

Name: \_\_\_\_\_



# New York State *Testing Program*

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## 2019 Mathematics Test Session 1

Grade **3**

May 1–3, 2019

RELEASED QUESTIONS

# Session 1



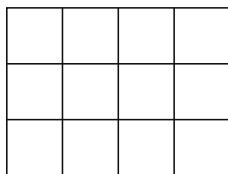
## TIPS FOR TAKING THE TEST

Here are some suggestions to help you do your best:

- Read each question carefully and think about the answer before making your choice.
- You have been provided with a ruler to use during the test. Use the ruler whenever you think it will help you to answer the question.

**1**

The array below represents a product.



Which expression can be used to find the product represented by the array?

- A**  $4 + 3$
- B**  $4 + 4 + 4 + 4$
- C**  $3 \times 4$
- D**  $3 \times 3 \times 3 \times 3$

**2**

Lucy is counting by 2s. She starts with the number 2 and stops at the number 50. Which number would Lucy **not** count?

- A** 11
- B** 22
- C** 34
- D** 48

**3**

Ms. Carter has 30 students in her classroom. She arranges them into 5 equal groups. Which expression represents how to find the number of students in each group?

- A**  $30 + 5$
- B**  $30 \div 5$
- C**  $30 - 5$
- D**  $30 \times 5$

**GO ON**

**6**

Jess scored 18 points during her last basketball game. Each basket she made was worth 2 points. How many baskets did she make?

- A 20
- B 16
- C 9
- D 8

**7**

A librarian receives two boxes of books for the library. The first box has 136 books. The second box has 58 fewer books than the first box. What is the total number of books the librarian receives?

- A 58
- B 78
- C 194
- D 214

**8**

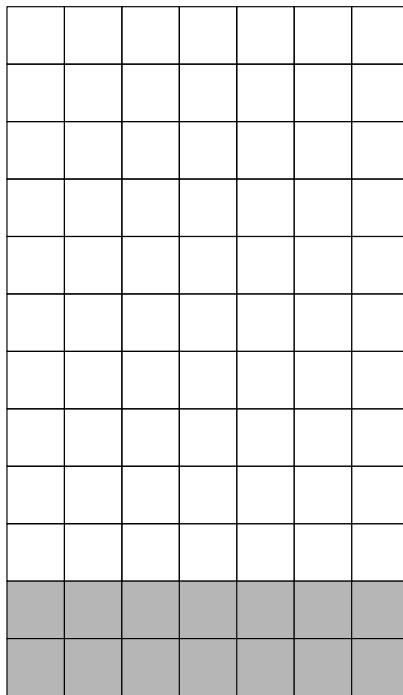
Which two fractions should be plotted at the same location on a number line?

- A  $\frac{3}{4}$  and  $\frac{4}{8}$
- B  $\frac{1}{4}$  and  $\frac{2}{8}$
- C  $\frac{2}{4}$  and  $\frac{4}{6}$
- D  $\frac{1}{2}$  and  $\frac{2}{6}$

**GO ON**

**15**

The figure below represents a floor covered with white tiles and gray tiles.



KEY
<input type="checkbox"/> = 1 square unit

Which expression could be used to find the area, in square units, of the entire floor?

A  $(12 + 7) \times (12 + 7)$

C  $(10 + 7) \times (2 + 7)$

B  $(12 \times 7) + (12 \times 7)$

D  $(10 \times 7) + (2 \times 7)$

**16**

Which expression is equivalent to  $(5 + 2) \times 8$ ?

A  $(8 \times 5) + (8 \times 2)$

B  $(5 \times 8) + (5 \times 2)$

C  $8 \times (5 \times 2)$

D  $(5 \times 8) \times 2$

**GO ON**

**21**

Which equation is true when the missing number is the number 7?

A  $7 \times \underline{\quad} = 42$

B  $7 \times \underline{\quad} = 49$

C  $8 \times \underline{\quad} = 40$

D  $8 \times \underline{\quad} = 48$

**22**

A number is rounded to the nearest hundred. The result is 500. Which number could **not** be the number before it was rounded to the nearest hundred?

A 458

B 463

C 547

D 559

**23**

Which statement is true?

A The product of  $5 \times 2$  is even because both of the factors are even.

B The product of  $4 \times 4$  is odd because both of the factors are even.

C The product of  $2 \times 7$  is even because both of the factors are odd.

D The product of  $5 \times 3$  is odd because both of the factors are odd.

**GO ON**

# Session 2



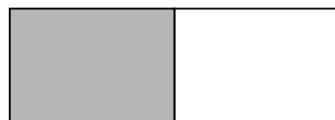
## TIPS FOR TAKING THE TEST

Here are some suggestions to help you do your best:

- Read each question carefully and think about the answer before making your choice or writing your response.
- You have been provided with a ruler to use during the test. Use the ruler whenever you think it will help you to answer the question.
- Be sure to show your work when asked.

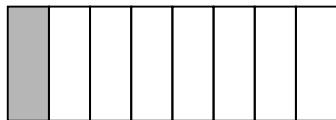
**26**

The shape below is shaded to represent a fraction.

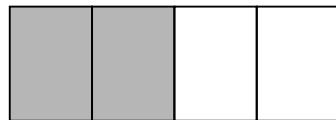


Which shape is shaded to represent a fraction equivalent to the shape shown above?

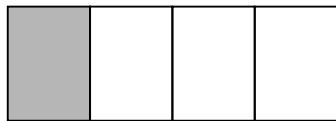
**A**



**C**



**B**



**D**



**27**

A store manager orders shirts from their warehouse. The shirts are packed into boxes and sent to the store, as described below.

- 81 shirts are ordered
- each shipping box holds 9 shirts

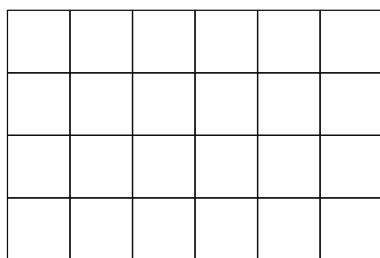
How many shipping boxes are needed for all of the shirts ordered?

- A** 8  
**B** 9  
**C** 72  
**D** 90

**GO ON**

**28**

Leeza used unit squares to find the area of the rectangle shown below.



KEY
= 1 square unit

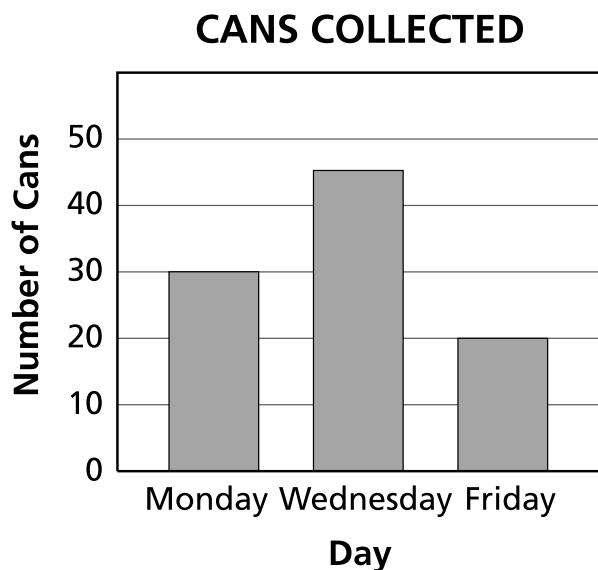
What is the area, in square units, of the rectangle?

- A 16
- B 20
- C 24
- D 28

**GO ON**

**29**

The students in Mr. Gazer's class are collecting cans for recycling. The bar graph below shows the number of cans they collected for each of three days.



How many more cans were collected on Wednesday than on Friday?

- A 15
- B 20
- C 25
- D 45

**30**

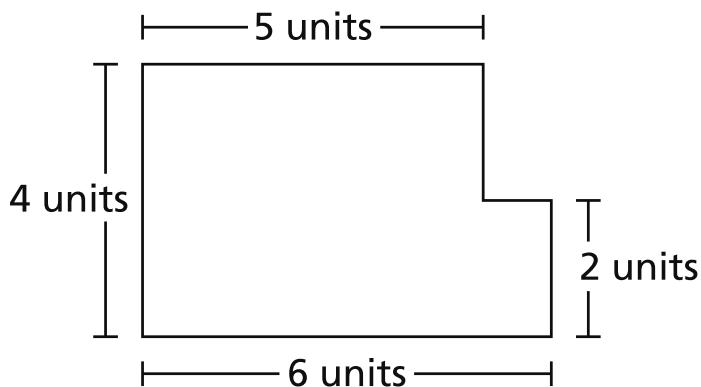
In which situation can the expression  $64 \div 8$  be used?

- A There are 8 buses with 64 students on each bus.
- B Ms. Vance has 8 pens and 64 pencils in a container.
- C There are 64 books in a bookcase and 8 books are removed.
- D Mr. Juarez has 64 cups and puts an equal number on each of 8 tables.

**GO ON**

**31**

The figure below was made by combining two rectangles.



What is the total area, in square units, of the figure?

- A** 17
- B** 20
- C** 22
- D** 32

**32**

Which expression is equivalent to  $4 \times 9$ ?

- A**  $(4 \times 4) + (4 \times 5)$
- B**  $(4 + 4) \times (4 + 5)$
- C**  $(4 + 4) + (4 + 5)$
- D**  $(4 \times 4) \times (4 \times 5)$

**GO ON**

**33**

Coach Wu has a total of 30 soccer balls.

- 9 soccer balls are white
- the remaining soccer balls are one of three different colors (blue, pink, or green)
- there is an equal number of blue, pink, and green balls

How many green soccer balls does Coach Wu have?

**A** 7

**B** 10

**C** 21

**D** 39

**GO ON**

**34**

Wyatt wants to solve the equation below to find the missing factor.

$$8 \times \underline{?} = 24$$

How can Wyatt find the missing factor by changing the equation to a division problem? Be sure to include the value of the missing factor in your answer.

*Explain your answer.*

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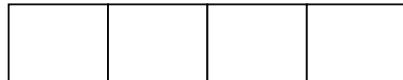
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**GO ON**

**35**

Two families buy large sandwiches of the same size. Family A shares one sandwich equally among 4 people, as represented in the picture below.



Family B shares one sandwich equally between 2 people.

Will a person from Family A get the same amount or a different amount of a sandwich as a person from Family B? Be sure to include what you know about fractions or parts of a whole in your answer.

*Explain your answer.*

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**GO ON**

**36**

Suzy made cupcakes for her friends. She started at 2:40 p.m. The list below shows the number of minutes it took to complete each step of the process.

- 9 minutes to mix the batter
- 18 minutes to bake the cupcakes
- 5 minutes to let them cool
- 10 minutes to frost the cupcakes

What time did Suzy finish frosting the cupcakes?

*Show your work.*

**Answer** \_\_\_\_\_ p.m.

**GO ON**

**37**

Ashlynn rides her bike 2 miles to school and 2 miles home each day. How many total miles will Ashlynn ride her bike to school and home in 40 days?

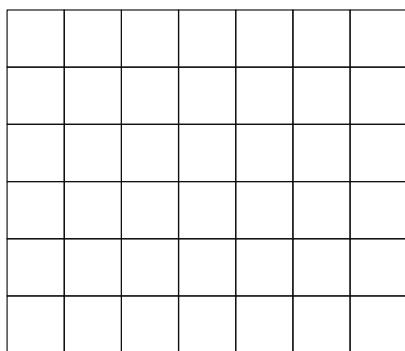
*Show your work.*

*Answer* \_\_\_\_\_ miles

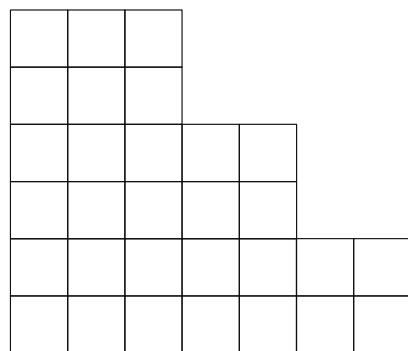
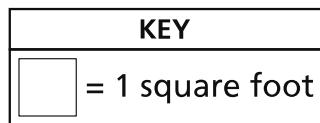
**GO ON**

**38**

Two figures are shown below.



**FIGURE A**



**FIGURE B**

What is the difference, in square feet, between the area of Figure A and the area of Figure B?

*Explain how you found your answer.*

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**GO ON**

**39**

Gianna cuts a ribbon into equal pieces as shown below.



She uses 4 pieces of the ribbon for a project. What fraction of the ribbon does Gianna use for the project?

*Explain how you found your answer.*

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**GO ON**

**40**

Ms. Ross is making breakfast for her family. She makes 15 small pancakes to share equally among 3 people. How many small pancakes will each person get?

*Show your work.*

*Answer* \_\_\_\_\_ pancakes

Ms. Ross also wants to give each person a glass of orange juice. If each person gets 8 ounces, how many total ounces of orange juice does she need?

*Show your work.*

*Answer* \_\_\_\_\_ ounces

**STOP**

**THE STATE EDUCATION DEPARTMENT**  
**THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234**  
**2019 Mathematics Tests Map to the Standards**  
**Grade 3 Released Questions on EngageNY**

Question	Type	Key	Points	Standard	Cluster	Multiple Choice Questions:	Constructed Response Questions:	
						Percentage of Students Who Answered Correctly (P-Value)	Average Points Earned	P-Value (Average Points Earned ÷ Total Possible Points)
<b>Session 1</b>								
1	Multiple Choice	C	1	CCSS.Math.Content.3.OA.A.1	Operations and Algebraic Thinking	0.90		
2	Multiple Choice	A	1	CCSS.Math.Content.3.OA.D.9	Operations and Algebraic Thinking	0.81		
3	Multiple Choice	B	1	CCSS.Math.Content.3.OA.A.2	Operations and Algebraic Thinking	0.81		
6	Multiple Choice	C	1	CCSS.Math.Content.3.OA.A.3	Operations and Algebraic Thinking	0.70		
7	Multiple Choice	D	1	CCSS.Math.Content.3.OA.D.8	Operations and Algebraic Thinking	0.35		
8	Multiple Choice	B	1	CCSS.Math.Content.3.NF.A.3a	Number and Operations - Fractions	0.59		
15	Multiple Choice	D	1	CCSS.Math.Content.3.MD.C.7c	Measurement and Data	0.56		
16	Multiple Choice	A	1	CCSS.Math.Content.3.OA.B.5	Operations and Algebraic Thinking	0.48		
21	Multiple Choice	B	1	CCSS.Math.Content.3.OA.A.4	Operations and Algebraic Thinking	0.70		
22	Multiple Choice	D	1	CCSS.Math.Content.3.NBT.A.1	Number and Operations in Base Ten	0.45		
23	Multiple Choice	D	1	CCSS.Math.Content.3.OA.D.9	Operations and Algebraic Thinking	0.59		
<b>Session 2</b>								
26	Multiple Choice	C	1	CCSS.Math.Content.3.NF.A.3b	Number and Operations - Fractions	0.84		
27	Multiple Choice	B	1	CCSS.Math.Content.3.OA.A.3	Operations and Algebraic Thinking	0.77		
28	Multiple Choice	C	1	CCSS.Math.Content.3.MD.C.5b	Measurement and Data	0.93		
29	Multiple Choice	C	1	CCSS.Math.Content.3.MD.B.3	Measurement and Data	0.67		
30	Multiple Choice	D	1	CCSS.Math.Content.3.OA.A.2	Operations and Algebraic Thinking	0.69		
31	Multiple Choice	C	1	CCSS.Math.Content.3.MD.C.7d	Measurement and Data	0.34		

32	Multiple Choice	A	1	CCSS.Math.Content.3.OA.B.5	Operations and Algebraic Thinking	0.70		
33	Multiple Choice	A	1	CCSS.Math.Content.3.OA.D.8	Operations and Algebraic Thinking	0.48		
34	Constructed Response		2	CCSS.Math.Content.3.OA.B.6	Operations and Algebraic Thinking		1.20	0.60
35	Constructed Response		2	CCSS.Math.Content.3.NF.A.3d	Number and Operations - Fractions		0.78	0.39
36	Constructed Response		2	CCSS.Math.Content.3.MD.A.1	Measurement and Data		1.06	0.53
37	Constructed Response		2	CCSS.Math.Content.3.NBT.A.3	Number and Operations in Base Ten		0.97	0.49
38	Constructed Response		2	CCSS.Math.Content.3.MD.C.6	Measurement and Data		0.83	0.41
39	Constructed Response		2	CCSS.Math.Content.3.NF.A.1	Number and Operations - Fractions		1.19	0.59
40	Constructed Response		3	CCSS.Math.Content.3.OA.A.3	Operations and Algebraic Thinking		2.03	0.68

\*This item map is intended to identify the primary analytic skills necessary to successfully answer each question. However, some questions measure proficiencies described in multiple standards, including a balanced combination of procedural and conceptual understanding.

## 2-Point Holistic Rubric

<b>2 Point</b>	A two-point response includes the correct solution to the question and demonstrates a thorough understanding of the mathematical concepts and/or procedures in the task.  This response <ul style="list-style-type: none"><li>• indicates that the student has completed the task correctly, using mathematically sound procedures</li><li>• contains sufficient work to demonstrate a thorough understanding of the mathematical concepts and/or procedures</li><li>• may contain inconsequential errors that do not detract from the correct solution and the demonstration of a thorough understanding</li></ul>
<b>1 Point</b>	A one-point response demonstrates only a partial understanding of the mathematical concepts and/or procedures in the task.  This response <ul style="list-style-type: none"><li>• correctly addresses only some elements of the task</li><li>• may contain an incorrect solution but applies a mathematically appropriate process</li><li>• may contain the correct solution but required work is incomplete</li></ul>
<b>0 Point*</b>	A zero-point response is incorrect, irrelevant, incoherent, or contains a correct solution obtained using an obviously incorrect procedure. Although some elements may contain correct mathematical procedures, holistically they are not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.

\* Condition Code A is applied whenever a student who is present for a test session leaves an entire constructed-response question in that session completely blank (no response attempted).

### **3-Point Holistic Rubric**

<b>3 Point</b>	<p>A three-point response includes the correct solution(s) to the question and demonstrates a thorough understanding of the mathematical concepts and/or procedures in the task.</p> <p>This response</p> <ul style="list-style-type: none"><li>• indicates that the student has completed the task correctly, using mathematically sound procedures</li><li>• contains sufficient work to demonstrate a thorough understanding of the mathematical concepts and/or procedures</li><li>• may contain inconsequential errors that do not detract from the correct solution(s) and the demonstration of a thorough understanding</li></ul>
<b>2 Point</b>	<p>A two-point response demonstrates a partial understanding of the mathematical concepts and/or procedures in the task.</p> <p>This response</p> <ul style="list-style-type: none"><li>• appropriately addresses most but not all aspects of the task using mathematically sound procedures</li><li>• may contain an incorrect solution but provides sound procedures, reasoning, and/or explanations</li><li>• may reflect some minor misunderstanding of the underlying mathematical concepts and/or procedures</li></ul>
<b>1 Point</b>	<p>A one-point response demonstrates only a limited understanding of the mathematical concepts and/or procedures in the task.</p> <p>This response</p> <ul style="list-style-type: none"><li>• may address some elements of the task correctly but reaches an inadequate solution and/or provides reasoning that is faulty or incomplete</li><li>• exhibits multiple flaws related to misunderstanding of important aspects of the task, misuse of mathematical procedures, or faulty mathematical reasoning</li><li>• reflects a lack of essential understanding of the underlying mathematical concepts</li><li>• may contain the correct solution(s) but required work is limited</li></ul>
<b>0 Point*</b>	<p>A zero-point response is incorrect, irrelevant, incoherent, or contains a correct solution obtained using an obviously incorrect procedure. Although some elements may contain correct mathematical procedures, holistically they are not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.</p>

\* Condition Code A is applied whenever a student who is present for a test session leaves an entire constructed-response question in that session completely blank (no response attempted).

## **2019 2- and 3-Point Mathematics Scoring Policies**

Below are the policies to be followed while scoring the mathematics tests for all grades:

1. If a student shows the work in other than a designated “Show your work” or “Explain” area, that work should still be scored.
2. If the question requires students to show their work, and the student shows appropriate work and clearly identifies a correct answer but fails to write that answer in the answer space, the student should still receive full credit.
3. If students are directed to show work or provide an explanation, a correct answer with **no** work shown or **no** explanation provided, receives **no** credit.
4. If students are **not** directed to show work, any work shown will **not** be scored. This applies to items that do **not** ask for any work and items that ask for work for one part and do **not** ask for work in another part.
5. If the student provides one legible response (and one response only), the rater should score the response, even if it has been crossed out.
6. If the student has written more than one response but has crossed some out, the rater should score only the response that has **not** been crossed out.
7. If the student provides more than one response, but does not indicate which response is to be considered the correct response and none has been crossed out, the student shall not receive full credit.
8. If the student makes a conceptual error (that is an error in understanding rather than an arithmetic or computational error), that student shall not receive more than 50% credit.
9. Trial-and-error responses are **not** subject to Scoring Policy #6 above, since crossing out is part of the trial-and-error process.
10. If a response shows repeated occurrences of the same conceptual error within a question, the conceptual error should **not** be considered more than once in gauging the demonstrated level of understanding.
11. In questions requiring number sentences, the number sentences must be written horizontally.
12. When measuring angles with a protractor, there is a +/- 5 degrees deviation allowed of the true measure.
13. Condition Code A is applied whenever a student who is present for a test session leaves an entire constructed-response question in that session completely blank (no response attempted). This is not to be confused with a score of zero wherein the student does respond to part or all of the question but that work results in a score of zero.

## EXEMPLARY RESPONSE

34

Wyatt wants to solve the equation below to find the missing factor.

$$8 \times \underline{?} = 24$$

How can Wyatt find the missing factor by changing the equation to a division problem? Be sure to include the value of the missing factor in your answer.

*Explain your answer.*

Given  $8 \times ? = 24$ , then  $24 \div 8 = 3$

because  $8 \times 3 = 24$ .

*or other valid explanation*

# GUIDE PAPER 1

Additional

34

Wyatt wants to solve the equation below to find the missing factor.

$$8 \times \underline{?} = 24$$

How can Wyatt find the missing factor by changing the equation to a division problem? Be sure to include the value of the missing factor in your answer.

***Explain your answer.***

so if  $8 \times ? = 24$  that means  $24 \div 3 = 8$  so  $8 \times 3 = 24$

## Score Point 2 (out of 2 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. A correct division equation with the calculated missing factor is provided. The explanation is complete and correct.

## GUIDE PAPER 2

34

Wyatt wants to solve the equation below to find the missing factor.

$$8 \times \underline{?} = 24$$

How can Wyatt find the missing factor by changing the equation to a division problem? Be sure to include the value of the missing factor in your answer.

***Explain your answer.***

$$\begin{array}{r} \times 8 \\ f \\ \hline 24 \end{array}$$

$$8 \times ? = 24$$

$$24 \div 8 = f$$

8,16,24

1,2,3

$$f=3$$

### Score Point 2 (out of 2 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. A correct division equation with the calculated missing factor is provided. The explanation is complete and includes the first 3 multiples of 8. The response is complete and correct.

## GUIDE PAPER 3

34

Wyatt wants to solve the equation below to find the missing factor.

$$8 \times \underline{?} = 24$$

How can Wyatt find the missing factor by changing the equation to a division problem? Be sure to include the value of the missing factor in your answer.

*Explain your answer.*

Wyatt can turn  $8 \times ? = 24$  to  $24 \div 8 = ?$  now Wyatt just has to solve the equation  $24 \div 8 = ?$  and the question mark in  $24 \div 8 = ? \rightarrow$  is 3 so now Wyatt can figure out  $8 \times \underline{?} = 24$ !



### Score Point 2 (out of 2 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. A correct division equation with the calculated missing factor is provided. The explanation is complete and correct.

## GUIDE PAPER 4

34

Wyatt wants to solve the equation below to find the missing factor.

$$8 \times \underline{?} = 24$$

How can Wyatt find the missing factor by changing the equation to a division problem? Be sure to include the value of the missing factor in your answer.

***Explain your answer.***

$$24 \div 3 = 8$$

### Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. A division equation containing the missing factor is provided; however, the explanation is insufficient. This response correctly addresses only some elements of the task.

## GUIDE PAPER 5

34

Wyatt wants to solve the equation below to find the missing factor.

$$8 \times \underline{\quad} = 24$$

How can Wyatt find the missing factor by changing the equation to a division problem? Be sure to include the value of the missing factor in your answer.

*Explain your answer.*

She can use division to sol  
8 x ? = 24 She can use division like this  
24 ÷ 8 = ?.

### Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. A correct division equation is provided, but the value of the missing factor is not included. This response correctly addresses only some elements of the task.

## GUIDE PAPER 6

34

Wyatt wants to solve the equation below to find the missing factor.

$$8 \times \underline{?} = 24$$

How can Wyatt find the missing factor by changing the equation to a division problem? Be sure to include the value of the missing factor in your answer.

***Explain your answer.***

He can find out by starting with doing 8 groups and in the groups draw as many dots he needs to get 24. And the answer is  $8 \times 3 = 24$ .

### Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. The correct missing factor is provided. The explanation shows some understanding of the division with the grouping, but there is no division equation. This response correctly addresses only some elements of the task.

## GUIDE PAPER 7

34

Wyatt wants to solve the equation below to find the missing factor.

$$8 \times \underline{?} = 24$$

How can Wyatt find the missing factor by changing the equation to a division problem? Be sure to include the value of the missing factor in your answer.

***Explain your answer.***

$$8 \times 3 = 24$$

### Score Point 0 (out of 2 points)

This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task. The missing factor 3 is correctly substituted in the provided equation, but no understanding of a division problem is demonstrated. Therefore, holistically, this is not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.

# GUIDE PAPER 8

Additional

34

Wyatt wants to solve the equation below to find the missing factor.

$$8 \times \underline{?} = 24$$

How can Wyatt find the missing factor by changing the equation to a division problem? Be sure to include the value of the missing factor in your answer.

***Explain your answer.***

$$(8) \div (24) = 6$$

## Score Point 0 (out of 2 points)

Although a division equation is attempted, it is written in the incorrect order and the missing factor is incorrect. Holistically, this is not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.

## EXEMPLARY RESPONSE

35

Two families buy large sandwiches of the same size. Family A shares one sandwich equally among 4 people, as represented in the picture below.



Family B shares one sandwich equally between 2 people.

Will a person from Family A get the same amount or a different amount of a sandwich as a person from Family B? Be sure to include what you know about fractions or parts of a whole in your answer.

*Explain your answer.*

The same whole sandwich will be divided into different amounts. Since Family A has 4 people, each person will get  $\frac{1}{4}$  of the sandwich and since Family B has 2 people, each person will get  $\frac{1}{2}$  of the sandwich.

*or*

Since Family A has 4 people and Family B has 2 people, the same whole sandwich will be divided into different amounts because the larger the number that is dividing the whole, the more and the smaller the pieces of the whole.

*or other valid explanation*

# GUIDE PAPER 1

Additional

35

Two families buy large sandwiches of the same size. Family A shares one sandwich equally among 4 people, as represented in the picture below.



Family B shares one sandwich equally between 2 people.

Will a person from Family A get the same amount or a different amount of a sandwich as a person from Family B? Be sure to include what you know about fractions or parts of a whole in your answer.

**Explain your answer.**

Family A will get a different amount because the more people you have the smaller the pieces get.



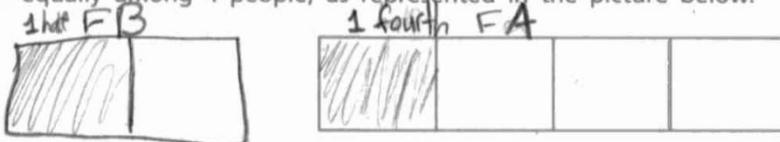
## Score Point 2 (out of 2 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. The explanation correctly describes that when dividing a whole, the larger the number the whole is divided by, the smaller each portion becomes. This concept is supported with the drawing. The response is complete and correct.

## GUIDE PAPER 2

35

Two families buy large sandwiches of the same size. Family A shares one sandwich equally among 4 people, as represented in the picture below.



Family B shares one sandwich equally between 2 people.

Will a person from Family A get the same amount or a different amount of a sandwich as a person from Family B? Be sure to include what you know about fractions or parts of a whole in your answer.

*Explain your answer.*

No, ~~a~~ person from family A won't get the same amount because a person from family B gets one half and a person from family A will get one fourth.

### Score Point 2 (out of 2 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. The sandwich portion sizes for Family A and Family B are correctly identified. The explanation is complete and correct.

## GUIDE PAPER 3

35

Two families buy large sandwiches of the same size. Family A shares one sandwich equally among 4 people, as represented in the picture below.

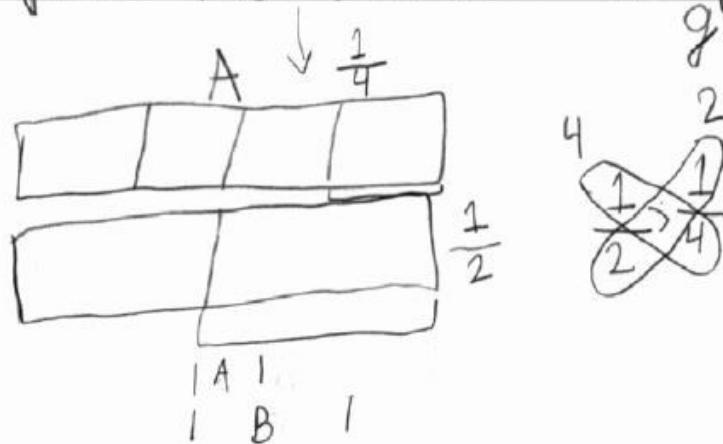


Family B shares one sandwich equally between 2 people.

Will a person from Family A get the same amount or a different amount of a sandwich as a person from Family B? Be sure to include what you know about fractions or parts of a whole in your answer.

*Explain your answer.*

A person from family B will get more than a person from family A. The more the piece the smaller the piece gets.



### Score Point 2 (out of 2 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. The portion size for each family member is correctly identified. The “butterfly method” is used to explain which fraction is larger, and is supported with the drawing. The response is complete and correct.

## GUIDE PAPER 4

35

Two families buy large sandwiches of the same size. Family A shares one sandwich equally among 4 people, as represented in the picture below.



Family B shares one sandwich equally between 2 people.

Will a person from Family A get the same amount or a different amount of a sandwich as a person from Family B? Be sure to include what you know about fractions or parts of a whole in your answer.

Explain your answer.

Every family get a equally pice and I cut it to pice sice there 4 people so I cot it into 4 forthors and sice there are 2 people I cut it to havles.



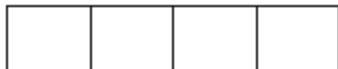
### Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. The portion size for each family is correctly identified, but the explanation compares sandwich portions within each family, not to the other family. This response correctly addresses only some elements of the task.

# GUIDE PAPER 5

35

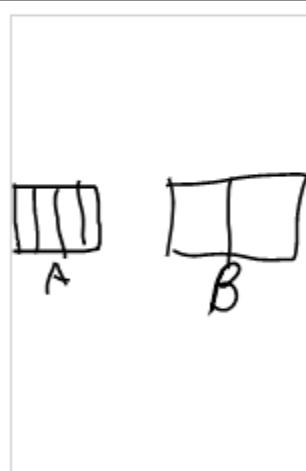
Two families buy large sandwiches of the same size. Family A shares one sandwich equally among 4 people, as represented in the picture below.



Family B shares one sandwich equally between 2 people.

Will a person from Family A get the same amount or a different amount of a sandwich as a person from Family B? Be sure to include what you know about fractions or parts of a whole in your answer.

*Explain your answer.*



$$b = 2 \text{ equal parts} \quad a = \frac{1}{4}$$

$$a = 4 \text{ equal parts}$$

## Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. The portion size for each family is correctly shown as a fraction, but the explanation does not say if the portion sizes are the same or different. This response correctly addresses only some elements of the task.

## GUIDE PAPER 6

35

Two families buy large sandwiches of the same size. Family A shares one sandwich equally among 4 people, as represented in the picture below.



Family B shares one sandwich equally between 2 people.

Will a person from Family A get the same amount or a different amount of a sandwich as a person from Family B? Be sure to include what you know about fractions or parts of a whole in your answer.

*Explain your answer.*

No, because one person in family A is going to get one piece and one person in family B is going to get two pieces.

### Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. The explanation correctly explains that the family members will get different amounts of the sandwich by implying that each portion for Family B is equivalent to two of Family A's portions, but the phrasing is vague and unclear. Holistically, there is a partial understanding. This response correctly addresses only some elements of the task.

## GUIDE PAPER 7

35

Two families buy large sandwiches of the same size. Family A shares one sandwich equally among 4 people, as represented in the picture below.



Family B shares one sandwich equally between 2 people.

Will a person from Family A get the same amount or a different amount of a sandwich as a person from Family B? Be sure to include what you know about fractions or parts of a whole in your answer.

***Explain your answer.***

$$2 \times 4 = S$$

A person from family A will get the same

amount of a sandwich as a person from family B.

2,4,6,8

$$S=8$$

### Score Point 0 (out of 2 points)

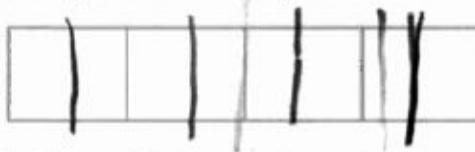
This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task. The explanation is incorrect.

# GUIDE PAPER 8

Additional

35

Two families buy large sandwiches of the same size. Family A shares one sandwich equally among 4 people, as represented in the picture below.



Family B shares one sandwich equally between 2 people.

Will a person from Family A get the same amount or a different amount of a sandwich as a person from Family B? Be sure to include what you know about fractions or parts of a whole in your answer.

*Explain your answer.*

it is the same because  
I divided it into 2 pieces

## Score Point 0 (out of 2 points)

This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task. The student misinterprets the question and divides each  $\frac{1}{4}$  portion of Family A's sandwich further into two  $\frac{1}{8}$  portions. The explanation is incorrect.

## EXEMPLARY RESPONSE

36

Suzy made cupcakes for her friends. She started at 2:40 p.m. The list below shows the number of minutes it took to complete each step of the process.

- 9 minutes to mix the batter
- 18 minutes to bake the cupcakes
- 5 minutes to let them cool
- 10 minutes to frost the cupcakes

What time did Suzy finish frosting the cupcakes?

*Show your work.*

$$2:40 + :09 = 2:49 \text{ p.m.}$$

$$2:49 + :18 = 3:07 \text{ p.m.}$$

$$3:07 + :05 = 3:12 \text{ p.m.}$$

$$3:12 + :10 = 3:22 \text{ p.m.}$$

*or*

$$9 + 18 + 5 + 10 = 42 \text{ minutes}$$

$$2:40 + :42 = 2:82 \text{ p.m.} = 3:22 \text{ p.m.}$$

*or other valid process*

*Answer* 3:22 p.m.

# GUIDE PAPER 1

Additional

36

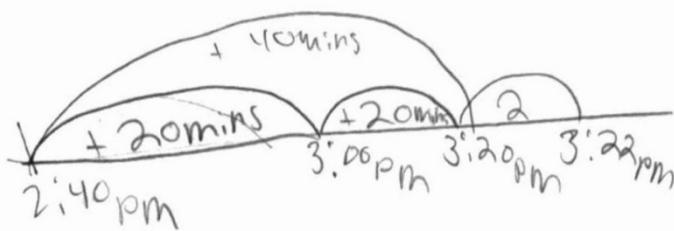
Suzy made cupcakes for her friends. She started at 2:40 p.m. The list below shows the number of minutes it took to complete each step of the process.

- 9 minutes to mix the batter
- 18 minutes to bake the cupcakes
- 5 minutes to let them cool
- 10 minutes to frost the cupcakes

What time did Suzy finish frosting the cupcakes?

Show your work.

$$\begin{array}{r} 2 \\ 1 \\ 8 \\ + 1 \\ \hline 1 \\ 6 \\ + 9 \\ \hline 1 \\ 5 \\ + 5 \\ \hline 4 \\ 2 \end{array}$$



Answer 3:22 p.m.

## Score Point 2 (out of 2 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. The total time to complete the cupcakes is correctly calculated and correctly added to the start time using a number line. The response is complete and correct.

## GUIDE PAPER 2

36

Suzy made cupcakes for her friends. She started at 2:40 p.m. The list below shows the number of minutes it took to complete each step of the process.

- 9 minutes to mix the batter
- 18 minutes to bake the cupcakes
- 5 minutes to let them cool
- 10 minutes to frost the cupcakes

What time did Suzy finish frosting the cupcakes?

**Show your work.**

$$2:40 + 9 = 2:49 \quad 2:49 + 18 = 3:07 \quad 3:07 + 5 = 3:12 \quad 3:12 + 10 = 3:22$$

**Answer**

3:22

p.m.

### Score Point 2 (out of 2 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. The time Suzy will finish frosting the cupcakes is correctly calculated by adding the duration of each step to the current time. The response is complete and correct.

## GUIDE PAPER 3

36

Suzy made cupcakes for her friends. She started at 2:40 p.m. The list below shows the number of minutes it took to complete each step of the process.

- 9 minutes to mix the batter
- 18 minutes to bake the cupcakes
- 5 minutes to let them cool
- 10 minutes to frost the cupcakes

What time did Suzy finish frosting the cupcakes?

*Show your work.*

$$9 + 18 + 5 + 10 = 42 + 2:40 = 3:22$$

**Answer**

3:22

p.m.

### Score Point 2 (out of 2 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. The total time to complete the cupcakes is correctly calculated and correctly added to the start time. The response is complete and correct.

## GUIDE PAPER 4

36

Suzy made cupcakes for her friends. She started at 2:40 p.m. The list below shows the number of minutes it took to complete each step of the process.

- 9 minutes to mix the batter
- 18 minutes to bake the cupcakes
- 5 minutes to let them cool
- 10 minutes to frost the cupcakes

What time did Suzy finish frosting the cupcakes?

*Show your work.*

$$\begin{aligned}2:40 + 18 &= 3:08 \\3:08 + 10 &= 3:18 \\3:18 + 9 &= 3:27 \\3:27 + 5 &= 3:32\end{aligned}$$

*Answer* 3:32 p.m.

### Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. A correct process is used to determine the time Suzy will finish frosting the cupcakes by adding the duration of each separate step to the current time, but the first step has an addition error:  $2:40 + :18 \neq 3:08$ . This response contains an incorrect solution but applies an appropriate process.

## GUIDE PAPER 5

36

Suzy made cupcakes for her friends. She started at 2:40 p.m. The list below shows the number of minutes it took to complete each step of the process.

- 9 minutes to mix the batter
- 18 minutes to bake the cupcakes
- 5 minutes to let them cool
- 10 minutes to frost the cupcakes

What time did Suzy finish frosting the cupcakes?

*Show your work.*

$$\begin{array}{r} + 9 \\ + 18 \\ \hline 27 \end{array}$$

$$\begin{array}{r} + 5 \\ + 10 \\ \hline 15 \end{array}$$

$$\begin{array}{r} + 27 \\ + 15 \\ \hline 42 \end{array}$$

*Answer*

42

p.m.

### Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. The total time to complete the cupcakes is correctly calculated; however, this total is not added to the start time and is inappropriately provided as the solution. This response correctly addresses only some elements of the task.

# GUIDE PAPER 6

36

Suzy made cupcakes for her friends. She started at 2:40 p.m. The list below shows the number of minutes it took to complete each step of the process.

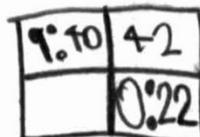
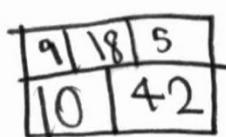
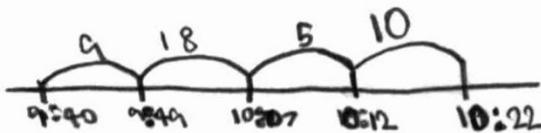
I need to find what time did Suzy finish frosting the cupcakes. I will make a number line and a bar model.  
• 9 minutes to mix the batter

- 18 minutes to bake the cupcakes
- 5 minutes to let them cool
- 10 minutes to frost the cupcakes

What time did Suzy finish frosting the cupcakes?

Show your work.

DO NOT WRITE BEYOND THIS AREA



I noticed I add my steps in order to count them to the total answer. I also noticed I counted the steps on my first bar model then added it to my second bar model.

Answer 10:22 p.m.

## Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. A correct process is used to determine the time Suzy will finish frosting the cupcakes, but the start time of 9:40 is incorrect. This response contains an incorrect solution but applies an appropriate process.

## GUIDE PAPER 7

36

Suzy made cupcakes for her friends. She started at 2:40 p.m. The list below shows the number of minutes it took to complete each step of the process.

- ↗ 9 minutes to mix the batter
- ↗ 18 minutes to bake the cupcakes
- ↗ 5 minutes to let them cool
- 10 minutes to frost the cupcakes

What time did Suzy finish frosting the cupcakes?

Show your work. *10 minutes*

$$\begin{array}{r} & 19 \\ + & 18 \\ \hline & 37 \\ + & 05 \\ \hline & 42 \\ + & 16 \\ \hline & 402 \end{array}$$

Answer 4:02 p.m.

### Score Point 0 (out of 2 points)

This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task. The response shows no overall understanding of what minutes and hours represent. Holistically, this is not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.

# GUIDE PAPER 8

Additional

36

Suzy made cupcakes for her friends. She started at 2:40 p.m. The list below shows the number of minutes it took to complete each step of the process.

- 9 minutes to mix the batter
- 18 minutes to bake the cupcakes
- 5 minutes to let them cool
- 10 minutes to frost the cupcakes

What time did Suzy finish frosting the cupcakes?

*Show your work.*

$$9 + 18 = 26 \quad 26 + 5 = 31 \quad 31 + 10 = 41$$

**Answer**  p.m.

## Score Point 0 (out of 2 points)

Although the process to calculate the total time to complete the cupcakes is correct, an addition error occurs ( $9 + 18 \neq 26$ ) and the result is not added to the start time. Holistically, the work is not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.

## EXEMPLARY RESPONSE

37

Ashlynn rides her bike 2 miles to school and 2 miles home each day. How many total miles will Ashlynn ride her bike to school and home in 40 days?

*Show your work.*

$$2 + 2 = 4 \text{ miles traveled per day}$$

$$4 \times 40 = 160 \text{ total miles}$$

*or other valid process*

*Answer* 160 miles

# GUIDE PAPER 1

Additional

37

Ashlynn rides her bike 2 miles to school and 2 miles home each day. How many total miles will Ashlynn ride her bike to school and home in 40 days?

*Show your work.*

$$\text{STEP 1: } 2 + 2 = 4$$

$$\text{STEP 2: } 4 \times 40 = 160$$

**Answer**

160 Miles In  
Total

miles

## Score Point 2 (out of 2 points)

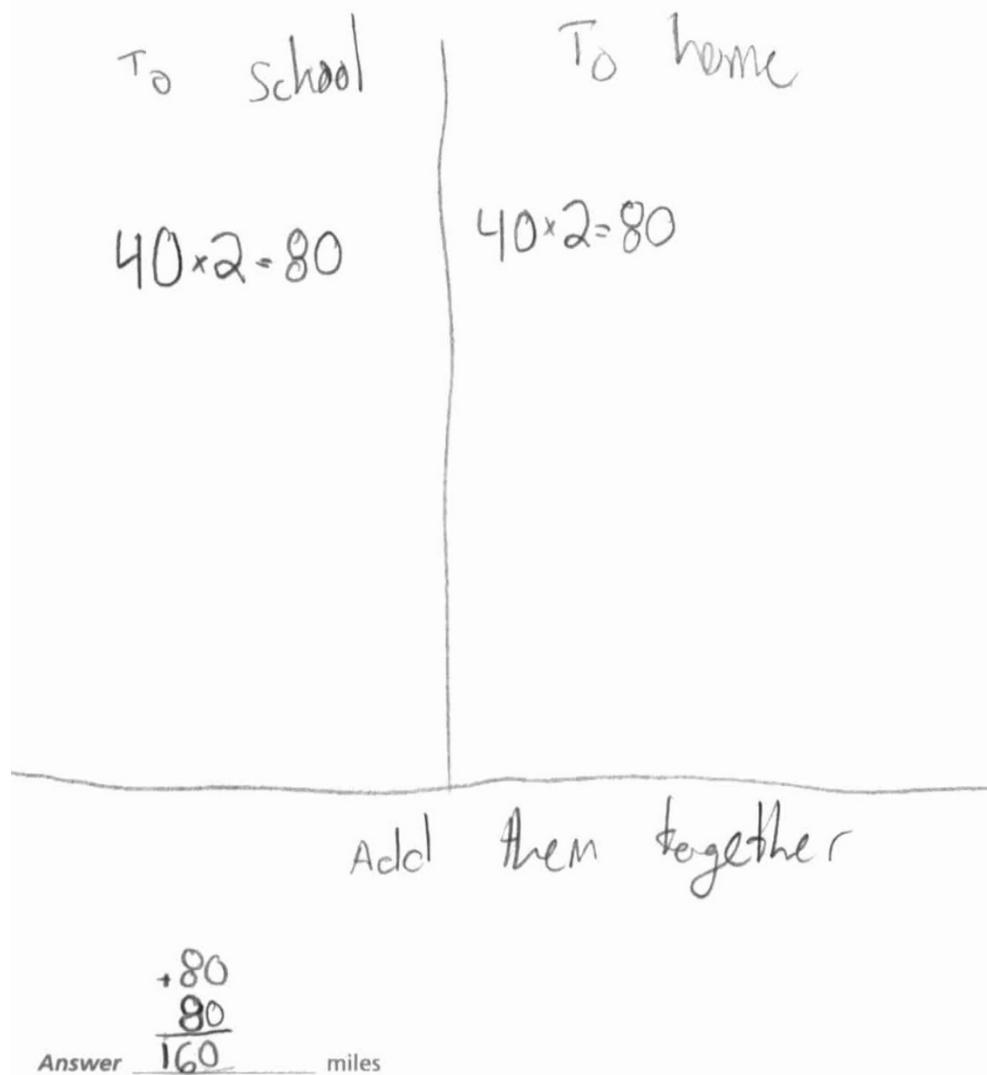
This response demonstrates a thorough understanding of the mathematical concepts in the task. The number of miles traveled per day is correctly calculated and multiplied by 40 to obtain the total distance traveled. The response is complete and correct.

## GUIDE PAPER 2

37

Ashlynn rides her bike 2 miles to school and 2 miles home each day. How many total miles will Ashlynn ride her bike to school and home in 40 days?

Show your work.



**Score Point 2 (out of 2 points)**

This response demonstrates a thorough understanding of the mathematical concepts in the task. The total number of miles traveled is correctly calculated. The response is complete and correct.

## GUIDE PAPER 3

37

Ashlynn rides her bike 2 miles to school and 2 miles home each day. How many total miles will Ashlynn ride her bike to school and home in 40 days?

*Show your work.*

$$\begin{aligned}2 \times 40 &= 80 \\2 \times 4 &= 8 \\2 \times 80 &= 160 \\2 \times 8 &= 16\end{aligned}$$

**Answer**

160

miles

### Score Point 2 (out of 2 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. The total number of miles traveled is correctly calculated using multiplication. The multiplications  $2 \times 4 = 8$  and  $2 \times 8 = 16$  are calculation aids that do not detract from the correct solution. The response is complete and correct.

## GUIDE PAPER 4

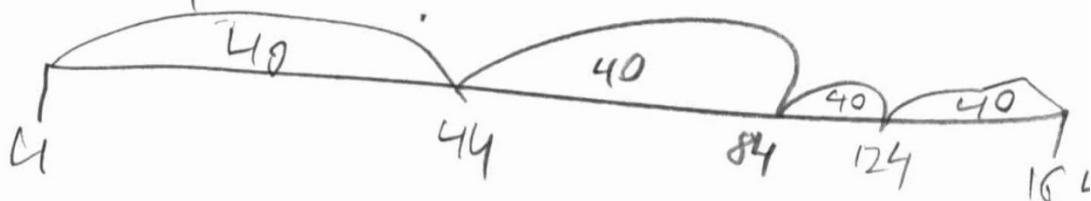
37

Ashlynn rides her bike 2 miles to school and 2 miles home each day. How many total miles will Ashlynn ride her bike to school and home in 40 days?

Show your work.

$$2 \times 2 = 4$$

$$4 \times 40 = ?$$



Answer 164 miles

### Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. The number of miles traveled per day is correctly calculated. A number line illustrates  $4 \times 40$ , but incorrectly starts at 4. This response contains an incorrect solution but applies an appropriate process.

## GUIDE PAPER 5

37

Ashlynn rides her bike 2 miles to school and 2 miles home each day. How many total miles will Ashlynn ride her bike to school and home in 40 days?

Show your work.

$$2 \times 40 = 80$$

Answer 80 miles

### Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. The total distance is calculated for only a one-way trip, not the round-trip distance to school and back. This response correctly addresses only some elements of the task.

## GUIDE PAPER 6

37

Ashlynn rides her bike 2 miles to school and 2 miles home each day. How many total miles will Ashlynn ride her bike to school and home in 40 days?

Show your work.

4,8,12,16,20,24,28,32,36,40,44,48,52,56,60,  
64,68,72,76,80,84,88,92,96,100,104,108  
112,116,120,124,128,132,136,140,148,152  
156,160, 164, ~~168,172,176,180~~

She will ride her bike  
164 miles in 40 days.

Answer 164 miles

### Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. The number of miles traveled is calculated by appropriately skip counting by fours; however, the value 144 is missing from the pattern, leading to an incorrect 40th term and answer. This response contains an incorrect solution but applies an appropriate process.

## GUIDE PAPER 7

37

Ashlynn rides her bike 2 miles to school and 2 miles home each day. How many total miles will Ashlynn ride her bike to school and home in 40 days?

Show your work.

$$2+2=4$$

$$4 \div 40 = 10$$

Ashlynn will ride 10 miles in  
40 days.

Answer 10 miles

### Score Point 0 (out of 2 points)

Although the 4 miles traveled per day is correctly calculated, an incorrect procedure is used to determine the total number of miles. Holistically, this response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task.

# GUIDE PAPER 8

Additional

37

Ashlynn rides her bike 2 miles to school and 2 miles home each day. How many total miles will Ashlynn ride her bike to school and home in 40 days?

*Show your work.*

$$2 \times 2 = 4 \quad 40 + 4 = 44$$

*Answer*

44

miles

## Score Point 0 (out of 2 points)

Although the 4 miles traveled per day is correctly calculated, an incorrect procedure is used to determine the total number of miles. Holistically, this response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task.

## EXEMPLARY RESPONSE

38

Two figures are shown below.

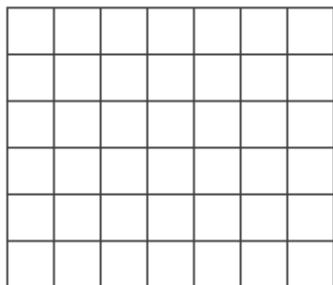


FIGURE A

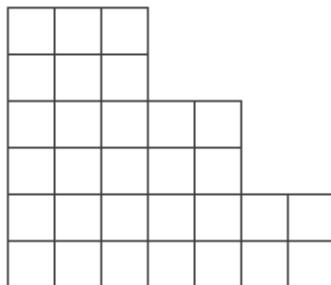
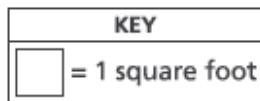


FIGURE B

What is the difference, in square feet, between the area of Figure A and the area of Figure B?

*Explain how you found your answer.*

The area of figure A can be found by  $6 \times 7 = 42$  or by counting the squares. The area of figure B can be found by  $(3 \times 6) + (2 \times 4) + (2 \times 2) = 30$  or by counting the squares. The difference is  $42 - 30 = 12$  square feet.

*or other valid explanation*

# GUIDE PAPER 1

Additional

38

Two figures are shown below.

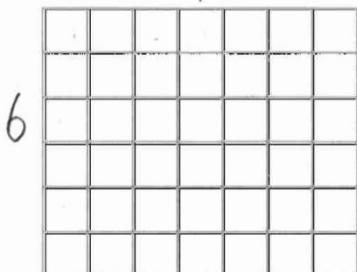


FIGURE A

$$6 \times 7 = 42$$

KEY
= 1 square foot

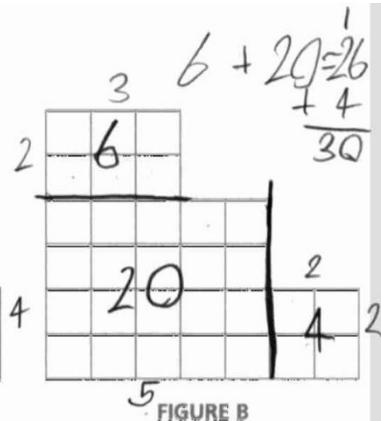


FIGURE B

What is the difference, in square feet, between the area of Figure A and the area of Figure B?

*Explain how you found your answer.*

The difference is 12 square feet because  $6 \times 7 = 42$ , and  $6 + 20 = 26 + 4 = 30$ , so  $42 - 30 = 12$

DO NOT WRITE BEYOND THIS AREA

## Score Point 2 (out of 2 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. The areas of Figure A and Figure B are correctly calculated and the difference between the areas is correctly determined. The explanation is complete and correct.

## GUIDE PAPER 2

38

Two figures are shown below.

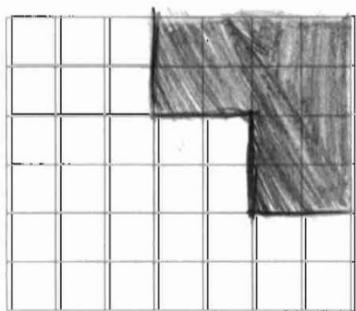


FIGURE A

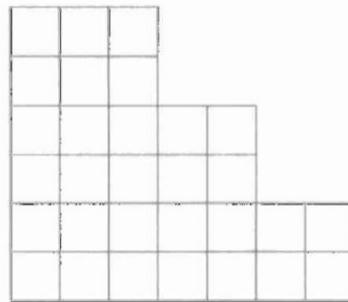
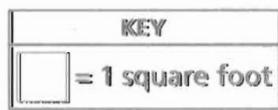


FIGURE B

What is the difference, in square feet, between the area of Figure A and the area of Figure B?

Explain how you found your answer.

I found my awnser by looking at figure B and drew lines to make the same shape and counted the squares that I shaded

### Score Point 2 (out of 2 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. Figure B is overlaid on Figure A, and then the squares that do not overlap (the shaded squares) are counted to compute the difference. The explanation is complete and correct.

# GUIDE PAPER 3

38

Two figures are shown below.

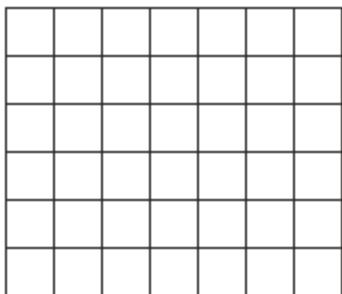


FIGURE A

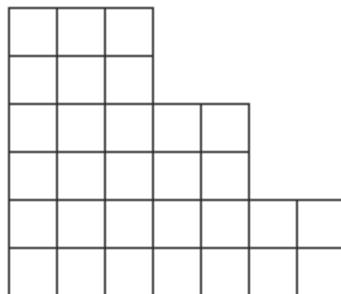
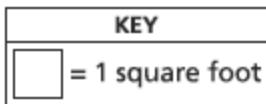


FIGURE B

What is the difference, in square feet, between the area of Figure A and the area of Figure B?

*Explain how you found your answer.*

there is 12 more in figure A

$$42 - 12 = 30$$

## Score Point 2 (out of 2 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. The areas of Figure A and Figure B are correctly calculated and the difference between the areas is correctly determined. The explanation is complete and correct.

## GUIDE PAPER 4

38

Two figures are shown below.

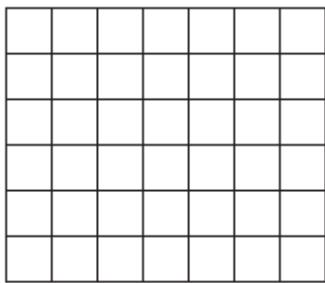


FIGURE A

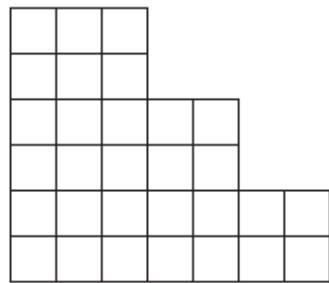
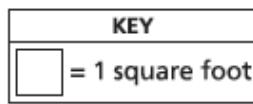
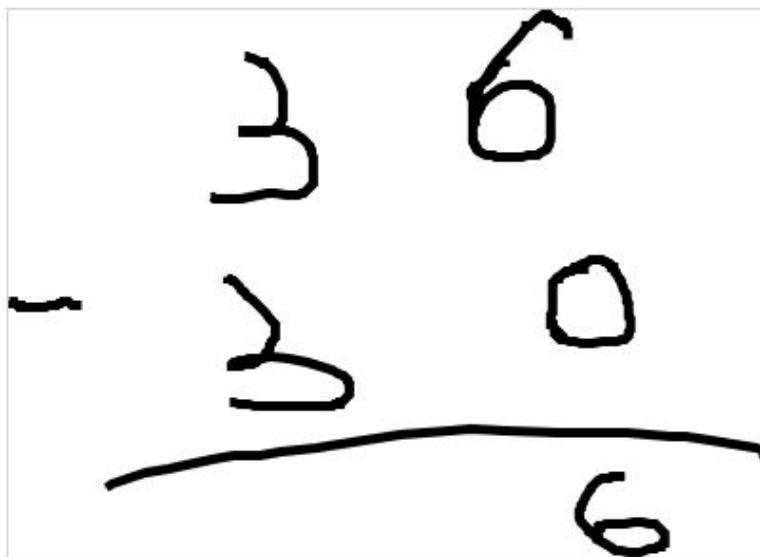


FIGURE B

What is the difference, in square feet, between the area of Figure A and the area of Figure B?

*Explain how you found your answer.*

$$6 \times 6 = 36$$



the diffrence is 6 because  $6 \times 6 = 36$  and I counted the other shapes area and that terned out to be 30 so  $36 - 30 = 6$ .

### Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. The area of Figure B is correctly derived by counting. An incorrect width is used to calculate the area of Figure A. The obtained areas are correctly subtracted to determine the difference between the two areas. This response correctly addresses only some elements of the task.

# GUIDE PAPER 5

38

Two figures are shown below.

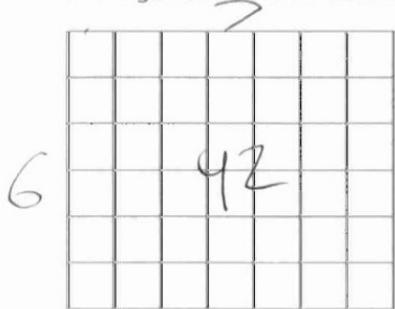


FIGURE A

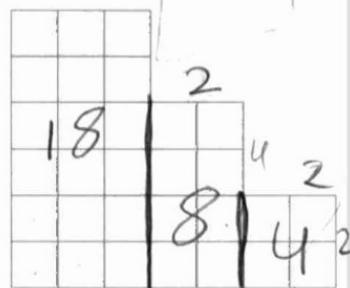
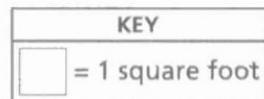


FIGURE B

What is the difference, in square feet, between the area of Figure A and the area of Figure B?

Explain how you found your answer.

I multiplied the perimeters of Figures A, B and got my answers which shows Figure A has a greater area than Figure B.

$$7 \times 6 = 42$$

Figure A

$$\begin{array}{r} 14 \\ 18 \\ 18 \\ \hline 30 \end{array}$$

Figure B

## Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. The areas of Figure A and B are correctly calculated, but the explanation is not complete because the difference is not addressed. The rectangle side lengths are inappropriately referred to as "perimeters." This response correctly addresses only some elements of the task.

# GUIDE PAPER 6

38

Two figures are shown below.

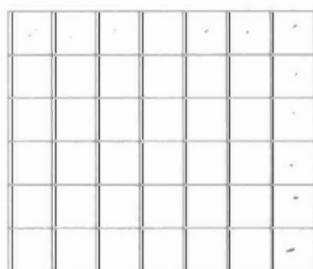


FIGURE A

KEY  
1 square foot



FIGURE B

What is the difference, in square feet, between the area of Figure A and the area of Figure B?

Explain how you found your answer.

14 is the difference, and  
Figure A is bigger than figure  
B

DO NOT WRITE BEYOND THIS LINE

## Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. A correct process is used to calculate the areas of Figure A and Figure B; however, a calculation error occurs in part of the work determining the area of Figure B ( $2 \times 2 \neq 2$ ). The obtained areas are correctly subtracted to determine the difference between the two areas. This response correctly addresses only some elements of the task.

# GUIDE PAPER 7

38

Two figures are shown below.

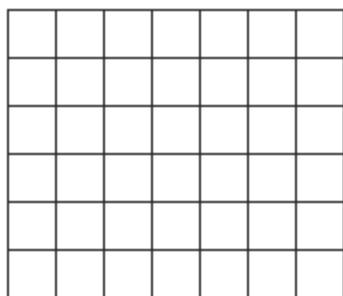


FIGURE A

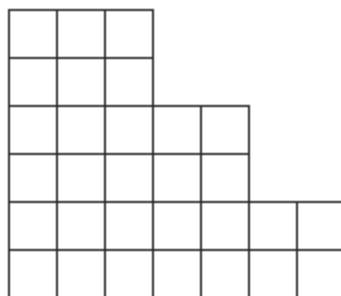
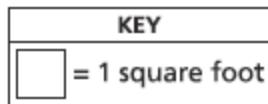


FIGURE B

What is the difference, in square feet, between the area of Figure A and the area of Figure B?

*Explain how you found your answer.*

The diffrence between the areaof figureA than figureB is 12 feet long

## Score Point 0 (out of 2 points)

This explanation is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task. A correct answer is given with incorrect units and with no explanation. Per Scoring Policy #3, a correct answer with no explanation receives no credit.

# GUIDE PAPER 8

Additional

38

Two figures are shown below.

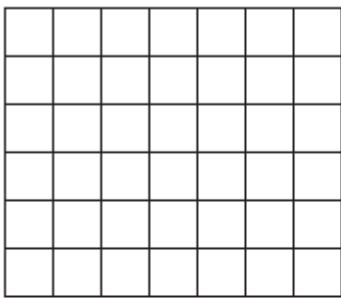


FIGURE A

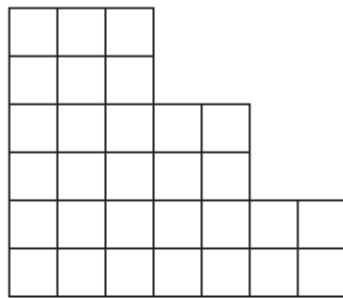
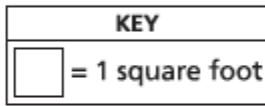


FIGURE B

What is the difference, in square feet, between the area of Figure A and the area of Figure B?

*Explain how you found your answer.*

$$45 + 28 = 19$$

## Score Point 0 (out of 2 points)

This explanation is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task. The areas of Figure A and B are incorrect. The explanation is incorrect because the difference between the areas is shown with addition, not subtraction.

## EXEMPLARY RESPONSE

39

Gianna cuts a ribbon into equal pieces as shown below.



She uses 4 pieces of the ribbon for a project. What fraction of the ribbon does Gianna use for the project?

*Explain how you found your answer.*

The ribbon is cut into 6 equal pieces so the denominator is 6. Since Gianna uses 4 pieces the numerator is 4, and  $\frac{4}{6}$  of the ribbon is used.

*or other valid explanation*

# GUIDE PAPER 1

Additional

39

Gianna cuts a ribbon into equal pieces as shown below.



She uses 4 pieces of the ribbon for a project. What fraction of the ribbon does Gianna use for the project?

***Explain how you found your answer.***

$\frac{4}{6}$  there were 6 in all and 4 were used so the denominator is 6 and the numerator is 4

## Score Point 2 (out of 2 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. The fraction of the ribbon that Gianna uses for her project is correct. The explanation correctly describes what the numerator and denominator in the fraction represent. The explanation is complete and correct.

## GUIDE PAPER 2

39

Gianna cuts a ribbon into equal pieces as shown below.



She uses 4 pieces of the ribbon for a project. What fraction of the ribbon does Gianna use for the project?

*Explain how you found your answer.*

*How I found my Answer was I shaded in 4 Scores from the 6 squares they gave me and Then I found out My Answer has to be  $\frac{4}{6}$*



$$\frac{1}{6} \times 4 = \frac{4}{6}$$

$$\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{4}{6}$$

### Score Point 2 (out of 2 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. The fraction of the ribbon that Gianna uses for her project is correct. The explanation is complete and correct.

## GUIDE PAPER 3

39

Gianna cuts a ribbon into equal pieces as shown below.



She uses 4 pieces of the ribbon for a project. What fraction of the ribbon does Gianna use for the project?

*Explain how you found your answer.*

$$\frac{4}{6}$$



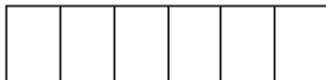
### Score Point 2 (out of 2 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. The fraction of the ribbon that Gianna uses for her project is correct. The correct shading in the diagram representing the ribbon fraction is a sufficient explanation. The response is complete and correct.

## GUIDE PAPER 4

39

Gianna cuts a ribbon into equal pieces as shown below.



She uses 4 pieces of the ribbon for a project. What fraction of the ribbon does Gianna use for the project?

***Explain how you found your answer.***

she used 4 pieces of ribbon and there are 2 left and therev are in all 6 so she used 4 6

### Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. This response demonstrates that the student understands there are 6 pieces total, of which 4 are used in the project. However, “4 6” is not sufficient notation to indicate the fraction  $\frac{4}{6}$ . This response correctly addresses only some elements of the task.

# GUIDE PAPER 5

39

Gianna cuts a ribbon into equal pieces as shown below.



She uses 4 pieces of the ribbon for a project. What fraction of the ribbon does Gianna use for the project?

*Explain how you found your answer.*

she uses  $\frac{4}{6}$  for the project because  
she used 4 for the project

## Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. This response provides the correct answer, but the denominator 6 is insufficiently explained. This response correctly addresses only some elements of the task.

# GUIDE PAPER 6

39

Gianna cuts a ribbon into equal pieces as shown below.



She uses 4 pieces of the ribbon for a project. What fraction of the ribbon does Gianna use for the project?

*Explain how you found your answer.*

*she uses  $\frac{4}{5}$  because  
She has 5 pieces  
and she takes four.*

## Score Point 1 (out of 2 points)

This response demonstrates only a partial understanding of the mathematical concepts in the task. A correct numerator is provided; however, the total number of pieces is miscounted, leading to an incorrect denominator. This response correctly addresses only some elements of the task.

## GUIDE PAPER 7

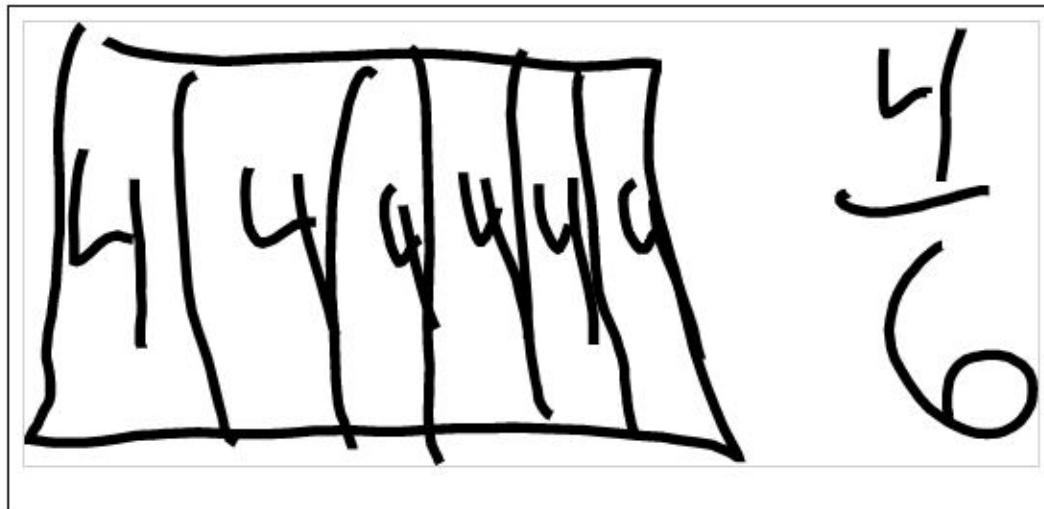
39

Gianna cuts a ribbon into equal pieces as shown below.



She uses 4 pieces of the ribbon for a project. What fraction of the ribbon does Gianna use for the project?

*Explain how you found your answer.*



**Score Point 0 (out of 2 points)**

This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task. The answer of  $\frac{4}{6}$  is obtained using an incorrect procedure.

# GUIDE PAPER 8

Additional

39

Gianna cuts a ribbon into equal pieces as shown below.



She uses 4 pieces of the ribbon for a project. What fraction of the ribbon does Gianna use for the project?

Explain how you found your answer.

$\frac{2}{4}$ . I got my answer by filling in 4 of the boxes and then I saw there were 2 left so  $\frac{2}{4}$  is my answer.

## Score Point 0 (out of 2 points)

Although the diagram is shaded correctly, the explanation shows no valid understanding of how it is represented as a fraction. Holistically, this response is not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.

## EXEMPLARY RESPONSE

40

Ms. Ross is making breakfast for her family. She makes 15 small pancakes to share equally among 3 people. How many small pancakes will each person get?

*Show your work.*

$$15 \div 3 = 5 \text{ pancakes}$$

*or other valid process*

**Answer** 5 pancakes

Ms. Ross also wants to give each person a glass of orange juice. If each person gets 8 ounces, how many total ounces of orange juice does she need?

*Show your work.*

$$8 \times 3 = 24 \text{ ounces of juice}$$

*or other valid process*

**Answer** 24 ounces

# GUIDE PAPER 1

Additional

40

Ms. Ross is making breakfast for her family. She makes 15 small pancakes to share equally among 3 people. How many small pancakes will each person get?

Show your work.

W- Each person will get 5 small pancakes



W-  $15 \div 3 = 5$  small pancakes

Answer 5 small pancakes

Ms. Ross also wants to give each person a glass of orange juice. If each person gets 8 ounces, how many total ounces of orange juice does she need?

Show your work.

W- Ms. Ross needs 24 ounces of orange juice.



W-  $8 \times 3 = 24$  ounces

Answer 24 ounces

## Score Point 3 (out of 3 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. The number of pancakes each person can get and the total amount of orange juice needed are correctly calculated. The response is complete and correct.

## GUIDE PAPER 2

40

Ms. Ross is making breakfast for her family. She makes 15 small pancakes to share equally among 3 people. How many small pancakes will each person get?

*Show your work.*

$$15 \div 3 = p$$

3,6,9,12,15  
p=5

**Answer** Each person gets 5 small pancakes.

Ms. Ross also wants to give each person a glass of orange juice. If each person gets 8 ounces, how many total ounces of orange juice does she need?

*Show your work.*

$$8 \times 3 = O$$

8,16,24  
O=24ounces

**Answer** She needs 24 ounces of orange juice.

### Score Point 3 (out of 3 points)

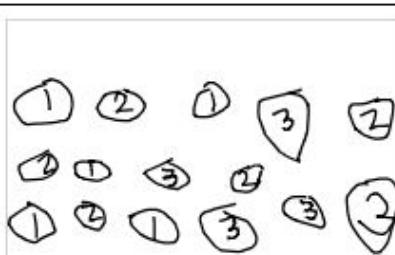
This response demonstrates a thorough understanding of the mathematical concepts in the task. The number of pancakes each person can get and the total amount of orange juice needed are correctly calculated. The “O” in the work is understood to signify the variable O, for orange juice, not the number zero. The response is complete and correct.

# GUIDE PAPER 3

40

Ms. Ross is making breakfast for her family. She makes 15 small pancakes to share equally among 3 people. How many small pancakes will each person get?

**Show your work.**

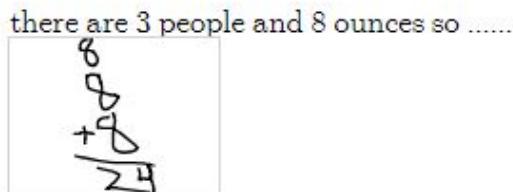


there is 5 of 2's and 5 of 1's and 5 of 3's

**Answer**  pancakes

Ms. Ross also wants to give each person a glass of orange juice. If each person gets 8 ounces, how many total ounces of orange juice does she need?

**Show your work.**



**Answer**  ounces

## Score Point 3 (out of 3 points)

This response demonstrates a thorough understanding of the mathematical concepts in the task. The number of pancakes each person can get is correctly derived. A correct process is shown by drawing 15 pancakes, and grouping them by numbering them 1 through 3. The total amount of orange juice is correctly calculated by repeatedly adding 8. The response is complete and correct.

## GUIDE PAPER 4

40

Ms. Ross is making breakfast for her family. She makes 15 small pancakes to share equally among 3 people. How many small pancakes will each person get?

**Show your work.**

1 person	1 person	1 person
1	1	1
1	1	1
1	1	1
1	1	1

$$15 \div 3 = 5$$

5 in each

the answer is 5 because  $15 \div 3 = 5$ .

each person  
gets 5  
pancakes

**Answer**      **pancakes**

Ms. Ross also wants to give each person a glass of orange juice. If each person gets 8 ounces, how many total ounces of orange juice does she need?

**Show your work.**

$$\begin{array}{l} 3 \text{ people} \\ 8 \times 3 = 27 \\ \text{the answer is } 27 \end{array}$$

she needs 27  
ounces

**Answer**      **ounces**

### Score Point 2 (out of 3 points)

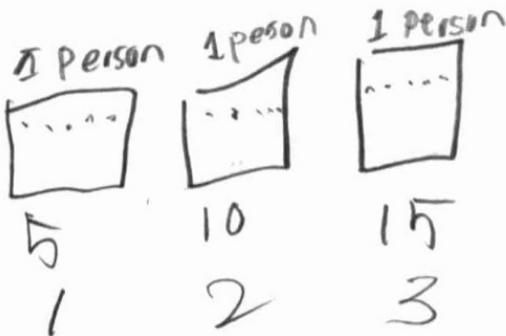
This response demonstrates a partial understanding of the mathematical concepts in the task. The number of pancakes each person can get is correctly calculated. The process to determine the total amount of juice needed is correct, but a multiplication error results in an incorrect answer. This response contains an incorrect solution but applies sound procedures.

# GUIDE PAPER 5

40

Ms. Ross is making breakfast for her family. She makes 15 small pancakes to share equally among 3 people. How many small pancakes will each person get?

Show your work.



Answer 3 pancakes

Ms. Ross also wants to give each person a glass of orange juice. If each person gets 8 ounces, how many total ounces of orange juice does she need?

Show your work.

$$8, 16, \cancel{24}$$

$$\begin{aligned}3 \times 8 &= 8 \times 3 \\3 \times 8 &= 24 \\8 \times 3 &= 24\end{aligned}$$

Answer \_\_\_\_\_ ounces

## Score Point 2 (out of 3 points)

This response demonstrates a partial understanding of the mathematical concepts in the task. The drawing for the pancake distribution shows understanding of division, but the number of people, not the number of pancakes, is inappropriately provided as the solution. The total amount of juice needed is correctly calculated. Although the amount of orange juice needed is not on the answer line, per Scoring Policy #2, if the student does not write the answer in the answer space, but in this case clearly identifies the answer by circling the 24, then the student shall receive credit for this. This response reflects a minor misunderstanding of the underlying procedures.

## GUIDE PAPER 6

40

Ms. Ross is making breakfast for her family. She makes 15 small pancakes to share equally among 3 people. How many small pancakes will each person get?

**Show your work.**

$$15 \div 3 = 5$$

**Answer**  pancakes

Ms. Ross also wants to give each person a glass of orange juice. If each person gets 8 ounces, how many total ounces of orange juice does she need?

**Show your work.**

$$6 \times 8 = 48 \text{ ounces}$$

**Answer**  ounces

### Score Point 2 (out of 3 points)

This response demonstrates a partial understanding of the mathematical concepts in the task. The number of pancakes each person can get is correctly calculated. However, the total amount of juice needed is calculated using an appropriate process, but is calculated for 6 people, not 3. This response reflects a minor misunderstanding of the underlying procedures.

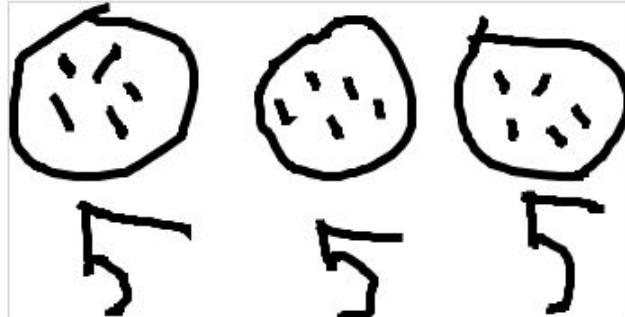
## GUIDE PAPER 7

40

Ms. Ross is making breakfast for her family. She makes 15 small pancakes to share equally among 3 people. How many small pancakes will each person get?

*Show your work.*

$$15 \div 3 = 5$$

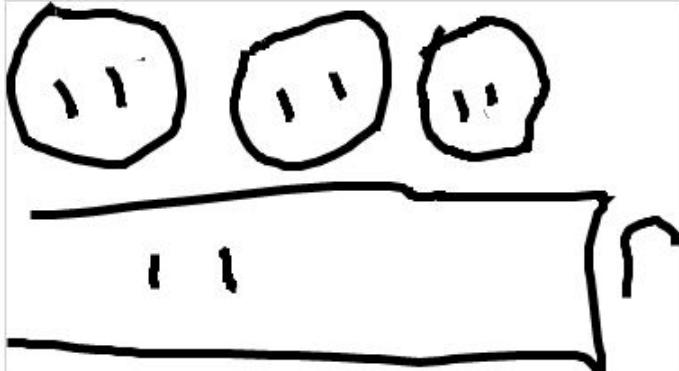


**Answer**  pancakes

Ms. Ross also wants to give each person a glass of orange juice. If each person gets 8 ounces, how many total ounces of orange juice does she need?

*Show your work.*

$$8 \div 3 = 2 r2$$



**Answer**  ounces

### Score Point 1 (out of 3 points)

This response demonstrates only a limited understanding of the mathematical concepts in the task. The number of pancakes each person can get is correctly calculated, but the method to determine the total amount of juice is incorrect. This response addresses only some elements of the task correctly.

# GUIDE PAPER 8

Additional

40

Ms. Ross is making breakfast for her family. She makes 15 small pancakes to share equally among 3 people. How many small pancakes will each person get?

*Show your work.*

each person gets 5 pancakes.



**Answer**

each person  
gets 5  
pancakes

Ms. Ross also wants to give each person a glass of orange juice. If each person gets 8 ounces, how many total ounces of orange juice does she need?

*Show your work.*

she needs 24 ounces.

**Answer**

she needs 24  
ounces

## Score Point 1 (out of 3 points)

This response demonstrates only a limited understanding of the mathematical concepts in the task. The number of pancakes each person can get is correctly derived using a diagram. The answer for the total amount of juice needed is correct, but no work is shown for that calculation. This response contains the correct solutions but the required work is limited.

# GUIDE PAPER 9

40

Ms. Ross is making breakfast for her family. She makes 15 small pancakes to share equally among 3 people. How many small pancakes will each person get?

Show your work.

$$\begin{array}{r} 15 \\ \hline 3 | 10 \\ 3 \overline{)1} \end{array}$$

$$5 \times 3 = 15$$

Answer 5 pancakes

Ms. Ross also wants to give each person a glass of orange juice. If each person gets 8 ounces, how many total ounces of orange juice does she need?

Show your work.

$$\begin{array}{r} 5 \times 3 = 15 \\ + 8 \\ \hline 23 \end{array}$$

$$\begin{array}{r} 15 \\ \hline 8 \\ 4 \overline{)1} \\ - 8 \\ \hline 3 \end{array}$$

Answer 23 ounces

## Score Point 1 (out of 3 points)

This response demonstrates only a limited understanding of the mathematical concepts in the task. The number of pancakes each person can get is correctly calculated. The answer and work to determine the total amount of juice are incorrect. This response addresses only some elements of the task correctly.

## GUIDE PAPER 10

40

Ms. Ross is making breakfast for her family. She makes 15 small pancakes to share equally among 3 people. How many small pancakes will each person get?

*Show your work.*

5

**Answer**  pancakes

Ms. Ross also wants to give each person a glass of orange juice. If each person gets 8 ounces, how many total ounces of orange juice does she need?

*Show your work.*

24

**Answer**  ounces

### Score Point 0 (out of 3 points)

This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task. There is no work for either the number of pancakes each person receives, or the total amount of juice needed. Per Scoring Policy #3 a correct answer with no work receives no credit.

# GUIDE PAPER 11

Additional

40

Ms. Ross is making breakfast for her family. She makes 15 small pancakes to share equally among 3 people. How many small pancakes will each person get?

Show your work.

$$\begin{array}{r} + 15 \\ 3 \hline 18 \end{array}$$

Answer 8 pancakes

Ms. Ross also wants to give each person a glass of orange juice. If each person gets 8 ounces, how many total ounces of orange juice does she need?

Show your work.

$$\begin{array}{r} 8 \\ \times 3 \\ \hline 11 \end{array}$$

Answer 11 ounces

## Score Point 0 (out of 3 points)

This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task. The work consists of adding the numbers that appear in the prompt, with no real understanding of what the numbers represent. The answers are incorrect.