2023 MCAS Sample Student Work and Scoring Guide

Grade 3 Mathematics
Question 7: Constructed-Response

Reporting Category: Number and Operations in Base Ten
Standard: 3.NBT.A.1 - Use place value understanding to round whole numbers to the nearest 10 or 100.
Item Description: Determine and justify which numbers round to the same 100 and provide different numbers that will also round the same way.
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
3A	The student response demonstrates an exemplary understanding of the Numbers and Operations in Base Ten concepts involved in using place value understanding to round whole numbers to the nearest 10 or 100. The student correctly determines which numbers round to the same number when rounding to the nearest 100, and provides different numbers that also round to the same number.
3B	
2	The student response demonstrates a good understanding of the Numbers and Operations in Base Ten concepts involved in using place value understanding to round whole numbers to the nearest 10 or 100. 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 2 points.
1	The student response demonstrates a minimal understanding of the Numbers and Operations in Base Ten concepts involved in using place value understanding to round whole numbers to the nearest 10 or 100. While some aspects of the task are completed correctly, others are not. The mixed evidence provided by the student merits 1 point.
0	The student response contains insufficient evidence of an understanding of the Numbers and Operations in Base Ten concepts involved in using place value understanding to round whole numbers to the nearest 10 or 100. 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., 3A and 3B).

Score Point 3A

This question has three parts.

A student is rounding each number shown in the list in this box to the nearest **hundred**.

$$559, 637, 651, 648, 586$$

The student says, "Every number in the list rounds to 600."

Part A

Which number in the list makes the student's statement false? Explain how you know your answer is correct.

Enter your answer and your explanation in the space provided.

> The answer is 651.
>
> I know this because the range of a number that rounds to 600 would be greater or equal to 550 and less than 650.The only number not in this range is 651 and therefore it is the answer.

Part B

Write a **different** number that rounds to 600 when rounded to the nearest hundred. Do not repeat a number from the list.

Enter your answer in the box.

597

Part C

What is the **least** number that rounds to 600 when rounded to the nearest hundred? Explain how you got your answer.

Enter your answer and your explanation in the space provided.

> The answer is 550.
>
> I know this because the range of a number that rounds to 600 would be greater or equal to 550 and less than 650. The smallest number in this range would be 550, and it subsequently is the answer.

Score Point 3B

This question has three parts.

A student is rounding each number shown in the list in this box to the nearest **hundred**.

$$559, 637, 651, 648, 586$$

The student says, "Every number in the list rounds to 600."

Part A

Which number in the list makes the student's statement false? Explain how you know your answer is correct.

Enter your answer and your explanation in the space provided.

651 makes the students statements false, I know my answer is correct because 651 is more than 649, so it would round to 700.

Part B

Write a **different** number that rounds to 600 when rounded to the nearest hundred. Do not repeat a number from the list.

Enter your answer in the box.

601

Part C

What is the **least** number that rounds to 600 when rounded to the nearest hundred? Explain how you got your answer.

Enter your answer and your explanation in the space provided.

550 is the least number that rounds to 600, because 550 is one more than 549 which is the last number that can't round to 600 before the numbers that can, so 550 is the least.

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Score Point 2

This question has three parts.

A student is rounding each number shown in the list in this box to the nearest **hundred**.

$$559, 637, 651, 648, 586$$

The student says, "Every number in the list rounds to 600."

Part A

Which number in the list makes the student's statement false? Explain how you know your answer is correct.

Enter your answer and your explanation in the space provided.

> No, not every number rounds to 600 because 5 or more you round up 4 or less you round down. and 651 rounds up to 700.

Part B

Write a **different** number that rounds to 600 when rounded to the nearest hundred. Do not repeat a number from the list.

Enter your answer in the box.

623

Part C

What is the **least** number that rounds to 600 when rounded to the nearest hundred? Explain how you got your answer.

Enter your answer and your explanation in the space provided.

> The least number that rounds to 600 is 555 because 5 or more rounds up 4 or less rounds to down.

Score Point 1

This question has three parts.

A student is rounding each number shown in the list in this box to the nearest **hundred**.

$$559, 637, 651, 648, 586$$

The student says, "Every number in the list rounds to 600."

Part A

Which number in the list makes the student's statement false? Explain how you know your answer is correct.

Enter your answer and your explanation in the space provided.

I think that the numbers 637 and 648 on the list mak this statement false because 637 rounds to 500 and 648 rounds to 500.

Part B

Write a **different** number that rounds to 600 when rounded to the nearest hundred. Do not repeat a number from the list.

Enter your answer in the box.

783

Part C

What is the **least** number that rounds to 600 when rounded to the nearest hundred? Explain how you got your answer.

Enter your answer and your explanation in the space provided.

I think that 550 is the least number that could rounnd to 600 because if you go down one number it would round to 500.

Score Point 0

This question has three parts.

A student is rounding each number shown in the list in this box to the nearest **hundred**.

559, 637, 651, 648, 586

The student says, "Every number in the list rounds to 600."

Part A

Which number in the list makes the student's statement false? Explain how you know your answer is correct.

Enter your answer and your explanation in the space provided.

The student is corect 559, 637, 651, 648, and 586 all round to the nearest 6 hundred

Part B

Write a **different** number that rounds to 600 when rounded to the nearest hundred. Do not repeat a number from the list.

Enter your answer in the box.

744

Part C

What is the **least** number that rounds to 600 when rounded to the nearest hundred? Explain how you got your answer.

Enter your answer and your explanation in the space provided.

The least nummber rounded to the nerest 6 hundred is 555

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