values of the digits in the numbers.