Just In Time Quick Check
Standard of Learning (SOL) 4.1b

Strand: Number and Number Sense

Standard of Learning (SOL) 4.1b
The student will compare and order whole numbers expressed through millions.

Grade Level Skills:
- Compare two whole numbers expressed through millions, using the words *greater than, less than, equal to*, and *not equal to* or using the symbols >, <, =, or ≠.
- Order up to four whole numbers expressed through millions.

Just in Time Quick Check

Just in Time Quick Check Teacher Notes

Supporting Resources:
- VDOE Mathematics Instructional Plans (MIPS)
    - 4.1ab - Mystery Numbers: Number Sense (Word) / PDF Version
- VDOE Word Wall Cards: Grade 4 (Word) | (PDF)
    - Place Value Position
    - Less Than
    - Greater Than
    - Equal To
    - Equality
    - Inequality

Supporting and Prerequisite SOL: 4.1a, 3.1c, 2.1c

SOL 4.1b - Just in Time Quick Check

1. Write a statement using the terms *greater than*, *less than*, or *equal to* that shows the relationship between the numbers 1,102,121 and 998,969.

2. Create an equality and an inequality statement using the symbols = and ≠ and the digits in the table below. Each number should have at least five digits. You may use the digits provided in the table more than one time.

0	1	2	3	4	5	6	7	8	9

$\boxed{}$ = $\boxed{}$ $\boxed{}$ ≠ $\boxed{}$

3. Using the symbols provided, place a comparison symbol in each empty box to create true statements. Each symbol may be used more than one time.

<	>	=

315,254 $\boxed{}$ 315,274

289,674 $\boxed{}$ 289,744

1,100,001 $\boxed{}$ 1,101,001

4. Write the following numbers in order from greatest to least.

987,035   9,879,001   253,053   1,354,980

SOL 4.1b - Just in Time Quick Check Teacher Notes
Common Errors/Misconceptions and their Possible Indications

1. Write a statement using the terms *greater than*, *less than*, or *equal to* that shows the relationship between the numbers 1,102,121 and 998,969.

   Some students may respond 998,969 is greater than 1,102,121. These students may think that if the digit 9 is in the highest place value of a number (the 9 in the hundred thousand place) it automatically makes the number greater than another number that has a higher place value (the 1 in the million place). Students may also have the misconception that a number with multiple nines is a greater number.

   Teachers may provide students with practice opportunities to compare the quantity each whole number represents. Depending on student readiness levels, this may be done using place value blocks, the expanded form of each digit, or standard digits.

   A place value chart may also be used as a visual aid for comparing the individual digits in a number. For visual continuity, teachers may suggest that students place a zero where no digit is represented. In this question, the million place confirms that 1,132,121 is greater than 998,769.

   Example:

Hundred million	Ten million	Million	,	Hundred thousand	Ten thousand	Thousand	,	Hundred	Ten	One
		1	,	1	0	2	,	1	2	1
		0		9	9	8	,	9	6	9

   Using number generators such as digit cards, number cubes, or other manipulatives, teachers may have students create and compare numbers that have the same number of digits as well as numbers that have a different number of digits. During practice, teachers should emphasize that students can use individual place values, as well as the whole quantity represented, to accurately compare larger numbers.

2. Create an equality and an inequality statement using the symbols = and ≠ and the digits in the table below. Each number should have at least five digits. You may use the digits provided in the table more than one time.

0	1	2	3	4	5	6	7	8	9

   [_____] = [_____]   [_____] ≠ [_____]

Some students may confuse the meaning of the equals and not equals sign. This item allows students to demonstrate their understanding of both symbols by creating an equality statement and an inequality statement.

For students indicating a lack of understanding of how to use these symbols, begin by comparing 2- or 3-digit numbers using concrete representations and comparison words. Next, transition the comparison words to symbols. Then move from the concrete representations to number representations. If necessary, use the expanded form of digits before standard form.

3. Using the symbols provided, place a comparison symbol in each empty box to create true statements. Each symbol may be used more than one time.

<	>	=

315,254 [   ] 315,274

289,674 [   ] 289,744

1,100,001 [   ] 1,101,001

Some students may have difficulty when two or more of the first digits in the numbers being compared are the same. These students may benefit from practice focusing on the place of each digit as they compare. Using a place value chart can help students isolate digits that may be challenging to "see" and evaluate in larger numbers.

4. Write the following numbers in order from greatest to least.

987,035   9,879,001   253,053   1,354,980

When ordering numbers, some students may focus on the first digit in the number to compare, rather than looking at each number as a whole. Stacking the numbers on top of each other by place value can provide a visual aid for ordering several multi-digit numbers.

1,354,980   1,354,980
253,053   **2**53,053
987,035   **9**87,035
9,879,001   9,**8**79,001

In the above example, students can see that the greatest number is 9,879,001, followed by 1,354,980, 987,035 and 253,053 last.