

Grade 5 Mathematics Sample CR Item C1 T1

MAT.05.CR.1.000MD.G.256 C1 T1

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| Sample Item ID: | MAT.05.CR.1.000MD.G.256 |
| Grade: | 05 |
| Primary Claim: | Claim 1: Concepts and Procedures Students can explain and apply mathematical concepts and carry out mathematical procedures with precision and fluency. |
| Secondary Claim(s): | |
| Primary Content Domain: | Measurement and Data |
| Secondary Content Domain(s): | |
| Assessment Target(s): | 1 G: Convert like measurement units within a given measurement system. |
| Standard(s): | 5.MD.1, 5.NBT.5, 5.NBT.6 |
| Mathematical Practice(s): | 1, 2, 5, 6 |
| DOK: | 2 |
| Item Type: | CR |
| Score Points: | 3 |
| Difficulty: | M |
| Key: | See Sample Top-Score Response. |
| Stimulus/Source: | |
| Target-Specific Attributes (e.g., Accessibility Issues): | |
| Notes: | Requires both AI scoring and TE tools. |

Ms. Laurel sells orange juice at her restaurant. She uses conversions to calculate amounts of orange juice. Five measurements are shown below.

Part A

Drag and drop each measurement to complete the equations below.

- | | | | | |
|---------|--------|-----------------|---------|----------|
| 1 quart | 1 pint | 16 fluid ounces | 2 pints | 1 gallon |
|---------|--------|-----------------|---------|----------|

$$\underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Done

Click "Done" when you have completed the equations.

[If the entry is completed correctly, the student is prompted with the message "Good job! The equations are correct."]

[If the entry is completed incorrectly, the equations are corrected and the student is prompted with the message "Sorry, these equations were not correct. The equations have now been corrected."]

[If the conversions are incomplete, the student is prompted with the message "Please complete both equations before you click 'Done.'"]

[Student is not allowed to go back to Part A after the student clicks "Done"]

Ms. Laurel had 10 cartons of orange juice in her restaurant on Monday. Each carton contains 128 fluid ounces of orange juice.

Part B

$$\boxed{1 \text{ pint}} = \boxed{16 \text{ fluid ounces}}$$
$$\boxed{1 \text{ quart}} = \boxed{2 \text{ pints}}$$

Exactly how many **quarts** of orange juice did Ms. Laurel have in these 10 cartons on Monday?

quarts

Part C

$$\boxed{1 \text{ pint}} = \boxed{16 \text{ fluid ounces}}$$
$$\boxed{1 \text{ quart}} = \boxed{2 \text{ pints}}$$

In the restaurant, Ms. Laurel sells glasses of orange juice in two sizes. The table below shows the amount of orange juice each size glass will hold.

Orange Juice

| Size | Amount (fluid ounces) |
|-------|-----------------------|
| Small | 8 |
| Large | 12 |

If she has 180 pints of orange juice, what is the greatest number of large glasses she could sell?

large glasses

What is the greatest number of small glasses she could sell with 180 pints of orange juice?

small glasses

Sample Top-Score Response:

Part A

$$\boxed{1 \text{ pint}} = \boxed{16 \text{ fluid ounces}}$$

$$\boxed{1 \text{ quart}} = \boxed{2 \text{ pints}}$$

Part B

40 quarts

Part C

240 large glasses

360 small glasses

Scoring Rubric:

Responses to this item will receive 0–3 points, based on the following:

- 3 points:** The student shows thorough understanding of how to convert between fluid ounces, pints, and quarts. The student shows this understanding in his/her successful completion of all parts of this task. The student shows a thorough understanding by correctly creating conversions in *Part A*. The student correctly uses multiplication and/or division to determine conversion in *Part B*. For *Part C*, the student understands how to use multiple operations in order to solve for the greatest number of large or small glasses sold.
- 2 points:** The student shows partial understanding of how to convert between fluid ounces, pints, and quarts. The student shows this understanding in his/her unsuccessful completion of *Part A*. The student correctly uses multiplication and/or division to determine conversion in *Part B*. For *Part C*, the student understands how to use multiple operations in order to solve for the greatest number of large or small glasses sold.
- 1 point:** The student shows limited understanding of how to convert between fluid ounces, pints, and quarts, how to correctly use multiplication and division to find the conversions, and how to use multiple operations in order to solve for the number of glasses of each size that could be sold. The student answers only one part of the problem correctly.
- 0 points:** The student shows inconsistent or no understanding of how to convert between fluid ounces, pints, and quarts, how to correctly use multiplication and division to find the conversions, and how to use multiple operations in order to solve for the number of glasses of each size that could be sold.