2021 MCAS Sample Student Work and Scoring Guide

Grade 4 Mathematics
Question 6: Constructed-Response

Reporting Category: Number and Operations in Base Ten
Standard: 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 >, =, and < symbols to record the results of comparisons.
Item Description: Express multi-digit whole numbers in standard and expanded forms and use place value understanding to compare the numbers with symbols and to explain your answer.
Calculator: Not allowed

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Scoring Guide
Select a score point in the table below to view the sample student response.

Score*	Description
4A **4B**	The student response demonstrates an exemplary understanding of the Number and Operations in Base Ten concepts involved in reading, writing, and comparing numbers using the base-ten numerals, number names, and expanded form. The student correctly writes numbers in numerical and expanded forms, justifies how to compare numbers using >, <, or =, and uses place value to find an unknown number.
3	The student response demonstrates a good understanding of the Number and Operations in Base Ten concepts involved in reading, writing, and comparing numbers using the base-ten numerals, number names, and expanded form. Although there is significant evidence that the student was able to recognize and apply the concepts involved, some aspect of the response is flawed. As a result, the response merits 3 points.
2	The student response demonstrates a fair understanding of the Number and Operations in Base Ten concepts involved in reading, writing, and comparing numbers using the base-ten numerals, number names, and expanded form. While some aspects of the task are completed correctly, others are not. The mixed evidence provided by the student merits 2 points.
1	The student response demonstrates a minimal understanding of the Number and Operations in Base Ten concepts involved in reading, writing, and comparing numbers using the base-ten numerals, number names, and expanded form.
0	The student response contains insufficient evidence of an understanding of the Number and Operations in Base Ten concepts involved in reading, writing, and comparing numbers using the base-ten numerals, number names, and expanded form. As a result, the response does not merit any points.

*Letters are used to distinguish between sample student responses that earned the same score (e.g., 4A and 4B).

Score Point 4A

This question has four parts.

Part A

Write this number in standard form.

> one hundred sixty-eight thousand, twenty-one

Enter your answer in the box.

168,021

Part B

Write the number $168,201$ in expanded form.

Enter your answer in the space provided.

$$100,000 + 60,000 + 8,000 + 200 + 1$$

Part C

Use $>$, $<$, or $=$ to write a comparison of the two numbers in Part A and Part B. Explain how you got your answer.

Enter your answer and your explanation in the space provided.

$168,021 < 168,201$. I know this because in 168,021 there is nothing in the hundreds place but in 168,201 there's a 2 in the hundreds place.

Part D

Write a number that is $1,000$ greater than the number $169,201$. Explain how you got your answer.

Enter your answer and your explanation in the space provided.

170,201 is 1000 greater than 169,201. I know this because if you add 1000 to 9,201 you would get to 10,201. I added 1000 to 169,201 and ended up with 170,201.

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Score Point 4B

This question has four parts.

Part A

Write this number in standard form.

> one hundred sixty-eight thousand, twenty-one

Enter your answer in the box.

168,021

Part B

Write the number $168,201$ in expanded form.

Enter your answer in the space provided.

> $100,000 + 60,000 + 8,000 + 200 + 1$

Part C

Use $>$, $<$, or $=$ to write a comparison of the two numbers in Part A and Part B. Explain how you got your answer.

Enter your answer and your explanation in the space provided.

> $168,021 < 168,201$
>
> The reason that I think 168,021 is less than 168,201 is because in $168,201$ the digit 2 has a higher place value since it is in the hundreds place, whereas in $168,021$ the digit in the hundreds place is only a zero and the rest of the numbers are the same.

Part D

Write a number that is $1,000$ greater than the number $169,201$. Explain how you got your answer.

Enter your answer and your explanation in the space provided.

> 170,201
>
> I got this answer by adding 1 thousand to the thousands place wich made it so that there was ten thousand which meant that I had to change the thousands place to a zero and give the ten thousands place another ten thousand. The rest of the number stayed the same.

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Score Point 3

This question has four parts.

Part A

Write this number in standard form.

> one hundred sixty-eight thousand, twenty-one

Enter your answer in the box.

168,021

Part B

Write the number $168,201$ in expanded form.

Enter your answer in the space provided.

one hundred sixty-eight thousand, two hundred one.

Part C

Use $>$, $<$, or $=$ to write a comparison of the two numbers in Part A and Part B. Explain how you got your answer.

Enter your answer and your explanation in the space provided.

$168,021 < 168,201.$ that is right because the 2 in 168,201 is ten times the 2 in 168,021

Part D

Write a number that is $1,000$ greater than the number $169,201$. Explain how you got your answer.

Enter your answer and your explanation in the space provided.

$170,201.$ I added 1,000 to 169,201

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Score Point 2

This question has four parts.

Part A

Write this number in standard form.

| one hundred sixty-eight thousand, twenty-one |

Enter your answer in the box.

168,021

Part B

Write the number $168,201$ in expanded form.

Enter your answer in the space provided.

one hundred 68 thousand two hundred and one

Part C

Use $>$, $<$, or $=$ to write a comparison of the two numbers in Part A and Part B. Explain how you got your answer.

Enter your answer and your explanation in the space provided.

part B because $168,201 > 168,021$ because $021 < 201$

Part D

Write a number that is $1,000$ greater than the number $169,201$. Explain how you got your answer.

Enter your answer and your explanation in the space provided.

$169,201 > 1,000$ because it has two more numbers

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Score Point 1

This question has four parts.

Part A

Write this number in standard form.

> one hundred sixty-eight thousand, twenty-one

Enter your answer in the box.

16,821

Part B

Write the number $168,201$ in expanded form.

Enter your answer in the space provided.

$$100,000 + 60,000 + 8,000 + 200 + 1$$

Part C

Use $>$, $<$, or $=$ to write a comparison of the two numbers in Part A and Part B. Explain how you got your answer.

Enter your answer and your explanation in the space provided.

$$16,821 = 168,201$$

Part D

Write a number that is $1,000$ greater than the number $169,201$. Explain how you got your answer.

Enter your answer and your explanation in the space provided.

200,000

I took 1 from the six and added it to the one infront of the six.

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Score Point 0

This question has four parts.

Part A

Write this number in standard form.

> one hundred sixty-eight thousand, twenty-one

Enter your answer in the box.

> 168,201

Part B

Write the number $168,201$ in expanded form.

Enter your answer in the space provided.

> one hundred sixty-eight
> thousand,twenty-one

Part C

Use $>$, $<$, or $=$ to write a comparison of the two numbers in Part A and Part B. Explain how you got your answer.

Enter your answer and your explanation in the space provided.

> $168,201 = one$ hundred sixty-eight thousand,twenty one because is writen in the same thing but with words and numbers.

Part D

Write a number that is $1,000$ greater than the number $169,201$. Explain how you got your answer.

Enter your answer and your explanation in the space provided.

> $1,000 < 168,201$ because when a biger number comes it makes another number smaller.