

2026 MCAS Sample Student Work and Scoring Guide

Grade 5 Mathematics

Question 13: Constructed-Response

Reporting Category: Number and Operations in Base Ten

Standard: [5.NBT.B.5](#) - Fluently multiply multi-digit whole numbers. (Include two-digit x four-digit numbers and, three-digit x three-digit numbers) using the standard algorithm.

Item Description: Solve a problem involving multiplying whole numbers including one-digit by four-digit, two-digit by four-digit, and three-digit by three-digit multiplication.

Calculator: Not allowed

This item can be found in the released item sets on the [MCAS Resource Center](#).

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 fluently multiplying multi-digit whole numbers using standard algorithms. The student correctly solves problems by multiplying a one-digit whole number by a four-digit whole number, a two-digit whole number by a four-digit whole number, and 2 three-digit whole numbers.
3	The student response demonstrates a good understanding of the Number and Operations in Base Ten concepts involved in fluently multiplying multi-digit whole numbers using standard algorithms. 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 fluently multiplying multi-digit whole numbers using standard algorithms. 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 fluently multiplying multi-digit whole numbers using standard algorithms.
0	The student response contains insufficient evidence of an understanding of the Number and Operations in Base Ten concepts involved in fluently multiplying multi-digit whole numbers using standard algorithms. 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.

An artist bought pearls, rubies, and diamonds to make jewelry.

- The artist bought 1,295 pearls. The pearls cost \$3 each.
- The artist bought 1,100 rubies. The rubies cost \$11 each.
- The artist bought 205 diamonds. The diamonds cost \$129 each.

Part A

What was the total amount, in dollars, that the artist spent on pearls? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

Cost of pearls: $1,295 \times \$3 = \$3,885$

Part B

What was the total amount, in dollars, that the artist spent on rubies? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

Cost of rubies: $1,100 \times \$11 = \$12,100$

Part C

What was the total amount, in dollars, that the artist spent on diamonds? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

Cost of diamonds: $205 \times \$129 = \$26,445$

Part D

The artist had a budget and should have spent no more than a total of \$45,000 on the pearls, rubies, and diamonds.

Is the total amount the artist spent on the pearls, rubies, and diamonds within the budget? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

Total cost of everything:
 $\$3,885 + \$12,100 + \$26,445 = \$42,430$
Compare: $\$45,000 > \$42,430$
Yes, the artist is within budget.

Score Point 4B

This question has four parts.

An artist bought pearls, rubies, and diamonds to make jewelry.

- The artist bought 1,295 pearls. The pearls cost \$3 each.
- The artist bought 1,100 rubies. The rubies cost \$11 each.
- The artist bought 205 diamonds. The diamonds cost \$129 each.

Part A

What was the total amount, in dollars, that the artist spent on pearls? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

My answer is \$3885 because $1,295 \times 3 = 3885$.

Part B

What was the total amount, in dollars, that the artist spent on rubies? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

The artist spent \$12,100 on the rubies.
 $1,100 \times 11 = 12,100$

Part C

What was the total amount, in dollars, that the artist spent on diamonds? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

The artist spent \$26,445 on diamonds because
 $205 \times 129 = 26,445$.

Part D

The artist had a budget and should have spent no more than a total of \$45,000 on the pearls, rubies, and diamonds.

Is the total amount the artist spent on the pearls, rubies, and diamonds within the budget? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

The artist was on budget because the artist spent \$42,430 on all of the pearls rubies and diamonds.
 $3,885 + 12,100 + 26,445 = 42,430$

Score Point 3

This question has four parts.

An artist bought pearls, rubies, and diamonds to make jewelry.

- The artist bought 1,295 pearls. The pearls cost \$3 each.
- The artist bought 1,100 rubies. The rubies cost \$11 each.
- The artist bought 205 diamonds. The diamonds cost \$129 each.

Part A

What was the total amount, in dollars, that the artist spent on pearls? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

$$1295 \times 3 = \$3,885$$

Part B

What was the total amount, in dollars, that the artist spent on rubies? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

$$1100 \times 11 = \$12,100$$

Part C

What was the total amount, in dollars, that the artist spent on diamonds? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

$$205 \times 129 = \$26,445$$

Part D

The artist had a budget and should have spent no more than a total of \$45,000 on the pearls, rubies, and diamonds.

Is the total amount the artist spent on the pearls, rubies, and diamonds within the budget? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

$$26,445 + 12,100 + 3,885 = \$40,430$$

He or she has \$5,570 left

Score Point 2

This question has four parts.

An artist bought pearls, rubies, and diamonds to make jewelry.

- The artist bought 1,295 pearls. The pearls cost \$3 each.
- The artist bought 1,100 rubies. The rubies cost \$11 each.
- The artist bought 205 diamonds. The diamonds cost \$129 each.

Part A

What was the total amount, in dollars, that the artist spent on pearls? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

$$1,295 \times 3 = 3885$$

Part B

What was the total amount, in dollars, that the artist spent on rubies? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

1200

Part C

What was the total amount, in dollars, that the artist spent on diamonds? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

2644

Part D

The artist had a budget and should have spent no more than a total of \$45,000 on the pearls, rubies, and diamonds.

Is the total amount the artist spent on the pearls, rubies, and diamonds within the budget? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

he spent \$42,430 so he was under his budget

Score Point 1

This question has four parts.

An artist bought pearls, rubies, and diamonds to make jewelry.

- The artist bought 1,295 pearls. The pearls cost \$3 each.
- The artist bought 1,100 rubies. The rubies cost \$11 each.
- The artist bought 205 diamonds. The diamonds cost \$129 each.

Part A

What was the total amount, in dollars, that the artist spent on pearls? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

3,885

Part B

What was the total amount, in dollars, that the artist spent on rubies? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

12,100

Part C

What was the total amount, in dollars, that the artist spent on diamonds? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

20,645

Part D

The artist had a budget and should have spent no more than a total of \$45,000 on the pearls, rubies, and diamonds.

Is the total amount the artist spent on the pearls, rubies, and diamonds within the budget? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

The artist would be under the budget

Score Point 0

This question has four parts.

An artist bought pearls, rubies, and diamonds to make jewelry.

- The artist bought 1,295 pearls. The pearls cost \$3 each.
- The artist bought 1,100 rubies. The rubies cost \$11 each.
- The artist bought 205 diamonds. The diamonds cost \$129 each.

Part A

What was the total amount, in dollars, that the artist spent on pearls? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

$$11 \times 3 \times 129 = 33 \times 129 = 4257$$

Part B

What was the total amount, in dollars, that the artist spent on rubies? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

$$1,111 \text{ because } 1,100 + 11 = 1111.$$

Part C

What was the total amount, in dollars, that the artist spent on diamonds? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

$$334 \text{ because } 205 + 129 = 334.$$

Part D

The artist had a budget and should have spent no more than a total of \$45,000 on the pearls, rubies, and diamonds.

Is the total amount the artist spent on the pearls, rubies, and diamonds within the budget? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

$$1,100 + 205 + 1,295 = 2,600$$