LESSON MAKER PRO

Number Order Detectives

Compare place values to put large numbers in order.

GRADE 4 · 4.NS.2.b

4.NS.2.b "Order up to four whole numbers up to seven digits each, from least to greatest or greatest to least."

NAME _____ DATE _____

THE BIG IDEA

To order whole numbers, compare digits in the greatest place first. If the digits match, move one place to the right until you find a difference. The number with the greater digit in that place is greater.

WORKED EXAMPLE

Order from greatest to least: 5,007,320, 4,999,999, 5,070,302, 5,070,320

1. Line up the digits by place value.
2. All the numbers with 5 million are greater than 4,999,999.
3. Compare the 5-million numbers from left to right: 5,070,320 is greater than 5,070,302, which is greater than 5,007,320.
4. Write the numbers in greatest-to-least order.

Answer: 5,070,320, 5,070,302, 5,007,320, 4,999,999

PRACTICE 6 problems

1 Order from least to greatest: 483,216, 438,261, 482,916

ANSWER _____

2 Order from greatest to least: 6,205,014, 6,250,104, 5,999,999, 6,205,140

ANSWER _____

3 Order from least to greatest: 903,007, 930,070, 903,070, 930,007

ANSWER _____

4 Order from greatest to least: 1,450,023, 1,405,230, 1,450,203, 1,405,203

ANSWER _____

5 Order from greatest to least: 89,999, 900,005, 899,950, 90,005

ANSWER _____

6 Order from least to greatest: 7,000,010, 6,999,999, 7,000,001, 7,000,100

ANSWER _____

APPLY IT Show your work

1 At a coding contest, four players earned these scores: 2,010,450; 2,010,405; 2,100,045; and 2,100,405. Order the scores from greatest to least to show the leaderboard.

WORK SPACE

ANSWER _____

2 Four teams earned points in an online game. Comet earned 725,604 points, Nova earned 752,406 points, Orbit earned 725,640 points, and Spark earned 752,046 points. Order the teams from greatest to least by points.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A school fundraiser recorded these totals: 4,305,018; 4,350,018; 4,305,180; and 4,350,108. Order the totals from least to greatest. Then explain why 4,305,018 is less than 4,350,018.

WORK SPACE AND ANSWER

ANSWER KEY

Number Order Detectives

GRADE 4 · 4.NS.2.b

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Order from least to greatest: 483,216, 438,261, 482,916	**438,261, 482,916, 483,216**
2	Order from greatest to least: 6,205,014, 6,250,104, 5,999,999, 6,205,140	**6,250,104, 6,205,140, 6,205,014, 5,999,999**
3	Order from least to greatest: 903,007, 930,070, 903,070, 930,007	**903,007, 903,070, 930,007, 930,070**
4	Order from greatest to least: 1,450,023, 1,405,230, 1,450,203, 1,405,203	**1,450,203, 1,450,023, 1,405,230, 1,405,203**
5	Order from greatest to least: 89,999, 900,005, 899,950, 90,005	**900,005, 899,950, 90,005, 89,999**
6	Order from least to greatest: 7,000,010, 6,999,999, 7,000,001, 7,000,100	**6,999,999, 7,000,001, 7,000,010, 7,000,100**

PART 2 · APPLY IT

1. **2,100,405, 2,100,045, 2,010,450, 2,010,405** The 2,100,xxx scores are greater than the 2,010,xxx scores. Then compare the digits from left to right within each group.
2. **Nova, Spark, Orbit, Comet** The 752,xxx scores are greater than the 725,xxx scores. Within each group, compare the next digits to order the teams.

CHALLENGE

4,305,018, 4,305,180, 4,350,018, 4,350,108. Both numbers have 4 in the millions place and 3 in the hundred-thousands place. In the ten-thousands place, 0 is less than 5, so 4,305,018 is less than 4,350,018.

Accept correctly ordered lists written with commas, spaces, or inequality symbols. For the challenge explanation, accept a correct comparison of the ten-thousands digits after matching greater place values.