

MA.2.NSO.1.3

Overarching Standard: *MA.2.NSO.1 Understand the place value of three-digit numbers.*

Benchmark of Focus

MA.2.NSO.1.3: Plot, order and compare whole numbers up to 1,000.

Examples: The numbers 424, 178 and 475 can be arranged in ascending order as 178, 424 and 475.

Benchmark Clarifications

Clarification 1: When comparing numbers, instruction includes using a number line and using place values of the hundreds, tens and ones digits.

Clarification 2: Within this benchmark, the expectation is to use terms (e.g., less than, greater than, between or equal to) and symbols (<, > or =).

Related Benchmark/Horizontal Alignment

- MA.2.NSO.2.2

Vertical Alignment

Previous Benchmarks	Next Benchmarks
MA.1.NSO.1.4	MA.3.NSO.1.3

Terms from the K-12 Glossary

- Cardinality Principle
- Natural Number

Purpose and Instructional Strategies

The purpose of this benchmark is to extend the place value work of plot, order and compare from grade 1 by increasing the number set to 1,000.

- Instruction includes the use of numbers presented in multiple ways and different forms.
- Instruction includes the understanding that the value of a digit is impacted by its position in a number.
- Instruction includes the use of place value charts, place value cards, place value disks, place value chips and base ten blocks. (*MTR.2.1*)
- Instruction includes the use of number lines using benchmark numbers to support comparing.
- Instruction includes the understanding that numbers can be reordered in both ascending and descending order.

Common Misconceptions or Errors

- Students may incorrectly plot a three-digit numbers in a number line.
- Students may not understand that a representation of a smaller portion of a number line (200 – 220) may have the same physical size as a representation of a larger number line (0 – 1,000).
- Students may have difficulty comparing two numbers that have the same digits in a different order (i.e., 852 and 582).

Strategies to Support Tiered Instruction

- Instruction includes the use of a hundreds chart and base ten blocks. Teacher shares two numbers that have the same digits, but the numbers are in different places.
 - For example, using numbers like 852 and 582, the students build the two numbers on place value charts. Teacher has students write the number under each of the base ten blocks representation. With the visual representation of the numbers available, ask which number is greater and which number has fewer of each of the base ten blocks. If students identify the incorrect number, teacher points out that there is a greater number of hundreds/flats in 852 than in 582.

Questions to ask students:

How can you use a number line to compare 598 and 589? Which is greater?

- Sample answer that indicates understanding: *Student draws a number line and correctly plots 598 and 589. "My number line shows 500 to 600. I plotted 598 closer to 600 because it is only 2 away. So 598 is greater than 589."*

Order the following numbers from greatest to least: 389, 352, 400. Explain your thinking.

- Sample answer that indicates understanding: *400 is the greatest because it has the greatest number of hundreds. The next number would be 389 because both of the numbers have 3 hundreds, but 389 has more tens. The least number would be 352 because it has the least number of hundreds and tens.*

Ask students to compare two 3-digit numbers. Have them explain the comparison using "greater than, less than, equal to" and/or the symbols: >, <, =

- Sample answer that indicates understanding: *299 is less than 310; $299 < 310$; OR $400+50+5$ is equal to 455 ; $455 = 455$*

Instructional Tasks

Instructional Task 1

Provide students with five numerals (i.e., 1, 8, 5, 4 and 0).

Part A: Create four different three-digit numbers that have a 4 in the hundreds place.

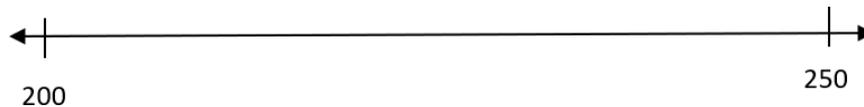
Part B. Arrange the numbers created in order from greatest to least. Explain why which number is the greatest.

Part C. Using two of the numbers created from Part A, write a statement using $>$ or $<$ to compare.

Instructional Items

Instructional Item 1

Use the number line below to plot the numbers 234, 247, 205.



Instructional Item 2

Use $<$, $>$ or $=$ to make the comparison statement below true

$$567 \square 576$$

Additional Resources:

[CPALMS Resources](#)

LearnZillion Video: [Compare Two 3-Digit Numbers by Comparing Number Parts](#)

Resources/Tasks to Support Your Child at Home:

Play Compare War! Using a deck of cards Ace-9 (ace represents 1), have each player choose 3 cards to create a three-digit number. The person with the greatest number wins the rounds and takes the cards. The person at the end with the most cards wins the game.

Math Learning Center: [Number Line](#) – Have your child use the blank number line and pencil drawing tool to plot numbers on the number line. Label the start and end of the number line with different values and have your child plot appropriate numbers that would fit on the number line. For example: *label the start 400 and label the end 600. Your child should add numbers to the line between 400 and 600 in the appropriate places.*

Math Learning Center: [Number Pieces](#) – Have your child build two 3-digit numbers with the base ten blocks and use place value language to explain why one is greater than the other. Ask your child to use $>$, $<$, $=$ symbols to compare the numbers.

Khan Academy Video: [Comparing Whole Numbers](#)