

Grade 4 Mathematics Performance Task Scoring Guide

Making Cakes Performance Task

September 2019



Stimulus

Making Cakes

You, Max, and Tonya will plan the number of cakes your class will make for a community celebration.

Your task is to decide how many cakes can be made using the available ingredients.

Table 1 shows three ingredients needed to make one cake.

Table 1. Ingredients for One Cake

Ingredient	Amount Needed
Flour	3 cups
Sugar	2 cups
Eggs	2

Table 2 shows the amount of each ingredient that is available to make the cakes.

Table 2. Ingredients Available

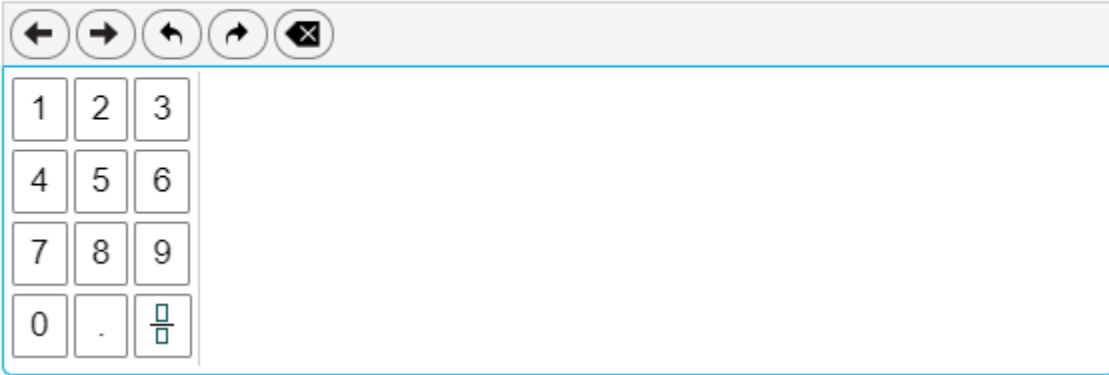
Ingredient	Amount Available
Flour	25 cups
Sugar	22 cups
Eggs	3 dozen

Performance Task Items

ITEM 1

Use **Table 1** to help you answer this question.

How many cups of sugar are needed to make 6 cakes?

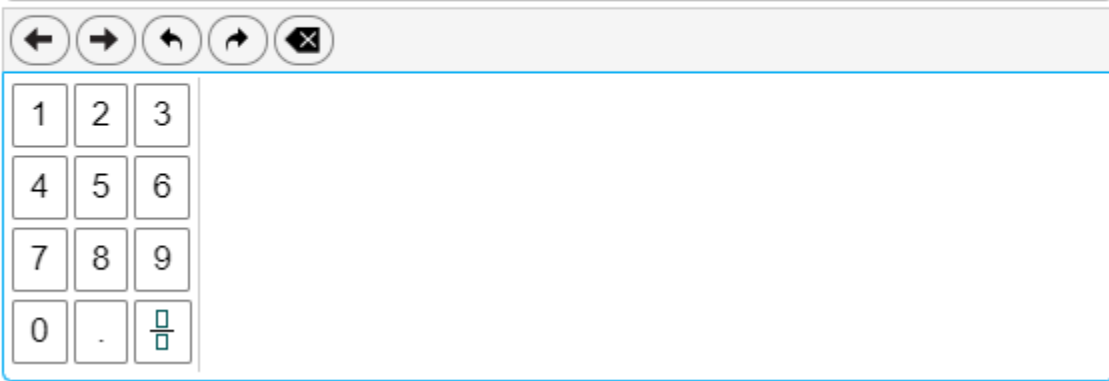


Calculator interface showing a numeric keypad with buttons for digits 1-9, 0, a decimal point, and a fraction template button. Navigation buttons for left, right, undo, redo, and clear are also present.

ITEM 2

Use **Table 1** to help you answer this question.

How many cups of flour are needed to make 2 cakes?



Calculator interface showing a numeric keypad with buttons for digits 1-9, 0, a decimal point, and a fraction template button. Navigation buttons for left, right, undo, redo, and clear are also present.

ITEM 3

Use **Table 1** and **Table 2** to help you answer this question.

There are 12 eggs in 1 dozen.

Tonya says there are enough eggs to make 18 cakes.

Do you agree or disagree with Tonya? Use words and numbers to support your answer.

ITEM 4

Max is estimating the amount of each ingredient needed to make 4 cakes.

Use the information listed in **Table 1** and **Table 2** to help you fill in the chart.

- Fill in the number of cups of flour and sugar, and the number of eggs needed to make 4 cakes.
- Then fill in the number of cups of flour and sugar, and the number of eggs that remain after making 4 cakes.

Ingredient	Amount Needed for 4 Cakes	Amount of Ingredients Remaining
Cups of Flour		
Cups of Sugar		
Number of Eggs		

ITEM 5

Max and Tonya are discussing the greatest number of cakes that can be made using the available ingredients.

Max thinks there are only enough ingredients to make 7 cakes. Tonya disagrees and says you can make more cakes.

Do you agree with Max or Tonya? Use words and numbers to support your answer.

ITEM 6

What is the greatest number of cakes that can be made using the available ingredients?


Use words and numbers to support your answer.

Scoring Guide

ITEM 1

Use **Table 1** to help you answer this question.

How many cups of sugar are needed to make 6 cakes?




1	2	3
4	5	6
7	8	9
0	.	$\frac{\square}{\square}$

ITEM 2

Use **Table 1** to help you answer this question.

How many cups of flour are needed to make 2 cakes?



1	2	3
4	5	6
7	8	9
0	.	$\frac{\square}{\square}$

#1 and #2 Equation numeric – 1 point

Item	Claim	Domain	Target	DOK	Content	MP	Key
#1	2	OA	2A	2	3.OA.A.3	1	12
#2	2	OA	2A	2	3.OA.A.3	1	6

Rubric:

1 point: The student responds with values of 12 and 6, respectively.

0 points: All other responses.

Commentary: The first two questions are entry-level and utilize content from earlier grades to ramp into the work of the performance task. As an entry point, students are asked to perform routine one and two-digit multiplication problems based on a context. This line of thinking will be repeated throughout the performance task as students are computing how much of an ingredient is required for a desired number of cakes.

Rationale for Content:

The numbers and operations are grounded in Grade 3:

3.OA.A.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities.

Rationale for Claim:

The student must identify and extract the quantity required from the table, choose the procedure, and calculate the answer to successfully answer this question.

Claim 2, Target A: Apply mathematics to solve well-posed problems in pure mathematics and those arising in everyday life, society, and the workplace.

Rationale for DOK:

The student is tasked to retrieve information from a table and then select a procedure to answer the question. Note that retrieve information and follow simple procedures are both elements of DOK 1. What separates this question and makes it DOK 2 is that the procedure is not given or specified.

Apply (DOK 2): Retrieve information to solve a problem.

ITEM 3

Use **Table 1** and **Table 2** to help you answer this question.

There are 12 eggs in 1 dozen.

Tonya says there are enough eggs to make 18 cakes.

Do you agree or disagree with Tonya? Use words and numbers to support your answer.

#3 Short answer – 1 point

Item	Claim	Domain	Target	DOK	Content	MP	Key
#3	3	OA	3E	3	4.OA.A.3	1	See exemplar

Rubric:

1 point: The student agrees with Tonya and shows that there are enough eggs to make 18 cakes.

0 points: The response does not meet the minimum requirements to score 1 point.

Commentary: The purpose of this question is to provide the student with an opportunity to communicate and develop an argument to support valid reasoning. The question focuses on the number of eggs needed to make 18 cakes, which requires a translation of units by the student. This question also represents a step in the multiplication and division progression that begins in grade 3 and culminates in grade 5 with writing simple expressions and equations. Students begin finding and interpreting single-digit products and quotients in grade 3. In grade 4 students solve multistep word problems including problems where remainders must be interpreted.

Rationale for Content:

The content is aligned to a grade 4 Priority Cluster and is an extension of 3.OA.A.3, which is securely held content from grade 3. In grade 3, problems are designed to be single step. In grade 4 students are solving multistep problems.

4.OA.A.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted.

Rationale for Claim:

The work required to solve this problem includes an explanation of the validity of Tonya's claim. The student must justify mathematically why they agree with Tonya that there are enough eggs to make 18 cakes.

Claim 3, Target E: Distinguish correct logic or reasoning from that which is flawed and — if there is a flaw in the argument — explain what it is.

Rationale for DOK:

In this DOK 3 question, students are asked to develop a chain of reasoning to provide supporting evidence and develop an argument that supports Tonya's claim.

Evaluate (DOK 3): Cite evidence and develop a logical argument.

What follows are sample responses and scoring annotations for Item 3.

Sample Response 3a

I do agree with Tonya because theres 3 dozen eggs and theres 12 in a dozen so 3 times 12 is 36, and 36 divided by 2 is 18 which is enough to make 18 cakes.

Score point 1:

The student correctly agrees with Tonya. The student shows that there are 36 eggs available in 3 dozen, because "3 times 12 is 36" and that this is enough for 18 cakes with 2 eggs in each cake, because "36 divided by 2 is 18."

Sample Response 3b

I agree with Tonya because, it takes two eggs to make a cake so if ou had 18 cakes you would need 36 eggs like I said you need two eggs to make a cake so, one way I can check my answer if 36 eggs and divide it by two because it takes two eggs to make cake so my answer would be 18 cakes. Another way to check my answer if to do the 18 cakes times two to get 36 eggs.

Score point 1:

The student correctly agrees with Tonya and shows that they have 36 eggs, and that this enough to make 18 cakes: "36 eggs and divide it by two because it takes two eggs to make cake so my answer would be 18 cake." The student

does not address the conversion from dozens to single eggs, but this information is included in the item stem and does not detract from the evidence of the student's understanding related to the task.

Sample Response 3c

I disagree with Tonya because if she needs to make 18 cakes, she needs 2 eggs for each cake so 18 times 2 is 36 and that is more then 1 dozen of eggs. If Tonya wanted to make the 18 cakes she would need 3 dozens of eggs.

Score point 0:

The student shows that 36 eggs are needed for 18 cakes, and that there are 36 eggs in 3 dozen. However, the student disagrees with Tonya because the student compares the number of eggs needed for 18 cakes to the number of eggs in 1 dozen, because "18 times 2 is 36 and that is more then 1 dozen eggs," rather than the 3 dozen shown in Table 2.

ITEM 4

Max is estimating the amount of each ingredient needed to make 4 cakes.

Use the information listed in **Table 1** and **Table 2** to help you fill in the chart.

- Fill in the number of cups of flour and sugar, and the number of eggs needed to make 4 cakes.
- Then fill in the number of cups of flour and sugar, and the number of eggs that remain after making 4 cakes.

Ingredient	Amount Needed for 4 Cakes	Amount of Ingredients Remaining
Cups of Flour	<input type="text"/>	<input type="text"/>
Cups of Sugar	<input type="text"/>	<input type="text"/>
Number of Eggs	<input type="text"/>	<input type="text"/>

#4 Fill in table – 2 points

Item	Claim	Domain	Target	DOK	Content	MP	Key
#4	4	OA	4A	2	4.OA.A.3	1	See exemplar

Rubric:

Ingredient	Amount Needed for 4 Cakes	Amount of Ingredients Remaining
Cups of Flour	12	13 (or 25 minus student answer)
Cups of Sugar	8	14 (or 22 minus student answer)
Number of Eggs	8	28 (or 36 minus student answer)

2 points: The student enters **all** correct values into the table as shown.

1 point: The student correctly enters 4 or 5 correct entries.

Scoring note: If a student enters the first column incorrectly but correctly subtracts the values from the values listed in Table 2 then the student should earn 1 point.

0 points: All other responses

Commentary: This question is designed to draw students fully into the context. The first three questions have exposed strategies that can now be applied to multiple ingredients. The question also allows students to verify previous strategies that were used to calculate ingredients. Students are determining the number of ingredients required to make 4 cakes and the quantities that remain. The question also exposes students to the process of determining which ingredient will be the limiting factor when making multiple cakes.

Rationale for Content:

The content is aligned to a grade 4 Priority Cluster in which students are required to solve whole-number word problems using the four operations.

4.OA.A.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted.

Rationale for Claim:

This question requires the student to draw information from two tables and decide on which arithmetic operations will be needed to solve the problem, including converting dozens into the total number of eggs.

Claim 4, Target A: Apply mathematics to solve problems arising in everyday life, society, and the workplace. The student identifies needed information and chooses which operations to perform.

Rationale for DOK:

This DOK 2 question requires students to retrieve information and perform multiple steps including a transformation of units.

Apply (DOK 2): Retrieve information to solve a problem.

ITEM 5

Max and Tonya are discussing the greatest number of cakes that can be made using the available ingredients.

Max thinks there are only enough ingredients to make 7 cakes. Tonya disagrees and says you can make more cakes.

Do you agree with Max or Tonya? Use words and numbers to support your answer.

#5 Short Answer – 2 points

Item	Claim	Domain	Target	DOK	Content	MP	Key
#5	3	OA	3B	3	4.OA.A.3	1	See exemplar

Rubric:

2 points: The student shows that there are enough of all three ingredients to make more than 7 cakes.

1 point: The student shows that there is enough of only one or two ingredients to make more than 7 cakes.

0 points: The student response does not meet the minimum requirements to score 1 point.

Note: This question is dependent on the responses to Item 4. Students should be awarded full credit if they have a correct argument based on incorrect responses to Item 4.

Commentary: This question requires the student to build on the process employed in the previous question. In this question, students evaluate an incorrect claim to determine whether or not there are enough ingredients to make 7 cakes. The student must test this proposition and then develop an argument that there are enough ingredients to make 7 cakes.

Rationale for Content:

The content is aligned to a grade 4 Priority Cluster in which students are required to solve whole-number word problems using the four operations.

4.OA.A.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted.

Rationale for Claim:

The student is given a proposition as to the maximum number of cakes that can be made. The student must disagree or defend this proposition based on a mathematical argument. This is what makes this a Claim 3 Target B question.

Claim 3, Target B: Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures.

Rationale for DOK:

This question asks students to cite evidence and develop a logical argument, which makes this question DOK 3.

Evaluate (DOK 3): Cite evidence and develop a logical argument.

What follows are the sample responses and scoring annotations for Item 5.

Sample Response 5a

I agree with Tonya because you can actually make 8 cakes and you have left 1 cup of flour, 6 cups of sugar, and 20 eggs.

Item 4 response

Ingredient	Amount Needed for 4 Cakes	Amount of Ingredients Remaining
Cups of Flour	12	13
Cups of Sugar	8	14
Number of Eggs	8	28

Score point 2:

The student correctly states that they have enough ingredients to make 8 cakes and justifies this by providing the correct amount of each ingredient that remains after making 8 cakes.

Sample Response 5b

I don't agree with Max, the eggs can make 18 cakes, the flour can make 8 cakes, the sugar can make 11 cakes. So Tonya is correct. The correct answer is 8 cakes. Tonya is correct that we can make more. I agree with Tonya. You have to look at the one with the least amount and that is the amount of cakes we would make.

Item 4 response

Ingredient	Amount Needed for 4 Cakes	Amount of Ingredients Remaining
Cups of Flour	12	13
Cups of Sugar	8	14
Number of Eggs	8	28

Score point 2:

The student correctly agrees with Tonya and states that they have enough ingredients to make 8 cakes. The student shows how many cakes can be made with each ingredient and determines that they can make 8 cakes. "You have to look at the one with the least amount and that is the amount of cakes we would make."

Sample Response 5c

I agree with.....Tonya. So look at the chart that can make one cake. For the flour 3 cup for one cake next sugar 2 cups then eggs 2 eggs. After that skip count by the one cake ingredient make sure you have some scratch paper to do this. First up flour 3 cups witch mean count by 3 and write it down make sure to look at the chart to make even more cakes. Look for flour it is 25 so count to 25 when skip counting it is 8 but does not go to 25 it only goes to 24. Next sugar 2 cup count by 2 22 times and it will be 11 times. Last but not lease the eggs 2 so count by 2 till we get to 36. So yes this is why i disagree with max!

Item 4 response

Ingredient	Amount Needed for 4 Cakes	Amount of Ingredients Remaining
Cups of Flour	12	4
Cups of Sugar	8	7
Number of Eggs	8	15

Score point 1:

The student agrees with Tonya and shows that there is enough flour for 8 cakes and enough sugar for 11 cakes, but does not complete the explanation for the amount of cakes that can be made with 36 eggs.

Sample Response 5d

Tonya is correct. They have enough to make 9 cakes, because flour has enough to make 9 cakes because they have 25 cups and they need 3 cups per cake so I divided 25 into 3 and got 9. Then sugar could make 11 because they had 22 cups of sugar and you need to use 2 cups per cake. So I divided 22 into 2 and got 11. For eggs they had 3 dozen that equals 36 and you need 2 per cake so do 36 into e and equals 18. You can only make 9 cakes because you do not have enough ingredients to make more.

Item 4 response

Ingredient	Amount Needed for 4 Cakes	Amount of Ingredients Remaining
Cups of Flour	12	13
Cups of Sugar	8	14
Number of Eggs	8	28

Score point 1:

The student agrees with Tonya and shows a correct process for finding how many cakes can be made with the available ingredients, but makes an error in determining how many cakes can be made with 25 cups of flour. "I divided 25 into 3 and got 9."

Sample Response 5e

13 cups of flour, 14 cups of sugar, and 27 eggs. There is enough ingredients to make 8 cakes.

Item 4 response

Ingredient	Amount Needed for 4 Cakes	Amount of Ingredients Remaining
Cups of Flour	12	13
Cups of Sugar	8	14
Number of Eggs	8	27

Score point 0:

The student states that there are enough ingredients for 8 cakes and provides the amount of each ingredient remaining after making 4 cakes (from dependent item), but does not include sufficient explanation that 4 more cakes can be made with the remaining ingredients.

ITEM 6

What is the greatest number of cakes that can be made using the available ingredients?

Use words and numbers to support your answer.

#6 Short answer – 2 points

Item	Claim	Domain	Target	DOK	Content	MP	Key
#6	3	OA	3B	3	4.OA.A.3	1	See exemplar

Rubric

2 points: The student provides the correct number of cakes and the correct reasoning based on the ingredients available.

1 point: The student provides the correct number of cakes but does not show reasoning.

OR

The student provides an incorrect number of cakes due to a mathematical error, but correctly reasons with this number.

0 points: The response does not meet the minimum requirements to score 1 point.

Note: This question is dependent on the responses to Item 4 and Item 5. Students should be awarded full credit if they have a correct argument based on incorrect responses to Item 4 or Item 5.

Commentary: The purpose of this question is to extend the decision-making process that has been established earlier in the performance task. In this question, students are asked to determine the greatest number of cakes with the available ingredients. There are multiple strategies available to students to answer this question. Students could recognize that when making 7 cakes, that only enough flour remains to make one more cake, or that when doubling the results of question 4, only 1 cup of flour remains.

The difference between an item measuring Claim 2 Target A, and Claim 3 Target B, is that the focus of Claim 3 Target B is on communicating the reasoning process in addition to getting the correct answer.

Rationale for Content:

The content is aligned to a grade 4 Priority Cluster in which students are required to solve whole-number word problems using the four operations.

4.OA.A.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted.

Rationale for Claim:

This question directly asks the student to solve a mathematical question and justify the result.

Claim 3, Target B: Items for this target can require students to solve a multi-step, well-posed problem involving the application of mathematics to a real-world context.

Rationale for DOK:

This DOK 3 question requires students to retrieve information from the context, select a procedure, and explain the reasoning that supports their conjecture.

Understand (DOK 3): Use concepts to solve non-routine problems.

Evaluate (DOK 3): Cite evidence and develop a logical argument.

What follows are the sample responses and scoring annotations for Item 6.

Sample Response 6a

8 because if you do the make 4 cakes again you will get eight and you cant make one more because I added and think-ed about how can i make more cakes how and i saw that I can add 4 more and that hit me I did substitution and I can make four. That is how I knew to make eight cakes.

Item 4 response

Ingredient	Amount Needed for 4 Cakes	Amount of Ingredients Remaining
Cups of Flour	12	13
Cups of Sugar	8	14
Number of Eggs	8	28

Item 5 response

I agree with Tonya because there are enough to make more than seven cakes because you can make maybe up to ten or eleven because they buy-ed enough to make more OK for example the thing to make four cakes I know how much was left of the ingredients so i did it again and I can make enough cakes to beat 7 cakes. those are my reasons I agree with Tonya.

Score point 2:

The student provides the correct number of cakes (8) and provides valid reasoning. The student used the table from item 4 and saw that the amount of ingredients remaining for each number (column 3) was more than the amount needed for 4 cakes (column 2), so they determined that there were enough ingredients for an additional 4 cakes.

Sample Response 6b

The greatest amount of cakes you can make is 8 because inf you divide every ingredient number by the number used to make a cake. You will get 8 for the flour, 11 for the sugar, and 18 for the eggs. Not all of the numbers are equal, and 11 amd 18 are far numbers from 8, but all the numbers can be 8. So 8 is the greatest amount of cakes you can make.

Item 4 response

Ingredient	Amount Needed for 4 Cakes	Amount of Ingredients Remaining
Cups of Flour	12	13
Cups of Sugar	8	14
Number of Eggs	8	28

Item 5 response

I agree with Tonya because if I divide all the ingredients by the number that is needed to make a 1 cake by the total amount that was needed to put in. On all of the ingredients I got a amount higher than 7. For the flour I did 25 divided by 3 and got 8 remainder 1. I did that because the total amount of flour that they had was 25 cups and the amount you needed to make a cake is 3 cups. Then i divided 2 into 22 and got 11. I did this because the total amount of sugar is 22 cups and you need 2 cups of sugar in each cake. Finally I divided 36 by 2 because the total amount of eggs is 36 and you need 2 eggs in the cake. Since these are not the same numbers I had to see which number all of my answers can be, and the only number that could be is 8. It is only 8 cakes because 18 and 11 and too high of numbers from 8 and all the numbers are all able to reach 8.

Score point 2:

The student provides the correct number of cakes (8) and correct reasoning based on the ingredients available. The student provides the correct number of cakes that can be made from each ingredient and then explains that the

greatest number of cakes is determined by the ingredient that will produce the fewest number of cakes.

Sample Response 6c

The greatest value of cakes is 8! That is because, 25 divided by 3 is 8 with 1 left over that is how I got my answer 8.

Item 4 response

Ingredient	Amount Needed for 4 Cakes	Amount of Ingredients Remaining
Cups of Flour	12	13
Cups of Sugar	8	14
Number of Eggs	8	24

Item 5 response

I agree with Tonya because, there are more ingredients to make just one more cakes. I got that because you can use 25 cups in 8 cakes with 1 cup left over.

Score point 1:

The student provides the correct number of cakes (8) but the reasoning is insufficient because only the amount of flour is addressed.

Sample Response 6d

9 cakes because you have more sugar and eggs, but less flour which is 9 cups of flour, so you could make 9 cakes.

Item 4 response

Ingredient	Amount Needed for 4 Cakes	Amount of Ingredients Remaining
Cups of Flour	12	13
Cups of Sugar	8	14
Number of Eggs	8	28

Item 5 response

I agree with Tonya because you can make more than 7 cakes. 25 cups of flour divided by 3 cups of flour = 9 cups of flour. You could make 9 cakes. There is enough sugar, too. You could make 16 cakes, but you would need more flour. There are enough eggs, too. You could make 18 cakes, but you would need more sugar and flour.

Score point 1:

The student provides the correct number of cakes based on the answer (9) to dependent Item 5, but the explanation is insufficient. The student attempts to explain that the number of cakes is limited by the amount of flour, but the statement “you have more sugar and eggs...” is not clear.

Sample Response 6e

3 cups of flour can go into 25 cups of flour 8 times. 2 cups of sugar can go into 22 cups 11 times. 2 eggs can go into 36 eggs 18 times. Add all those up, and you got yourself 47 cakes.

Item 4 response

Ingredient	Amount Needed for 4 Cakes	Amount of Ingredients Remaining
Cups of Flour	12	13
Cups of Sugar	8	14
Number of Eggs	8	28

Item 5 response

I agree with Tonya.

Step 1: I counted 3 seven times into 25. There was enough flour for 8 cakes, which is more than the goal.

Step 2: I counted 2 into 22 seven times. There was more than enough sugar.

Step 3: The number of sugar cups for one cake is equal to the number of eggs needed for one cake, so again there is more ingredients needed to bake 7 cakes.

Step 4: I concluded that Tony is correct.

Score point 0:

The student shows a correct process to determine how many cakes can be made with each of the three ingredients, but then misinterprets this data and adds the number of cakes together and states that the available ingredients will make 47 cakes.

Smarter Balanced Mathematics General Rubrics

The handscored items in this guide are both 1-point and 2-point short-text items. The general rubrics that are used as a basis for scoring all 1-point and 2-point short-text items are shown below. Although item-specific rubrics are also provided to scorers to facilitate the handscored of short-text items, every response should be able to map back to these general rubrics in a consistent and reliable manner.

Smarter Balanced Mathematics General Rubric for 2-Point Items

Score	Description
2	The student has demonstrated a full and complete understanding of all mathematical content and practices essential to this task. The student has addressed the task in a mathematically sound manner. The response contains evidence of the student’s competence in problem solving, reasoning, and/or modeling to the full extent that these processes apply to the specified task. The response may, however, contain minor flaws that do not detract from a demonstration of full understanding.
1	The student has demonstrated a partial understanding of the mathematical content and practices essential to this task. The student’s response contains some of the attributes of an appropriate response but lacks convincing evidence that the student fully comprehends the essential mathematical ideas addressed by this task. Such deficits include evidence of insufficient mathematical knowledge; errors in fundamental mathematical procedures; and other omissions or irregularities that bring into question the student’s competence in problem solving, reasoning, and/or modeling related to the specified task.
0	The student has demonstrated merely an acquaintance with the topic, or provided a completely incorrect or uninterpretable response. The student’s response may be associated with the task, but contains few attributes of an appropriate response. There are significant omissions or irregularities that indicate a lack of comprehension in regard to the mathematical content and practices essential to this task. No evidence is present that demonstrates the student’s competence in problem solving, reasoning, and/or modeling related to the specified task.

Smarter Balanced Mathematics General Rubric for 1-Point Items

Score	Description
1	The student has demonstrated a full and complete understanding of all mathematical content and practices essential to this task. The student has addressed the task in a mathematically sound manner. The response contains evidence of the student's competence in problem solving, reasoning, and/or modeling to the full extent that these processes apply to the specified task. The response may, however, contain minor flaws that do not detract from a demonstration of full understanding.
0	The student has demonstrated merely an acquaintance with the topic, or provided a completely incorrect or uninterpretable response. The student's response may be associated with the task, but contains few attributes of an appropriate response. There are significant omissions or irregularities that indicate a lack of comprehension in regard to the mathematical content and practices essential to this task. No evidence is present that demonstrates the student's competence in problem solving, reasoning, and/or modeling related to the specified task.