

Tennessee Comprehensive Assessment Program

TCAP/CRA 2013



3

Task 3 Scoring Guide

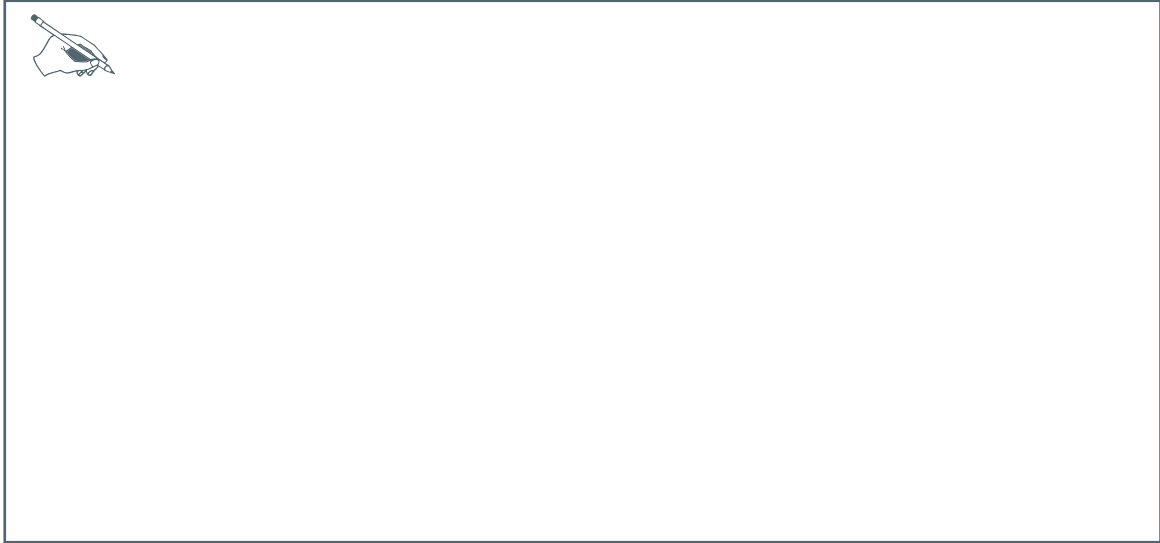
Party Treats Task

Task 3. Party Treats Task

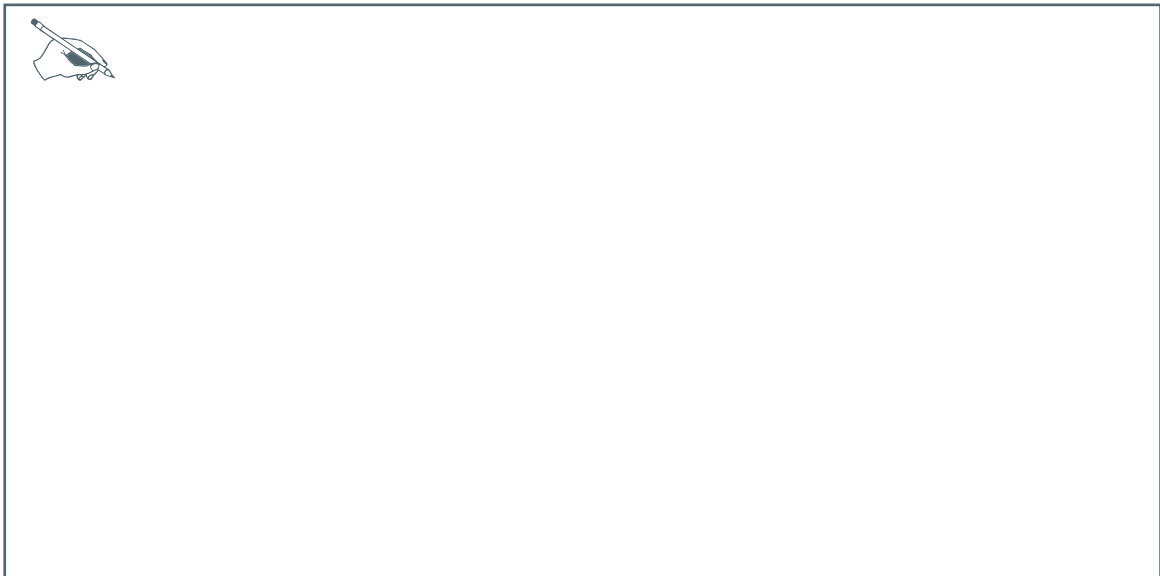
Alexa baked some cookies for a party. She said, "If everyone I invited comes to the party, there will be 3 cookies for every person."

On the day of the party, when Alexa handed out the cookies, there were 9 cookies for each person.

- a. Did more people come or fewer people come than Alexa invited? Explain your answer.



- b. How many people may have attended the party? Use a diagram or words to explain your answer.



3. Party Treats Task Scoring Guide

The CCSS for Mathematical Content (1 point)

- 3.OA.A.3 Gives a multiplication or division equation that shows there were 3 cookies for each person invited, or gives a multiplication or division equation that shows there were 9 cookies for each person who attended. _____
(1 Point)

Total Content Points _____

The CCSS for Mathematical Practice (2 points)

- MP2 Writes a multiplication or division equation, and recontextualizes the equation by providing labels or referencing the context. _____
(1 Point)
(MP2: Reason abstractly and quantitatively.)

- MP3 Provides valid mathematical reasoning supporting the answer that fewer people came than were invited. _____
(1 Point)
(MP3: Construct viable arguments and critique the reasoning of others.)

Total Practice Points _____

Total Awarded Points _____

The CCSS for Mathematical Content Addressed in This Task

Represent and solve problems involving multiplication and division.

3.OA.A.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

The CCSS for Mathematical Practice*

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

*Gray text indicates Mathematical Practices that are not addressed in this task.

Students' responses to a mathematical task provide evidence of what they understand and are able to do in relation to the standards and practices. Across tasks, this cumulative evidence shows students' understanding and abilities within a domain. When students do not respond completely to all parts of a task, they provide insufficient evidence of their mathematical understanding and abilities and therefore do not fully demonstrate the expectations of the standards and practices aligned with that task.

Task 3. Party Treats Task

Alexa baked some cookies for a party. She said, "If everyone I invited comes to the party, there will be 3 cookies for every person."

On the day of the party, when Alexa handed out the cookies, there were 9 cookies for each person.

- a. Did more people come or fewer people come than Alexa invited? Explain your answer.


The answer is less because if you invited 9 people and 3 came when you made 27 cookies you would have given them 9 cookies, but if all 9 came you would give them 3 cookies. What she is saying is that if more show up you would get less cookies.

- b. How many people may have attended the party? Use a diagram or words to explain your answer.

people	9	6	3
cookies baked	27	27	27
each person given	3	6	9

} people came because if you baked 27 cookies you would have to have 3 people come to give them 9 cookies.


- c. Write an equation that shows there were 3 cookies for each person invited. Tell what each number in the equation represents.



$27 \div 3 = 9$

The 27 in $27 \div 3 = 9$ is for the cookies baked. The 3 is for how many people came, and the nine is for the amount of cookies shared.

Write an equation that shows there were 9 cookies for each person who came.



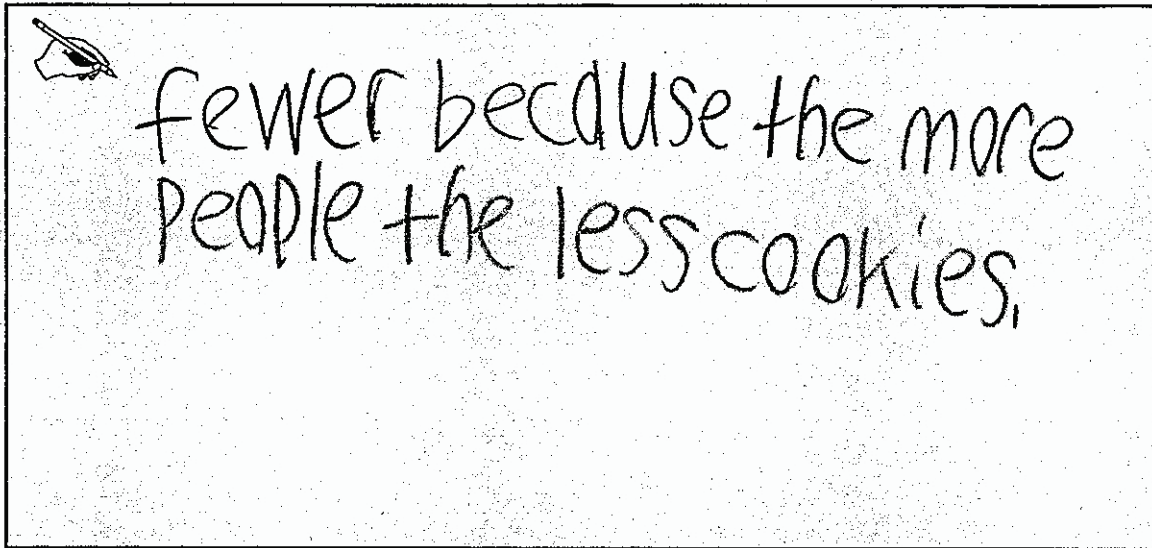
$27 \div 3 = 9$ is the equation because the 27 (cookies baked) divided by 3 (people came) would equal 9 (how many cookies).

Task 3. Party Treats Task

Alexa baked some cookies for a party. She said, "If everyone I invited comes to the party, there will be 3 cookies for every person."

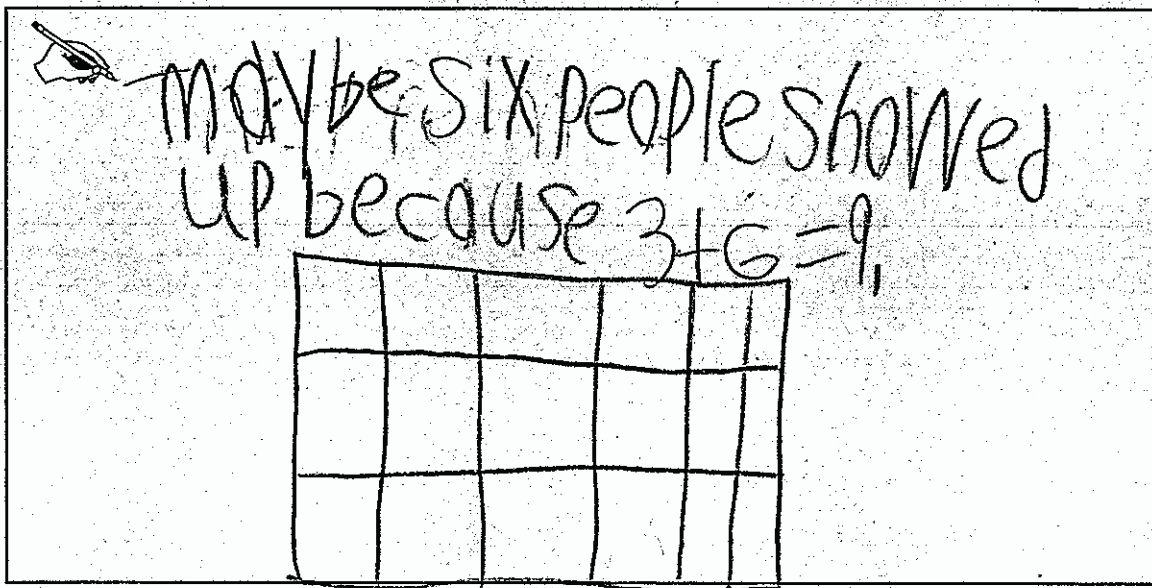
On the day of the party, when Alexa handed out the cookies, there were 9 cookies for each person.

- a. Did more people come or fewer people come than Alexa invited? Explain your answer.



A hand-drawn box containing a pencil icon in the top left corner. The text inside the box reads: "fewer because the more people the less cookies."

- b. How many people may have attended the party? Use a diagram or words to explain your answer.



A hand-drawn box containing a pencil icon in the top left corner. The text inside the box reads: "maybe six people showed up because $3 \times 6 = 9$ ". Below the text is a hand-drawn grid consisting of 3 rows and 6 columns of squares.

A-2b

- c. Write an equation that shows there were 3 cookies for each person invited. Tell what each number in the equation represents.

Handwritten equation: $6 \otimes \times 3 = 18$. Annotations include "kids" above $6 \otimes$, "cookies, for each person" above 3, and "total cookies" below 18. A pencil icon is in the top left.

Write an equation that shows there were 9 cookies for each person who came.


Handwritten equation: $9 \times 6 = 54$. Annotations include "cookies 2 kids" above 9, "for each person" below 9, and "total cookies" below 54. A pencil icon is in the top left.

Task 3. Party Treats Task


Alexa baked some cookies for a party. She said, "If everyone I invited comes to the party, there will be 3 cookies for every person."

On the day of the party, when Alexa handed out the cookies, there were 9 cookies for each person.

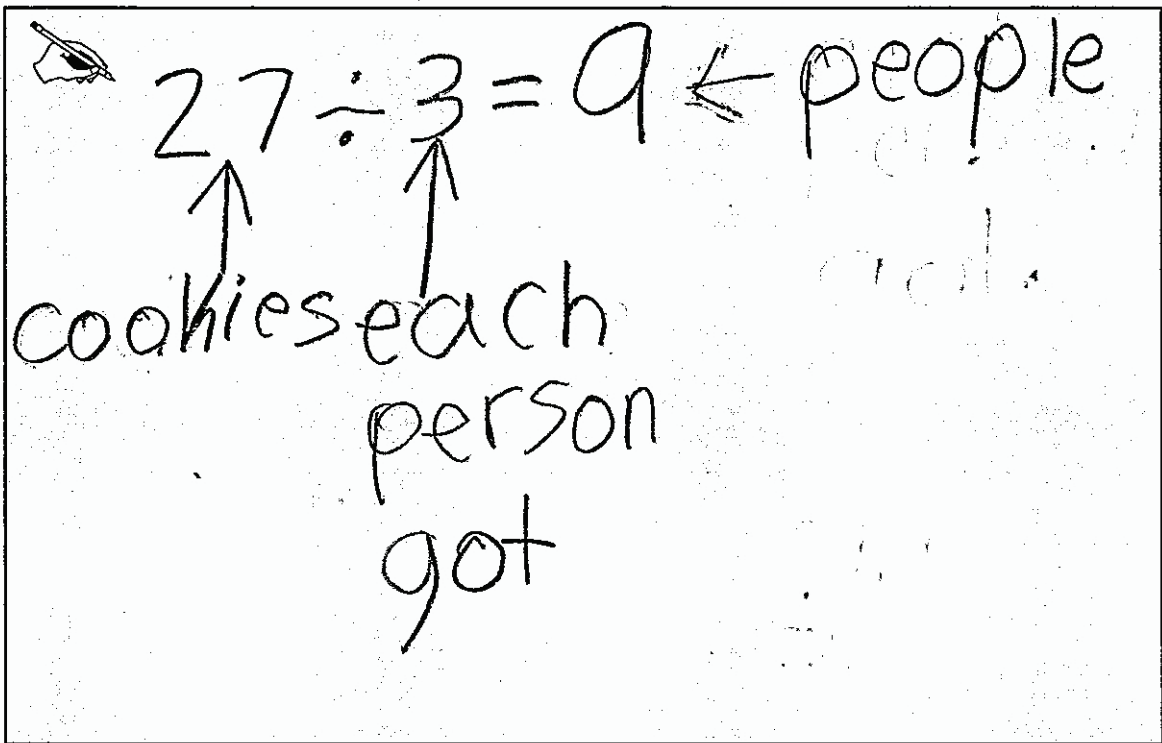
- a. Did more people come or fewer people come than Alexa invited? Explain your answer.

 Fewer because she said that if all of the people come there will be three for each person.

- b. How many people may have attended the party? Use a diagram or words to explain your answer.

 two or three people may have come.

- c. Write an equation that shows there were 3 cookies for each person invited. Tell what each number in the equation represents.

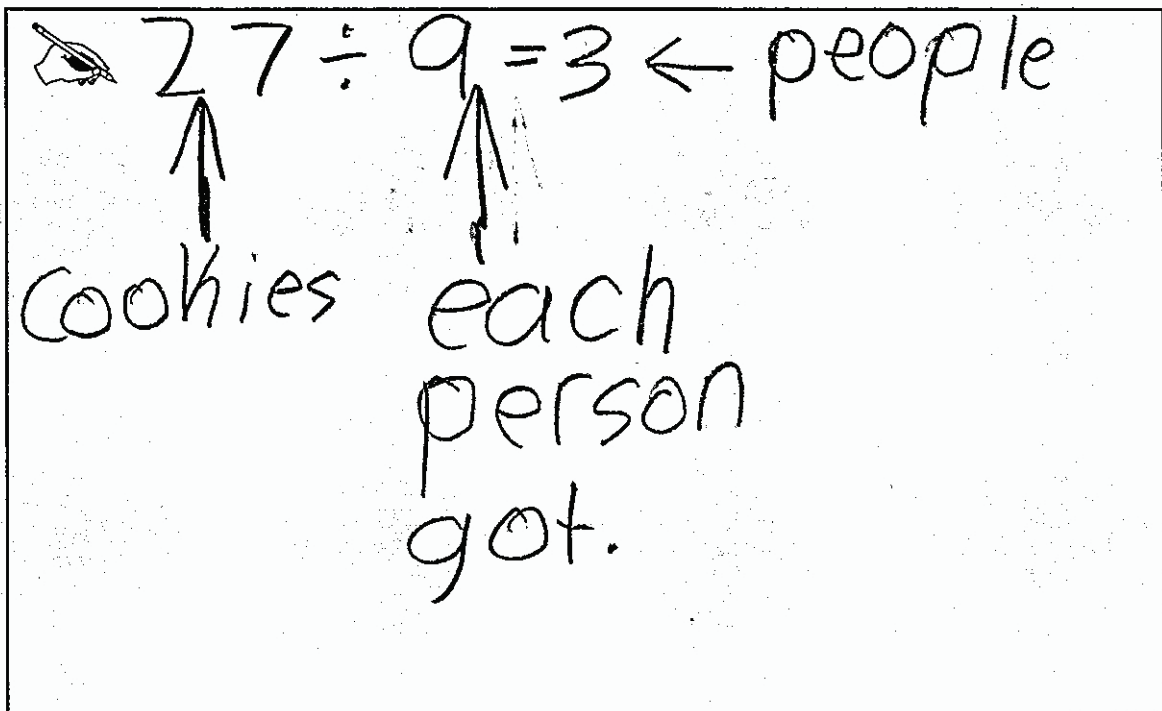


A handwritten equation $27 \div 3 = 9$ is shown inside a rectangular box. A small drawing of a pencil tip is at the top left. An arrow points from the number 27 down to the word "cookies". Another arrow points from the number 3 down to the words "each person got". A third arrow points from the number 9 to the word "people".

$$27 \div 3 = 9 \leftarrow \text{people}$$

cookies each person got

Write an equation that shows there were 9 cookies for each person who came.



A handwritten equation $27 \div 9 = 3$ is shown inside a rectangular box. A small drawing of a pencil tip is at the top left. An arrow points from the number 27 down to the word "cookies". Another arrow points from the number 9 down to the words "each person got". A third arrow points from the number 3 to the word "people".

$$27 \div 9 = 3 \leftarrow \text{people}$$

cookies each person got.

Guide 3

Litho 380775

Total Content Points: 1 (3.OA.A.3)

Total Practice Points: 1 (MP2)

In Part A, the student mostly restates the prompt (“fewer because she said that if all of the people come there will be three for each person”) and, therefore, does not provide a sufficient, viable argument that fewer people came than were invited (no credit for MP3). In Part C, the student writes acceptable equations and provides correct labels. For example, in the first half of Part C, the student correctly writes a division equation ($27 \div 3 = 9$) that shows there were 3 cookies for each person invited (3.OA.A.3); the student also recontextualizes the equation by providing correct labels (27 total “cookies,” 3 that “each person got,” for 9 “people”) (MP2).


Total Awarded Points: 2 out of 3

Task 3. Party Treats Task


Alexa baked some cookies for a party. She said, "If everyone I invited comes to the party, there will be 3 cookies for every person."

On the day of the party, when Alexa handed out the cookies, there were 9 cookies for each person.


- a. Did more people come or fewer people come than Alexa invited? Explain your answer.

 fewer people came because 3 cookies isn't alot but 9 cookies are alot.

- b. How many people may have attended the party? Use a diagram or words to explain your answer.

 Maybe there were five people at the party

- c. Write an equation that shows there were 3 cookies for each person invited. Tell what each number in the equation represents.



$$3 \times 5 = 15$$

3. Number of cookies per person.

5. People who came.

15. Total number of cookies.

Write an equation that shows there were 9 cookies for each person who came.


$$9 \times 5 = 45$$

Guide 4

Litho 350599

Total Content Points: 1 (3.OA.A.3)

Total Practice Points: 1 (MP2)

In Part A, the student's response ("fewer people came because 3 cookies isn't alot but 9 cookies are alot") does not indicate that more cookies per person means fewer people attended or that fewer cookies per person means more people attended and, therefore, does not provide a viable argument that fewer people came than were invited (no credit for MP3). In the first half of Part C, the student correctly writes and labels a multiplication equation that shows there were 3 cookies for each of 5 people ($3 \times 5 = 15$) (3.OA.A.3); the student also recontextualizes the equation by providing correct labels ("3. Number of cookies per person"; "5. People who came"; "15. Toatle [total] number of cookies") (MP2).

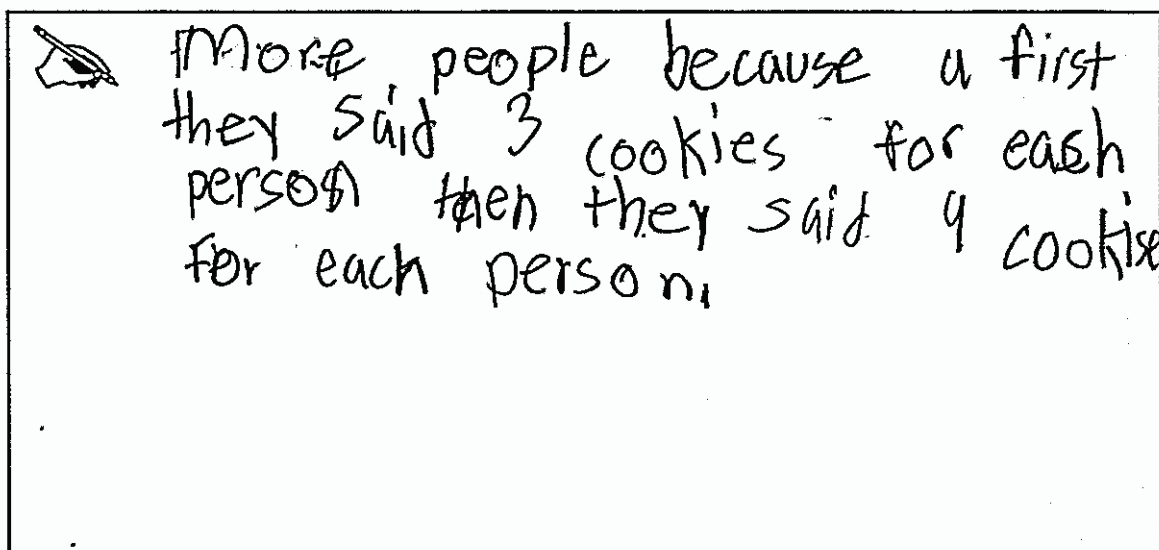
Total Awarded Points: 2 out of 3

Task 3. Party Treats Task

Alexa baked some cookies for a party. She said, "If everyone I invited comes to the party, there will be 3 cookies for every person."

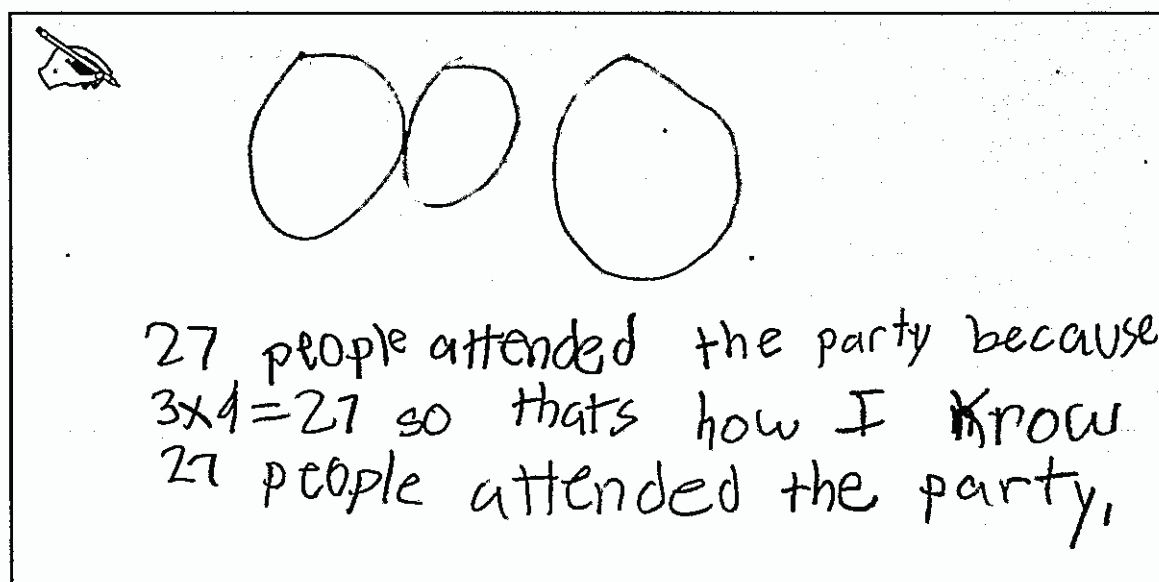
On the day of the party, when Alexa handed out the cookies, there were 9 cookies for each person.

- a. Did more people come or fewer people come than Alexa invited? Explain your answer.



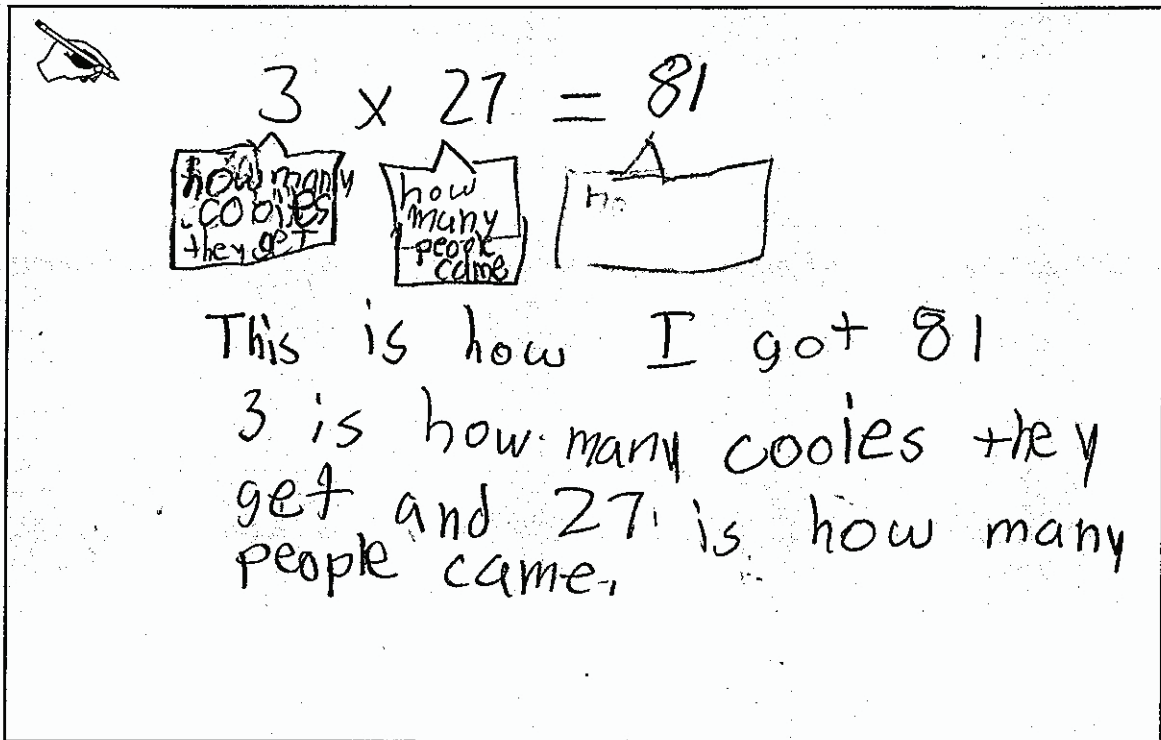
More people because a first they said 3 cookies for each person then they said 9 cookies for each person.


- b. How many people may have attended the party? Use a diagram or words to explain your answer.



27 people attended the party because $3 \times 9 = 27$ so that's how I know 27 people attended the party.

- c. Write an equation that shows there were 3 cookies for each person invited. Tell what each number in the equation represents.



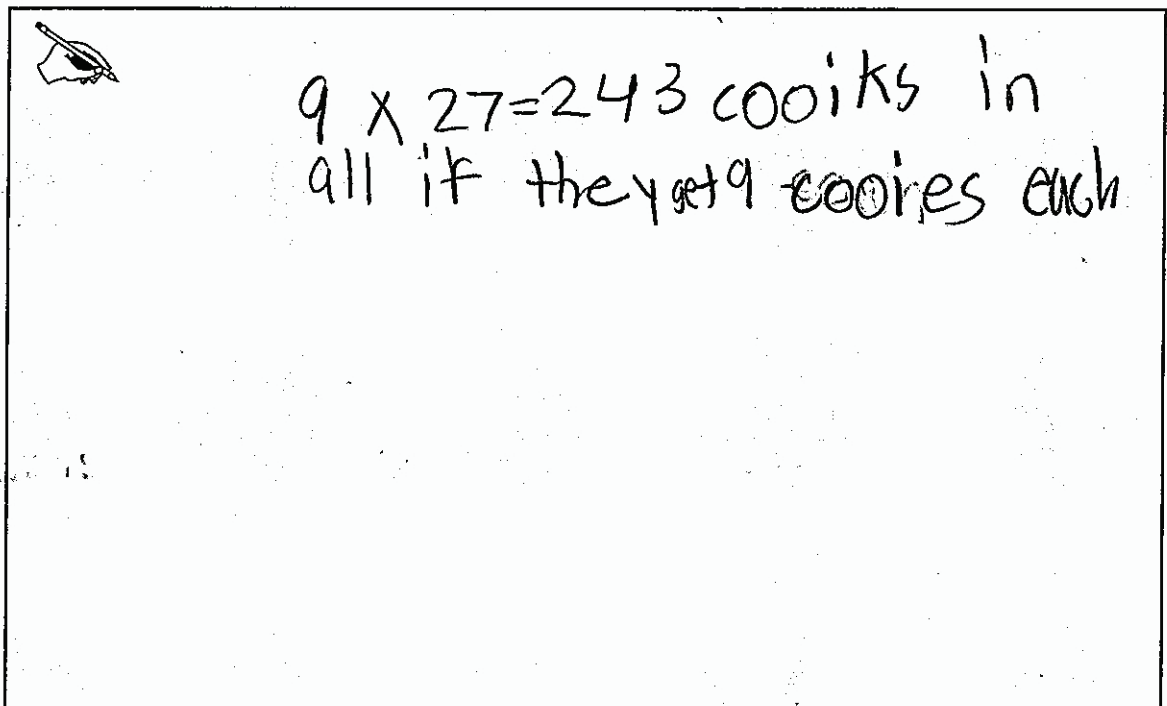



$$3 \times 27 = 81$$

how many cookies they get how many people came no.

This is how I got 81
 3 is how many cookies they get and 27 is how many people came.

Write an equation that shows there were 9 cookies for each person who came.





$$9 \times 27 = 243 \text{ cookies in all if they get 9 cookies each}$$

Guide 5

Litho 358208

Total Content Points: 1 (3.OA.A.3)

Total Practice Points: 1 (MP2)

In Part A, the student incorrectly concludes that more people came than were invited “because [at] first they said 3 cookies for each person then they said 9 cookie for each person”; therefore, the argument is not viable according to the task (no credit for MP3). In Part C, the student writes acceptable equations. For example, in the second half of Part C, the student writes a correct multiplication equation that shows there were 9 cookies for each person who attended ($9 \times 27 = 243$) (3.OA.A.3). By providing labels (“9 [cookies] each” and “243 [cookies] in all”) and indicating in Part B and in the first half of Part C that 27 is “how many people came,” the student recontextualizes the equation (MP2).


Total Awarded Points: 2 out of 3

Task 3. Party Treats Task


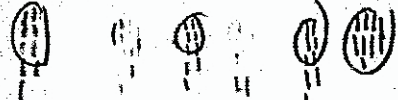
Alexa baked some cookies for a party. She said, "If everyone I invited comes to the party, there will be 3 cookies for every person."

On the day of the party, when Alexa handed out the cookies, there were 9 cookies for each person.


- a. Did more people come or fewer people come than Alexa invited? Explain your answer.

 Fewer because if there were more people came there would be less cookies for everyone.


- b. How many people may have attended the party? Use a diagram or words to explain your answer.

 
 4 people showed up
 because $4 \times 9 = 36$

- c. Write an equation that shows there were 3 cookies for each person invited. Tell what each number in the equation represents.

 if there were 3 people at the party everyone would get 3 cookies

Write an equation that shows there were 9 cookies for each person who came.

 $4 \times 9 = 36$ $36 \div 4 = 9$

Guide 6

Litho 388594

Total Content Points: 1 (3.OA.A.3)

Total Practice Points: 1 (MP3)

In Part A, the student provides a viable argument, noting that fewer people came than were invited “because if there were more people came there would be less cookies for everyone,” which demonstrates the desired conceptual understanding, even though this answer does not appear consistent with the answer given in Part C (MP3). In the second half of Part C, the student writes a correct multiplication equation ($4 \times 9 = 36$) and a correct division equation ($36 \div 4 = 9$) (3.OA.A.3); however, the student does not provide labels or reference the context of the task (no credit for MP2).


Total Awarded Points: 2 out of 3

Task 3. Party Treats Task



Alexa baked some cookies for a party. She said, "If everyone I invited comes to the party, there will be 3 cookies for every person."

On the day of the party, when Alexa handed out the cookies, there were 9 cookies for each person.

- a. Did more people come or fewer people come than Alexa invited? Explain your answer.


 Fewer, because if everyone came then each person would get 3.

- b. How many people may have attended the party? Use a diagram or words to explain your answer.


A-7b

- c. Write an equation that shows there were 3 cookies for each person invited. Tell what each number in the equation represents.


$$27 \div 9 = 3$$

3

Write an equation that shows there were 9 cookies for each person who came.


$$3 \times 9 = 27$$

Guide 7

Litho 364778

Total Content Points: 1 (3.OA.A.3)

Total Practice Points: 0

In Part A, the student's response summarizes the prompt ("fewer, because if everyone came then each person would get 3") and, therefore, does not provide a viable argument that fewer people came than were invited (no credit for MP3). In Part C, the student writes a correct division equation ($27 \div 9 = 3$) and a correct multiplication equation ($3 \times 9 = 27$) (3.OA.A.3); however, the student does not recontextualize either equation by providing labels or by referencing the context of the task (no credit for MP2).

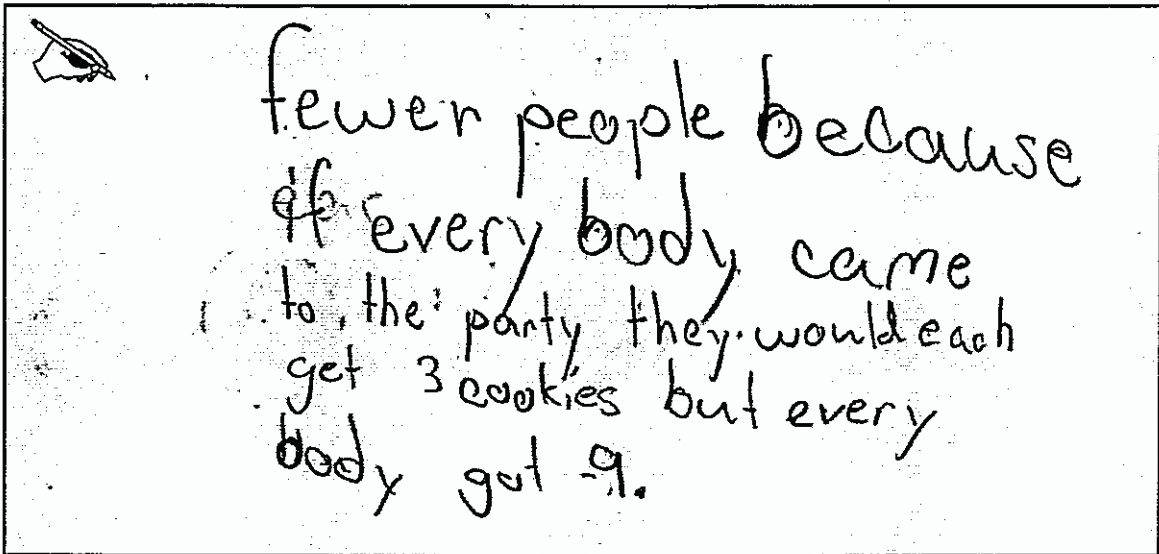
Total Awarded Points: 1 out of 3

Task 3. Party Treats Task

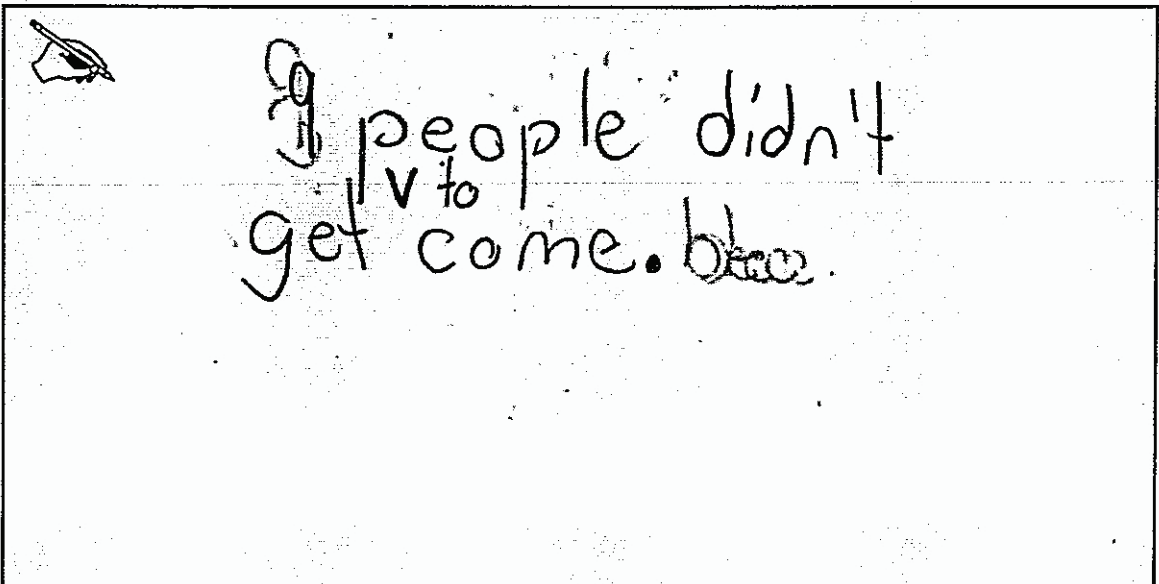
Alexa baked some cookies for a party. She said, "If everyone I invited comes to the party, there will be 3 cookies for every person."

On the day of the party, when Alexa handed out the cookies, there were 9 cookies for each person.

- a. Did more people come or fewer people come than Alexa invited? Explain your answer.



- b. How many people may have attended the party? Use a diagram or words to explain your answer.



- c. Write an equation that shows there were 3 cookies for each person invited. Tell what each number in the equation represents.

$5 \div 15 = 3$
 people → 5 ↓ cookies → 15 ↑ 3 → how many cookies kid got
 cookies
 people → [1] [3] [3] [3] [3]

Write an equation that shows there were 9 cookies for each person who came.

$3 \div 27 = 9$
 people → 3 ↓ cookies → 27 ↓ 9 → How many cookies each person
 people → [9] [9] [9]
 cookies

Total Content Points: 0

Total Practice Points: 1 (MP2)

In Part A, the student's response restates the prompt ("if every body came to the party they would each get 3 cookies but every body got 9") and, therefore, does not provide a viable argument that fewer people came than were invited (no credit for MP3). In Part C, the student's division equations ($5 \div 15 = 3$ and $3 \div 27 = 9$) are incorrect (no credit for 3.OA.A.3); however, the appropriate numbers are correctly labeled (5 "people" divide 15 "cookies" so that 3 is "how many cookies each kid got") and adequately recontextualize the equations (MP2).


Total Awarded Points: 1 out of 3

Task 3. Party Treats Task


Alexa baked some cookies for a party. She said, "If everyone I invited comes to the party, there will be 3 cookies for every person."

On the day of the party, when Alexa handed out the cookies, there were 9 cookies for each person.

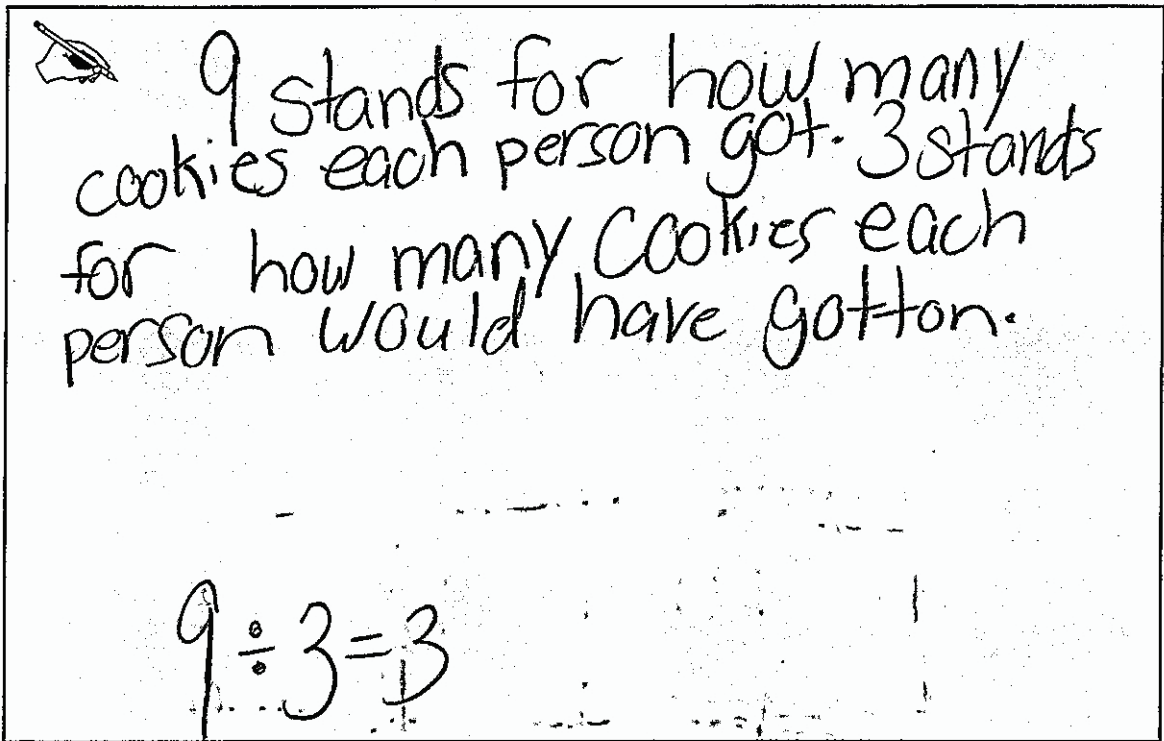
- a. Did more people come or fewer people come than Alexa invited? Explain your answer.


 Yes. Cause if everone had came then the would have gotton 3cookies but the people that came got 9cookies not 3.

- b. How many people may have attended the party? Use a diagram or words to explain your answer.

 3 because $9 \div 3 = 3$ so 3 people went to the party.

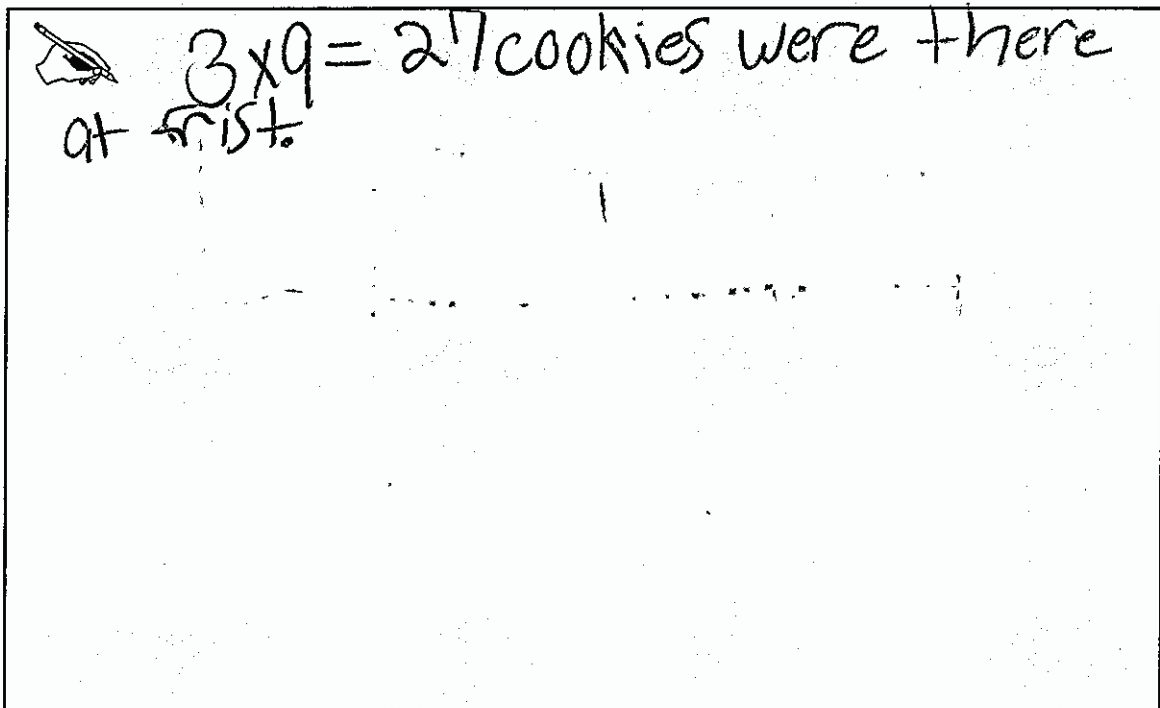
- c. Write an equation that shows there were 3 cookies for each person invited. Tell what each number in the equation represents.




 9 stands for how many cookies each person got. 3 stands for how many cookies each person would have gotten.

$$9 \div 3 = 3$$

Write an equation that shows there were 9 cookies for each person who came.



 $3 \times 9 = 27$ cookies were there at first.

Guide 9

Litho 386435

Total Content Points: 1 (3.OA.A.3)

Total Practice Points: 0

In Part A, the student’s conclusion lacks clarity and restates the prompt (“Yes. Cause if everone had came then [they] would have [gotten] 3 cookies but the people that came got 9 cookies not 3”) and, therefore, is not a viable argument supporting that fewer people came than were invited (no credit for MP3). In the first half of Part C, the student writes a division equation that correctly indicates how many total cookies would be divided so that the correct number of people received three cookies ($9 \div 3 = 3$) (3.OA.A.3). However, the equation is incorrectly recontextualized (“9...gotten”) (no credit for MP2).


Total Awarded Points: 1 out of 3

Task 3. Party Treats Task


Alexa baked some cookies for a party. She said, "If everyone I invited comes to the party, there will be 3 cookies for every person."

On the day of the party, when Alexa handed out the cookies, there were 9 cookies for each person.

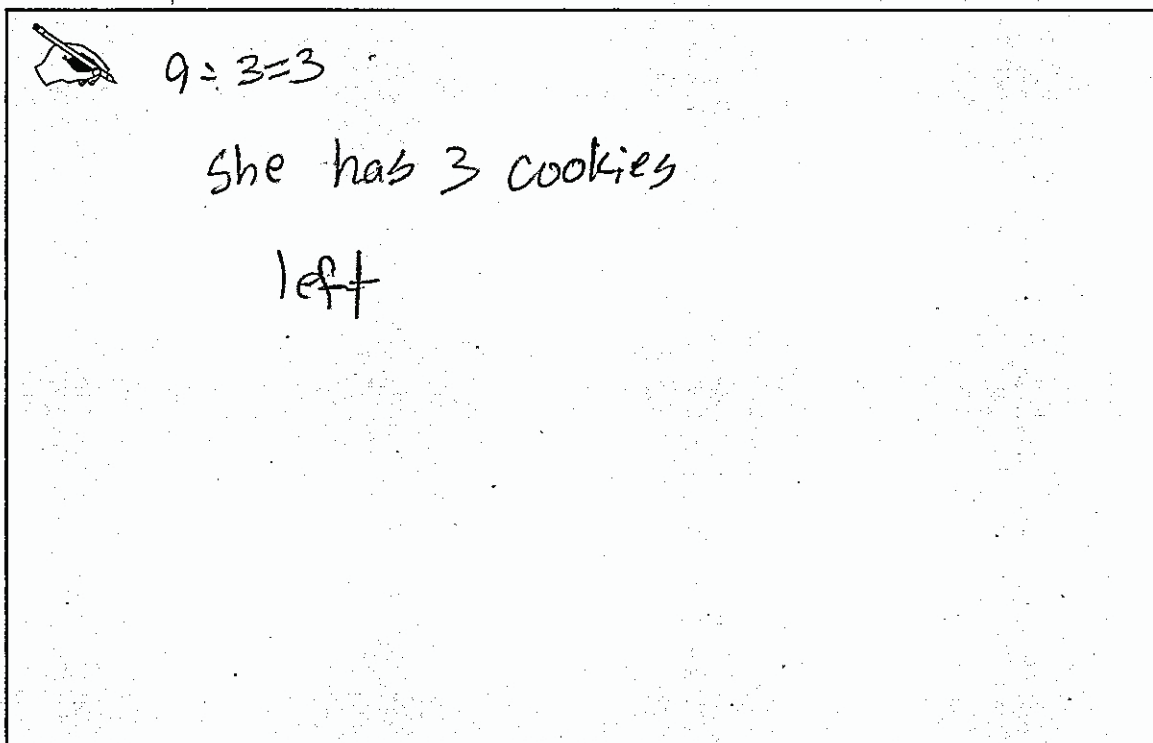
- a. Did more people come or fewer people come than Alexa invited? Explain your answer.

 Less People come. I because 3 cookies - 9 cookies would not work so less people would have to come. Cause if will only equal 6. she needs 15 for everybody

- b. How many people may have attended the party? Use a diagram or words to explain your answer.

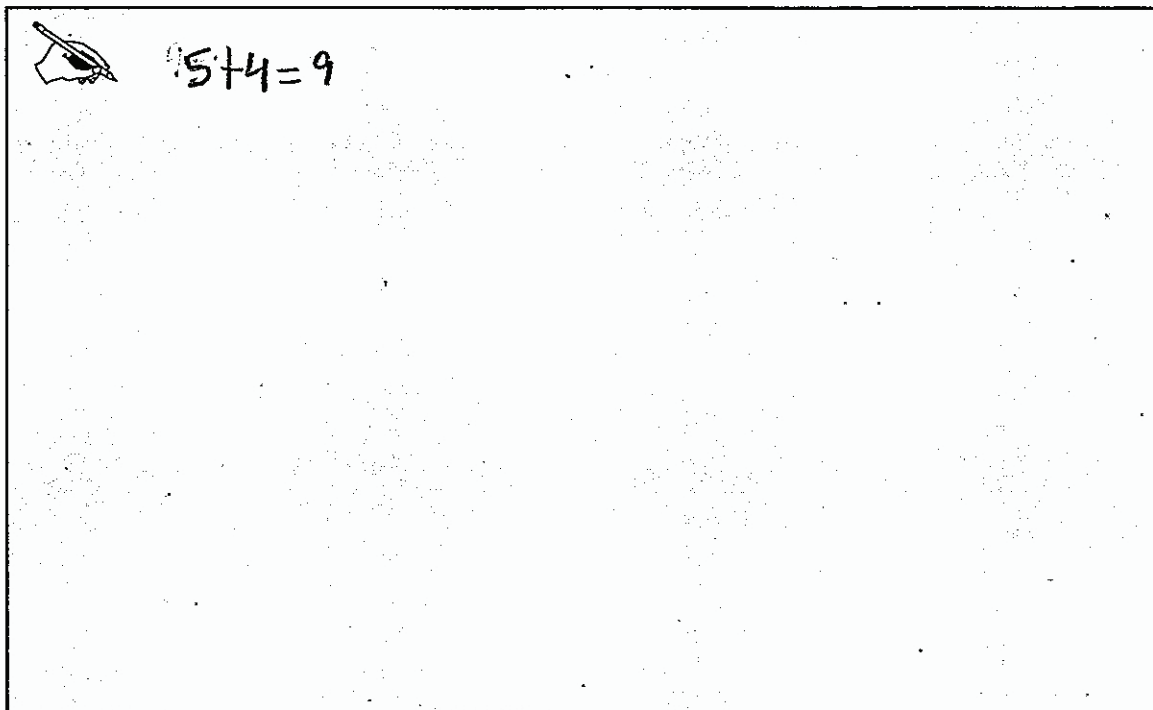
 15. I did $9 \div 3 = 15$ cause was 15 for everybody and 3 trays so it is 15 trays in all

- c. Write an equation that shows there were 3 cookies for each person invited. Tell what each number in the equation represents.



A rectangular box containing handwritten work. In the top left corner, there is a small drawing of a hand holding a pencil. To the right of the drawing, the equation $9 = 3 \times 3$ is written. Below the equation, the text "she has 3 cookies" is written, and further down, the word "left" is written.

Write an equation that shows there were 9 cookies for each person who came.



A rectangular box containing handwritten work. In the top left corner, there is a small drawing of a hand holding a pencil. To the right of the drawing, the equation $5 + 4 = 9$ is written.

Total Content Points: 0

Total Practice Points: 0

In Part A, the student concludes that fewer people came than invited, but the argument does not indicate that more cookies per person means fewer people attended, or vice-versa (“3 cookies – 9 cookies would not work . . . cause it will only equal 6. She needs 15 for everybody”); therefore, a valid argument is not provided as required by the task (no credit for MP3). In Part C, the student writes a correct division equation ($9 \div 3 = 3$) but has a different quotient for the same equation in Part B ($9 \div 3 = 15$) (no credit for 3.OA.A.3). The student does not recontextualize the equation with correct labels or correct references to the context of the task (no credit for MP2).


Total Awarded Points: 0 out of 3

Task 3. Party Treats Task


Alexa baked some cookies for a party. She said, "If everyone I invited comes to the party, there will be 3 cookies for every person."


On the day of the party, when Alexa handed out the cookies, there were 9 cookies for each person.

- a. Did more people come or fewer people come than Alexa invited? Explain your answer.

 Neither she baked more cookies than she needed.

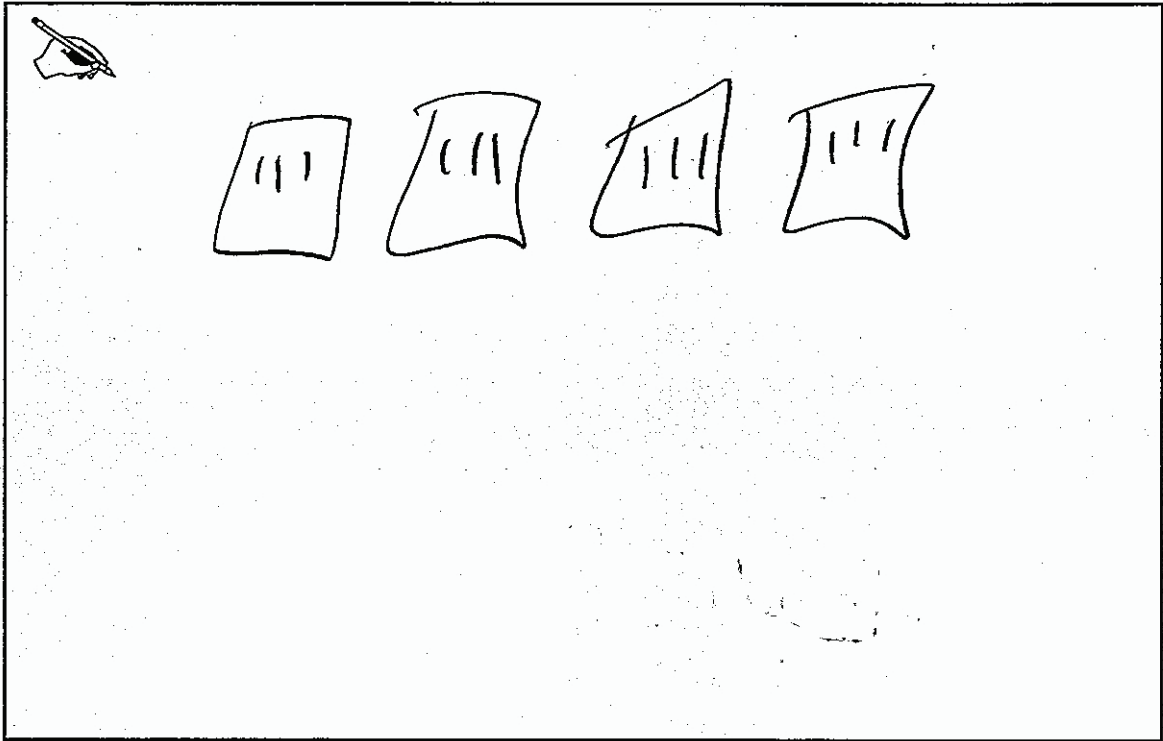
- b. How many people may have attended the party? Use a diagram or words to explain your answer.

 3 plus her makes four.

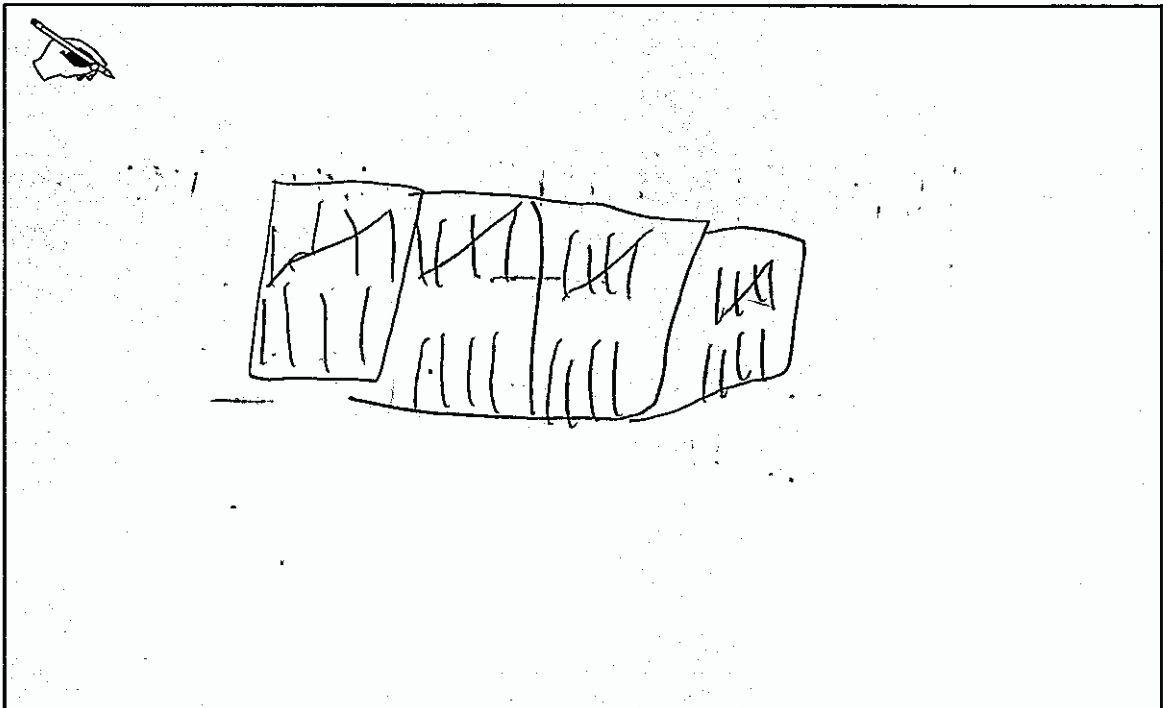


A-11b

- c. Write an equation that shows there were 3 cookies for each person invited. Tell what each number in the equation represents.



Write an equation that shows there were 9 cookies for each person who came.



Total Content Points: 0

Total Practice Points: 0

In Part A, the student's conclusion is incorrect ("Nether [Neither] she baked more cookies than she needed") and, therefore, does not provide a viable argument as required by the task (no credit for MP3). Although diagrams are given in Parts B and C, the student does not write correct equations for any part of the task (no credit for 3.OA.A.3); nor does the student provide correct labels to recontextualize the answers to the task (no credit for MP2).

Total Awarded Points: 0 out of 3