New York State Testing Program

2026

Mathematics Test

Grade 4

Scoring Leader Materials

Training Set

QAI30796

Note to Scorers

You may notice that some questions in these scoring materials appear with a bracketed credit value showing the respective number of credits. This is due to a style change that was recently field tested; therefore, not all items will have the bracketed credit value. An example of what the bracketed credit value looks like is provided below for your reference.

Example: Stem of the question. [2]

1-Credit Constructed-Response Rubric

1 Credit	A 1-credit response is a **correct answer** to the question which indicates a thorough understanding of mathematical concepts and/or procedures.
0 Credits*	A 0-credit response is incorrect, irrelevant, or incoherent.

* 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).

2-Credit Constructed-Response Holistic Rubric

2 Credits	A 2-credit 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 • indicates that the student has completed the task correctly, using mathematically sound procedures • contains sufficient work to demonstrate a thorough understanding of the mathematical concepts and/or procedures • may contain inconsequential errors that do not detract from the correct solution and the demonstration of a thorough understanding
1 Credit	A 1-credit response demonstrates only a partial understanding of the mathematical concepts and/or procedures in the task. This response • correctly addresses only some elements of the task • may contain an incorrect solution but applies a mathematically appropriate process • may contain the correct solution but required work is incomplete
0 Credits*	A 0-credit 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-Credit Constructed-Response Holistic Rubric

3 Credits	A 3-credit response includes the correct solution(s) to the question and demonstrates a thorough understanding of the mathematical concepts and/or procedures in the task. This response • indicates that the student has completed the task correctly, using mathematically sound procedures • contains sufficient work to demonstrate a thorough understanding of the mathematical concepts and/or procedures • may contain inconsequential errors that do not detract from the correct solution(s) and the demonstration of a thorough understanding
2 Credits	A 2-credit response demonstrates a partial understanding of the mathematical concepts and/or procedures in the task. This response • appropriately addresses most but not all aspects of the task using mathematically sound procedures • may contain an incorrect solution but provides sound procedures, reasoning, and/or explanations • may reflect some minor misunderstanding of the underlying mathematical concepts and/or procedures
1 Credit	A 1-credit response demonstrates only a limited understanding of the mathematical concepts and/or procedures in the task. This response • may address some elements of the task correctly but reaches an inadequate solution and/or provides reasoning that is faulty or incomplete • exhibits multiple flaws related to misunderstanding of important aspects of the task, misuse of mathematical procedures, or faulty mathematical reasoning • reflects a lack of essential understanding of the underlying mathematical concepts • may contain the correct solution(s) but required work is limited
0 Credits*	A 0-credit 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).

1-Credit Constructed-Response Mathematics Scoring Policies

1. The student is **not** required to show work for a 1-credit constructed-response question, therefore, any work shown will **not** be scored. A clearly identified correct response should still receive full credit.
2. If the student clearly identifies a correct answer but fails to write that answer in the answer space, the student should still receive full credit.
3. If the student provides one legible response (and one response only), the rater should score the response, even if it has been crossed out.
4. 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.
5. If the student provides more than one response but does not indicate which response is to be considered the correct response and none have been crossed out, the student shall not receive credit.
6. If the student does not provide the answer in the form as directed in the question, the student will not receive credit.
7. In questions requiring number sentences, the number sentences must be written horizontally.
8. When measuring angles with a protractor, there is a +/- 5 degrees deviation allowed of the true measure.
9. 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.

2- and 3-Credit Constructed-Response Mathematics Scoring Policies

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 questions that do **not** ask for any work and questions 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 have been crossed out, the student shall not receive full credit.
8. Trial-and-error responses are **not** subject to Scoring Policy #6 above, since crossing out is part of the trial-and-error process.
9. 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.
10. In questions requiring number sentences, the number sentences must be written horizontally.
11. When measuring angles with a protractor, there is a +/- 5 degrees deviation allowed of the true measure.
12. 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.

37

The model below is made up of three shapes of the same size. Each shape is divided into equal parts and shaded to represent a fraction of its whole.

What mixed number is represented by the model?

Answer _____

EXEMPLARY RESPONSE

37

The model below is made up of three shapes of the same size. Each shape is divided into equal parts and shaded to represent a fraction of its whole.

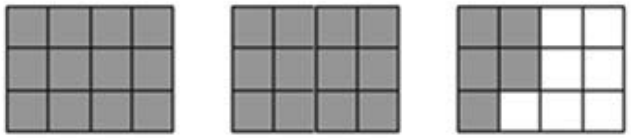
What mixed number is represented by the model?

Answer $2\ 5/12$

GUIDE PAPER 1

37

The model below is made up of three shapes of the same size. Each shape is divided into equal parts and shaded to represent a fraction of its whole.



What mixed number is represented by the model?

Answer There is 2 boxes shaded all so thats a whole and theres one more box that shaded with 5 so it is $2\frac{5}{12}$

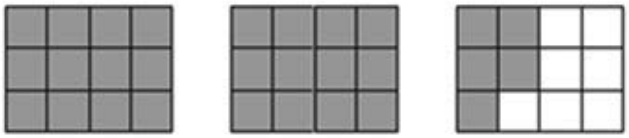
Score Credit 1 (out of 1 credit)

A correct answer is provided.

GUIDE PAPER 2

37

The model below is made up of three shapes of the same size. Each shape is divided into equal parts and shaded to represent a fraction of its whole.



What mixed number is represented by the model?

Answer $2\frac{5}{12}$

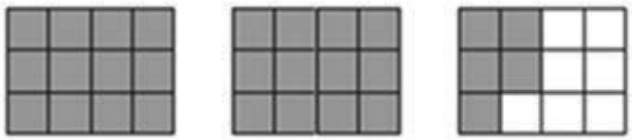
Score Credit 1 (out of 1 credit)

A correct answer is provided.

GUIDE PAPER 3

37

The model below is made up of three shapes of the same size. Each shape is divided into equal parts and shaded to represent a fraction of its whole.



What mixed number is represented by the model?

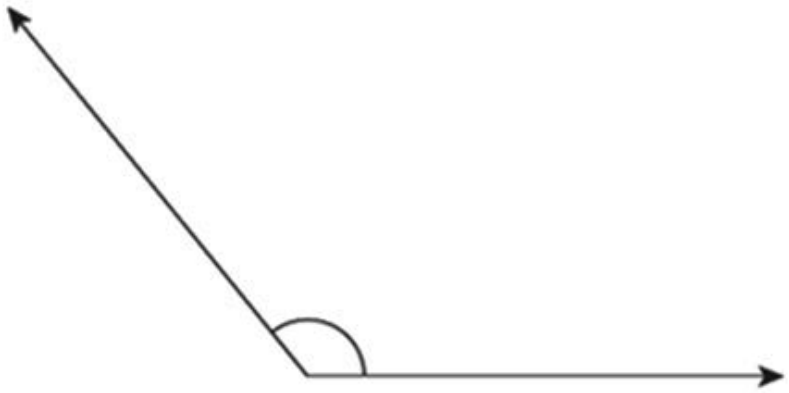
Answer $\frac{29}{12}$ or $2\frac{5}{12}$

Score Credit 0 (out of 1 credit)

An incorrect answer is provided per Scoring Policy #5.

38

An angle is shown below.



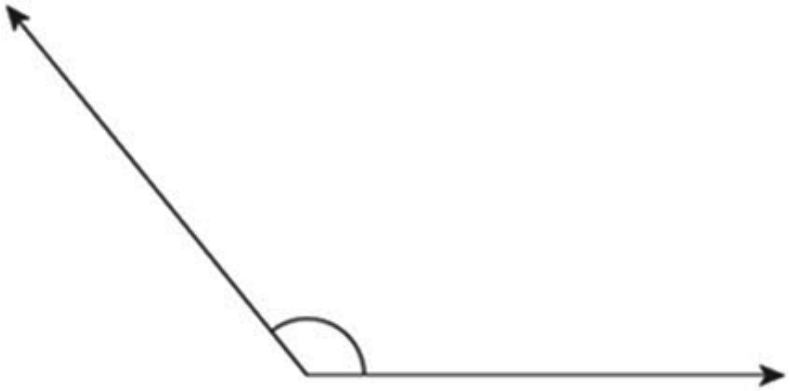
What is the measure of the angle?

Answer _____ °

EXEMPLARY RESPONSE

38

An angle is shown below.



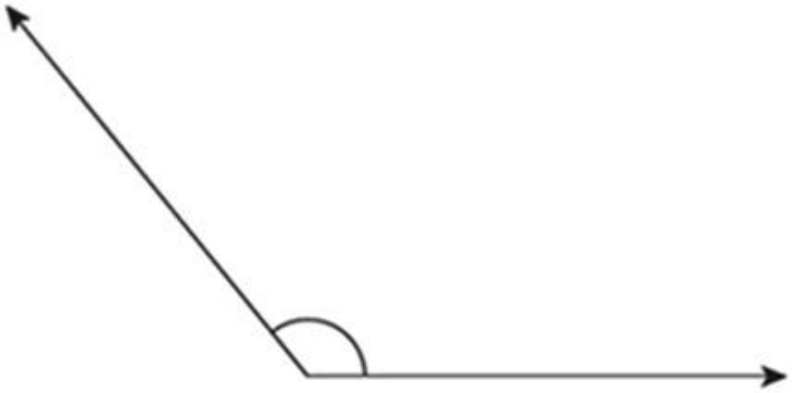
What is the measure of the angle?

Answer 129 °

Scoring Policy 8:
When measuring angles with a protractor, there is a +/- 5 degrees deviation allowed of the true measure.

38

An angle is shown below.



What is the measure of the angle?

Answer 129 °

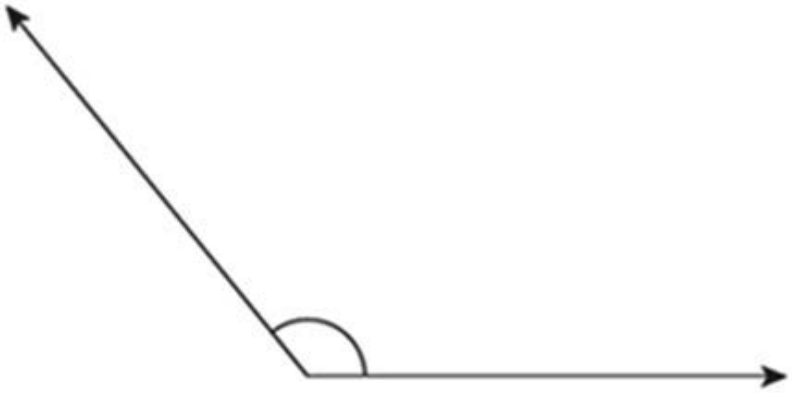
Score Credit 1 (out of 1 credit)

A correct answer is provided.

GUIDE PAPER 2

38

An angle is shown below.



What is the measure of the angle?

Answer 133 °

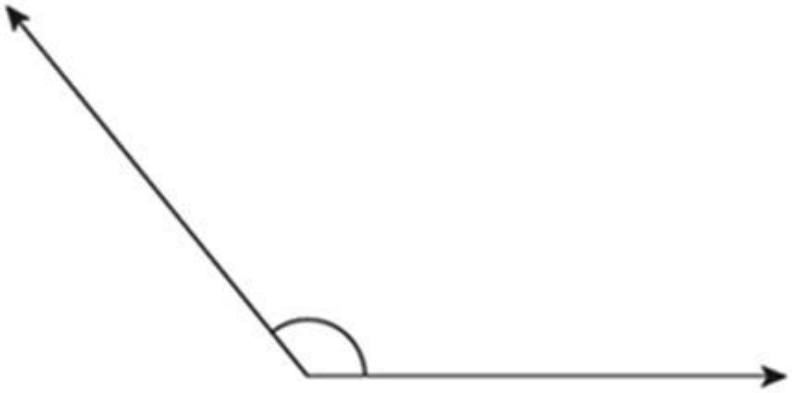
Score Credit 1 (out of 1 credit)

A correct answer is provided per Scoring Policy #8.

GUIDE PAPER 3

38

An angle is shown below.



What is the measure of the angle?

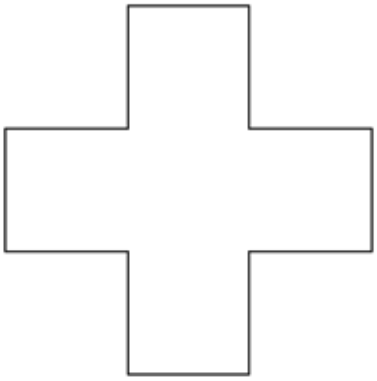
Answer 139 °

Score Credit 0 (out of 1 credit)

An incorrect answer is provided.

40

A figure is shown below.



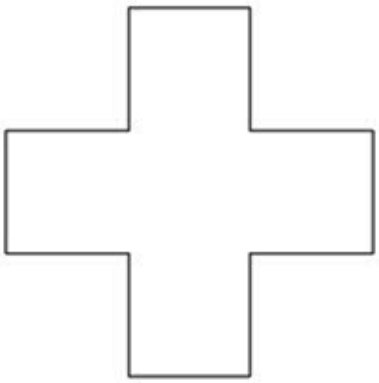
How many lines of symmetry does the figure appear to have? Be sure to include what you know about lines of symmetry in your answer.

Explain how you know your answer is correct.

EXEMPLARY RESPONSE

40

A figure is shown below.



How many lines of symmetry does the figure appear to have? Be sure to include what you know about lines of symmetry in your answer.

Explain how you know your answer is correct.

The figure has 4 lines of symmetry.

**I know this because when a line is drawn
that creates two equal parts (halves)
that match on top of each other
(that are mirror images of each other),
it is a line of symmetry for the figure.**

**If you fold the figure exactly down the middle (vertically)
and exactly across the middle (horizontally),
you have two lines of symmetry.**

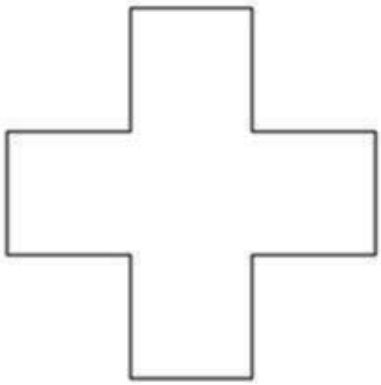
**If you fold the figure diagonally from left to right
and diagonally from right to left,
it has two more lines of symmetry.**

Therefore, this figure has a total of 4 lines of symmetry.

OR Other valid response

40

A figure is shown below.



How many lines of symmetry does the figure appear to have? Be sure to include what you know about lines of symmetry in your answer.

Explain how you know your answer is correct.

The figure appears to have 4 lines of symmetry I know this because if you fold the figure any of these ways tha the sides will perfectly overlap.

Score Credit 2 (out of 2 credits)

This response demonstrates a thorough understanding of the mathematical concepts in the task.

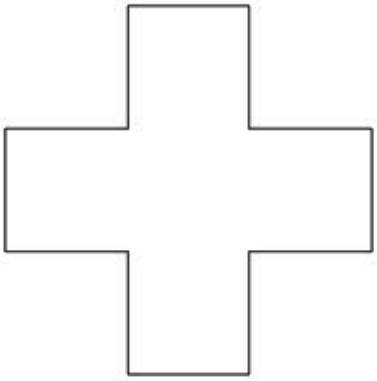
- The number of lines of symmetry is given and supported by sound mathematical reasoning that is accompanied with a visual.

This response is complete and correct.

GUIDE PAPER 2

40

A figure is shown below.



How many lines of symmetry does the figure appear to have? Be sure to include what you know about lines of symmetry in your answer.

Explain how you know your answer is correct.

The figure has 4 lines of symmetry because if you fold it in half horizontally, vertically, and diagonally, you will see all sides match up if you fold them together.

Score Credit 2 (out of 2 credits)

This response demonstrates a thorough understanding of the mathematical concepts in the task.

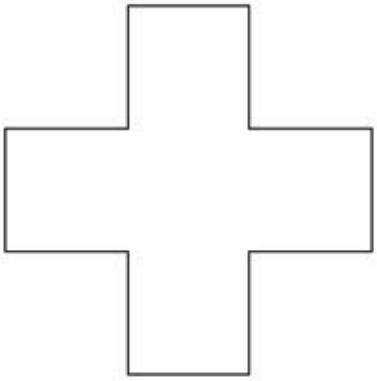
- A correct answer is given and supported by a correct explanation.

This response is complete and correct.

GUIDE PAPER 3

40

A figure is shown below.



How many lines of symmetry does the figure appear to have? Be sure to include what you know about lines of symmetry in your answer.

Explain how you know your answer is correct.

The figure appears to have four lines of symmetry. I know because if you split it in a way that will have the shape mirrored on the other side that would be a line of symmetry.

Score Credit 2 (out of 2 credits)

This response demonstrates a thorough understanding of the mathematical concepts in the task.

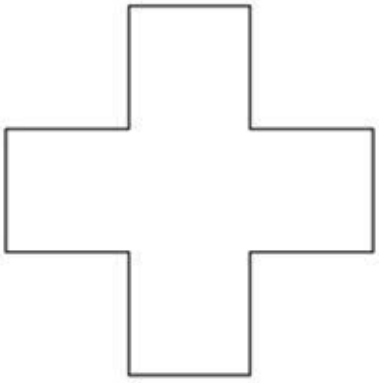
- The number of lines of symmetry is given and supported by an acceptable description of the result when a figure is folded along a line of symmetry.

This response contains sufficient work to demonstrate a thorough understanding.

GUIDE PAPER 4

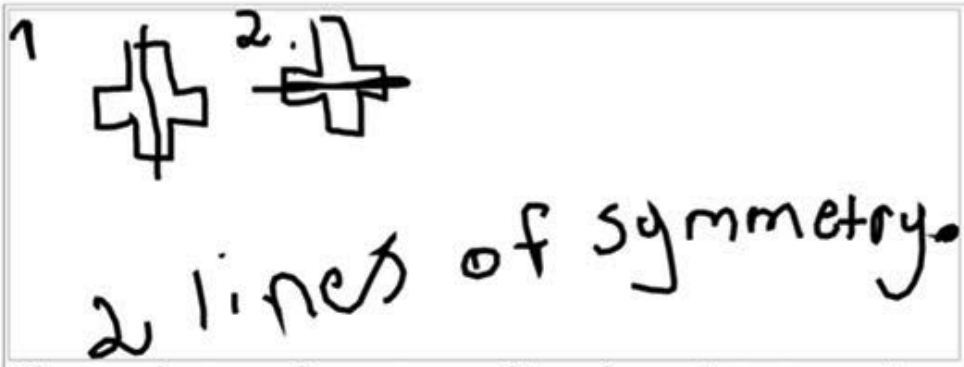
40

A figure is shown below.



How many lines of symmetry does the figure appear to have? Be sure to include what you know about lines of symmetry in your answer.

Explain how you know your answer is correct.



I know that you have two split a shape into two mirror images of each other to make line of symmetry. I made 2 lines of symmetry with this shape, and that is all you can make.

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts in the task.

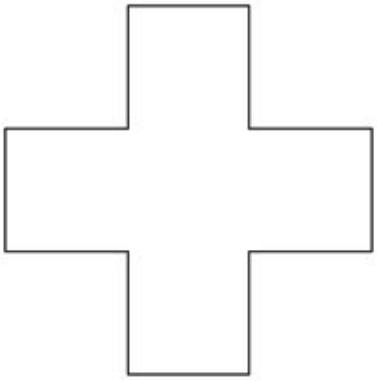
- The vertical and the horizontal lines of symmetry for the figure are correctly drawn and supported by sound reasoning; however, only those two lines are given as the final solution.

This response contains an incorrect solution, but describes a mathematically appropriate process.

GUIDE PAPER 5

40

A figure is shown below.



How many lines of symmetry does the figure appear to have? Be sure to include what you know about lines of symmetry in your answer.

Explain how you know your answer is correct.

2 because the shape can be folded twice equally without a part of it being left out of the fold.

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts in the task.

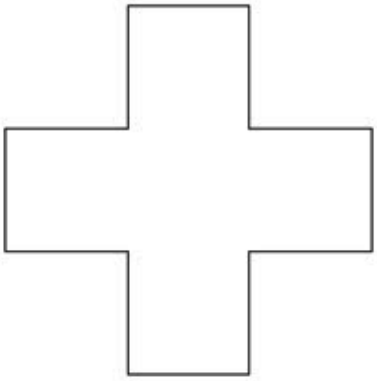
- An incorrect total number of lines of symmetry is given; however, acceptable reasoning for identifying lines of symmetry is provided.

This response contains an incorrect solution but describes a mathematically appropriate process.

GUIDE PAPER 6

40

A figure is shown below.



How many lines of symmetry does the figure appear to have? Be sure to include what you know about lines of symmetry in your answer.

Explain how you know your answer is correct.

it has 4 lines of symmetry because if you cut it into pieces and you see they look the exact same it has atleast one line of symmetry

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts in the task.

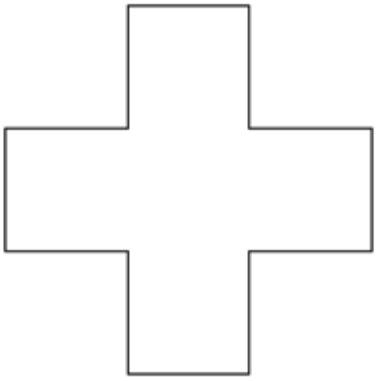
- The number of lines of symmetry is given; however, the provided reasoning is insufficient to demonstrate full understanding.

This response contains the correct solution, but the required explanation is incomplete.

GUIDE PAPER 7

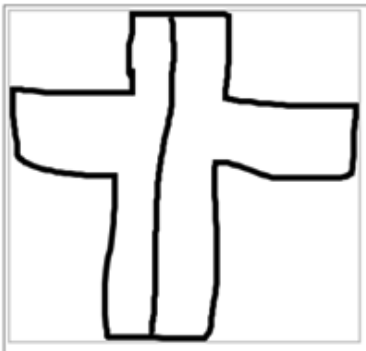
40

A figure is shown below.



How many lines of symmetry does the figure appear to have? Be sure to include what you know about lines of symmetry in your answer.

Explain how you know your answer is correct.



Score Credit 0 (out of 2 credits)

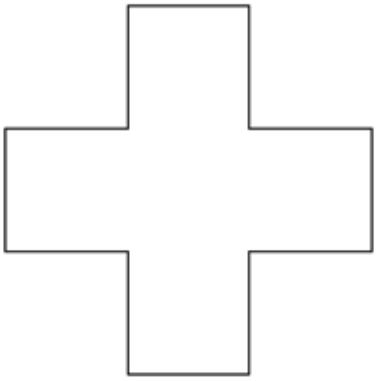
This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task.

- Although one line of symmetry for the figure is drawn, no additional reasoning or final solution is provided.

Holistically, this response shows no overall understanding of the task.

40

A figure is shown below.



How many lines of symmetry does the figure appear to have? Be sure to include what you know about lines of symmetry in your answer.

Explain how you know your answer is correct.

The shape has 4 lines of symmetry I know my answer is correct because I made the shape on a piece of paper and I got 4 lines of symmetry

Score Credit 0 (out of 2 credits)

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

- A correct solution is given with no explanation.

Per Scoring Policy #3 for 2- and 3-credit responses, this response receives no credit.

41

A teacher spends a total of $27 on boxes of pencils. Each box of pencils is $3. Write and solve an equation that can be used to determine the total number of boxes of pencils the teacher buys. Use the letter *b* to represent the total number of boxes of pencils in your equation.

Show your work.

Answer $b =$ _____ boxes of pencils

EXEMPLARY RESPONSE

41

A teacher spends a total of $27 on boxes of pencils. Each box of pencils is $3. Write and solve an equation that can be used to determine the total number of boxes of pencils the teacher buys. Use the letter *b* to represent the total number of boxes of pencils in your equation.

Show your work.

$27 \div 3 = b$
$b = 9$
9 boxes of pencils

OR

$3 \times b = 27$
$b = 9$
9 boxes of pencils

OR other valid process

Answer $b =$ 9 boxes of pencils

41

A teacher spends a total of $27 on boxes of pencils. Each box of pencils is $3. Write and solve an equation that can be used to determine the total number of boxes of pencils the teacher buys. Use the letter *b* to represent the total number of boxes of pencils in your equation.

Show your work.

27 ÷ 3 = b
b=9
9x3=27
the teacher bought 9 boxes of pencils

Answer $b =$ 9 boxes of pencils

Score Credit 2 (out of 2 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.

- An equation that represents the situation using the given variable for the unknown is provided, as well as the solution for the total number of boxes of pencils the teacher buys.

This response is complete and correct.

GUIDE PAPER 2

41

A teacher spends a total of $27 on boxes of pencils. Each box of pencils is $3. Write and solve an equation that can be used to determine the total number of boxes of pencils the teacher buys. Use the letter *b* to represent the total number of boxes of pencils in your equation.

Show your work.

27 ÷ 3 = b

3 6 9 12 15 18 21 24 (27)

Answer $b =$ 9 boxes of pencils

Score Credit 2 (out of 2 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.

- An equation that represents the situation using the given variable for the unknown is provided, as well as the solution for the total number of boxes of pencils the teacher buys.

This response is complete and correct.

GUIDE PAPER 3

41

A teacher spends a total of $27 on boxes of pencils. Each box of pencils is $3. Write and solve an equation that can be used to determine the total number of boxes of pencils the teacher buys. Use the letter *b* to represent the total number of boxes of pencils in your equation.

Show your work.

B = ?
27 ÷ 3 = ?
? = 9

Answer $b =$ 9 boxes of pencils

Score Credit 2 (out of 2 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.

- An equation that represents the situation using a symbol defined in the work as equivalent to the given variable for the unknown is provided, as well as the solution for the total number of boxes of pencils the teacher buys.

This response contains sufficient work to demonstrate a thorough understanding.

GUIDE PAPER 4

41

A teacher spends a total of $27 on boxes of pencils. Each box of pencils is $3. Write and solve an equation that can be used to determine the total number of boxes of pencils the teacher buys. Use the letter *b* to represent the total number of boxes of pencils in your equation.

Show your work.

$27 \div 3$

Answer $b =$ B = 9 boxes of pencils

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts in the task.

- Although the solution and supportive work for the total number of boxes of pencils the teacher buys are given, an equation that represents the situation using the given variable for the unknown is not provided.

This response appropriately addresses only some elements of the task.

GUIDE PAPER 5

41

A teacher spends a total of $27 on boxes of pencils. Each box of pencils is $3. Write and solve an equation that can be used to determine the total number of boxes of pencils the teacher buys. Use the letter *b* to represent the total number of boxes of pencils in your equation.

Show your work.

$27 \div 3 = 9$

Answer $b =$ 9 boxes of pencils

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts in the task.

- Although an equation is given to support the solution for the total number of boxes the teacher buys, an equation is not provided that represents the situation using the given variable for the unknown.

This response appropriately addresses only some elements of the task.

GUIDE PAPER 6

41

A teacher spends a total of $27 on boxes of pencils. Each box of pencils is $3. Write and solve an equation that can be used to determine the total number of boxes of pencils the teacher buys. Use the letter *b* to represent the total number of boxes of pencils in your equation.

Show your work.

3,6,9,12,15,18,21,24,27

Answer $b =$ 9 boxes boxes of pencils

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts in the task.

- The solution for the total number of boxes the teacher buys is given and supported by a mathematically sound process; however, an equation that represents the situation using the given variable for the unknown is not provided.

This response contains the correct solution, but the required work is incomplete.

GUIDE PAPER 7

41

A teacher spends a total of $27 on boxes of pencils. Each box of pencils is $3. Write and solve an equation that can be used to determine the total number of boxes of pencils the teacher buys. Use the letter *b* to represent the total number of boxes of pencils in your equation.

Show your work.

The teacher buys 7 boxes of pencils . I know my answer is correct because 3 ÷ 27 = 9

Answer *b* = 3 ÷ 27 = b boxes of pencils

Score Credit 0 (out of 2 credits)

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

- The equation used to represent the situation is incorrect, as well as the solution for the total number of boxes of pencils the teacher buys.

Holistically, this response shows no overall understanding of the task.

41

A teacher spends a total of $27 on boxes of pencils. Each box of pencils is $3. Write and solve an equation that can be used to determine the total number of boxes of pencils the teacher buys. Use the letter *b* to represent the total number of boxes of pencils in your equation.

Show your work.

3,6,9,12,15,18,21,24,27

Answer $b =$ 10 boxes of penciels boxes of pencils

Score Credit 0 (out of 2 credits)

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

- Although a process of skip-counting is shown in the provided work, no equation representing the situation is given.
- An incorrect solution for the total number of boxes of pencils is given.

Holistically, this response shows no overall understanding of the task.

42

A student has 7 pieces of string. Each piece of string is $\frac{5}{6}$ of a yard. What is the total length, in yards, of all of the pieces of string? Write your answer as a mixed number.

Show your work.

Answer _____ yards

EXEMPLARY RESPONSE

42

A student has 7 pieces of string. Each piece of string is $\frac{5}{6}$ of a yard. What is the total length, in yards, of all of the pieces of string? Write your answer as a mixed number.

Show your work.

$7 \times {}^{5}/_{6} = {}^{35}/_{6}$

${}^{35}/_{6} = 5\,{}^{5}/_{6}$

$5\,{}^{5}/_{6}$ **yards**

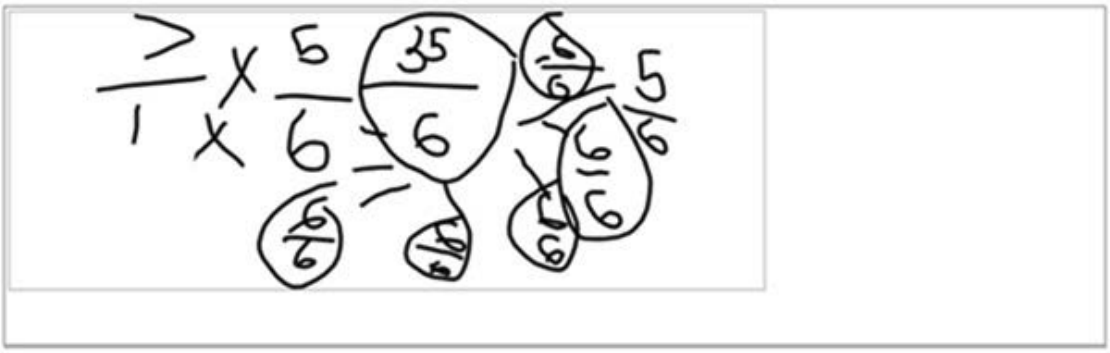
OR other valid process

Answer $5\,{}^{5}/_{6}$ yards

42

A student has 7 pieces of string. Each piece of string is $\frac{5}{6}$ of a yard. What is the total length, in yards, of all of the pieces of string? Write your answer as a mixed number.

Show your work.



Answer $5\frac{5}{6}$ yards

Score Credit 2 (out of 2 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.

- The total length of string is given as a mixed number and supported by a sound mathematical procedure.

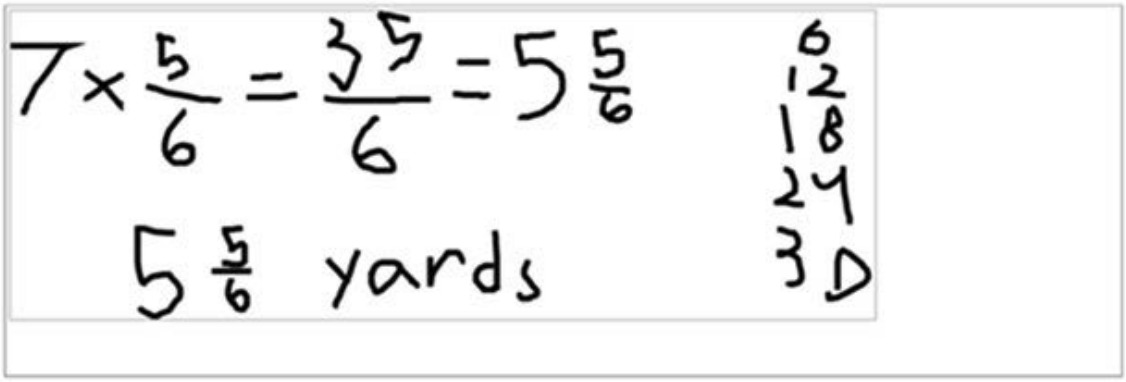
This response is complete and correct.

GUIDE PAPER 2

42

A student has 7 pieces of string. Each piece of string is $\frac{5}{6}$ of a yard. What is the total length, in yards, of all of the pieces of string? Write your answer as a mixed number.

Show your work.



Answer 5 5/6 yards yards

Score Credit 2 (out of 2 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.

- The total length of string is given as a mixed number and supported by a sound mathematical procedure.

This response is complete and correct.

GUIDE PAPER 3

42

A student has 7 pieces of string. Each piece of string is $\frac{5}{6}$ of a yard. What is the total length, in yards, of all of the pieces of string? Write your answer as a mixed number.

Show your work.

$\frac{5}{6} \times 7 = \frac{35}{6} = 5\frac{5}{6}$

Answer The length of string is $5\frac{5}{6}$. yards

Score Credit 2 (out of 2 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.

- The total length of string is given as a mixed number and supported by a sound mathematical procedure.

This response contains sufficient work to demonstrate a thorough understanding.

GUIDE PAPER 4

42

A student has 7 pieces of string. Each piece of string is $\frac{5}{6}$ of a yard. What is the total length, in yards, of all of the pieces of string? Write your answer as a mixed number.

Show your work.

$7 \times \frac{5}{6} = 5\frac{5}{6}$

Answer $5\frac{5}{6}$ yards

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts and procedures in the task.

- Although a sound mathematical procedure is shown that can be used to determine the total length of string, no additional work is shown that supports how that procedure leads to the mixed number provided as the final solution.

This response contains the correct solution, but the required work is incomplete.

GUIDE PAPER 5

42

A student has 7 pieces of string. Each piece of string is $\frac{5}{6}$ of a yard. What is the total length, in yards, of all of the pieces of string? Write your answer as a mixed number.

Show your work.

$$\frac{5}{6} + \frac{5}{6} + \frac{5}{6} + \frac{5}{6} + \frac{5}{6} + \frac{5}{6} + \frac{5}{6} = \frac{35}{6}$$

Answer 35/6 yards

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts and procedures in the task.

- Although the total length of string is determined and supported by a sound mathematical procedure, the total length is not written as a mixed number.

This response correctly addresses only some elements of the task.

GUIDE PAPER 6

42

A student has 7 pieces of string. Each piece of string is $\frac{5}{6}$ of a yard. What is the total length, in yards, of all of the pieces of string? Write your answer as a mixed number.

Show your work.

5/6 + 5/6 + 5/6 + 5/6 + 5/6 + 5/6 + 5/6 =

Answer 30/6 yards

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts and procedures in the task.

- The total length of string is correctly represented as a repeated addition expression in the equation shown in the work; however, a calculation error occurs when determining the value of the expression and an incorrect solution is provided.

This response correctly addresses only some elements of the task.

GUIDE PAPER 7

42

A student has 7 pieces of string. Each piece of string is $\frac{5}{6}$ of a yard. What is the total length, in yards, of all of the pieces of string? Write your answer as a mixed number.

Show your work.

$7 \times 5 = 35\text{yd}$

Answer 35yd yards

Score Credit 0 (out of 2 credits)

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

- The unit of sixths is not considered, and an incorrect solution is provided.

Holistically, this response shows no overall understanding of the task.

42

A student has 7 pieces of string. Each piece of string is $\frac{5}{6}$ of a yard. What is the total length, in yards, of all of the pieces of string? Write your answer as a mixed number.

Show your work.

$$\frac{7}{6} - \frac{5}{6} = \frac{2}{6}$$

Answer $\frac{2}{6}$ yards yards

Score Credit 0 (out of 2 credits)

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

- An incorrect solution is given and supported by an incorrect procedure.

Holistically, this response shows no overall understanding of the task.

43

Write a multiplication or division equation that shows the relationship between the value represented by the digit 5 in the number 3,451 and the value represented by the digit 5 in the number 3,526. Be sure to include how place value can be used to determine your answer.

Explain your answer.

EXEMPLARY RESPONSE

43

Write a multiplication or division equation that shows the relationship between the value represented by the digit 5 in the number 3,451 and the value represented by the digit 5 in the number 3,526. Be sure to include how place value can be used to determine your answer.

Explain your answer.

The value represented by the 5 in the number 3,451 is 50.
The value represented by the 5 in the number 3,526 is 500.
Therefore, the equation $50 \times 10 = 500$ can be used
to represent that 500 is 10 times greater than 50.
$(500 \div 50 = 10)$

OR

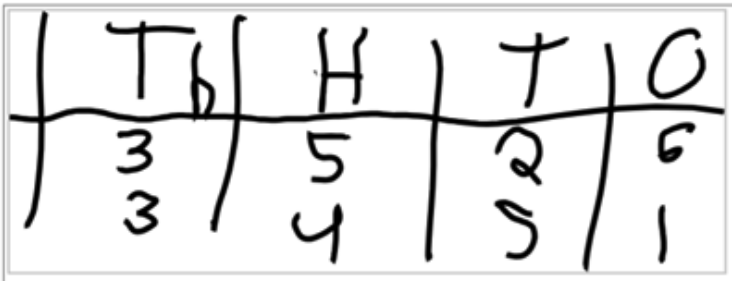
The digit 5 represents 50 in the number 3,451, which is 5 tens.
The digit 5 represents 500 in the number 3,526, which is 5 hundreds.
I know that each hundred is the same as 10 tens,
so 500 is the same as 50 tens.
This means that 500 (50 tens) is 10 times as many as 50 (5 tens).
$500 = 10 \times 50$

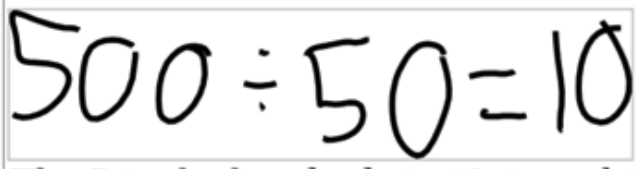
OR Other valid explanation

43

Write a multiplication or division equation that shows the relationship between the value represented by the digit 5 in the number 3,451 and the value represented by the digit 5 in the number 3,526. Be sure to include how place value can be used to determine your answer.

Explain your answer.





The 5 in the hundrads is 10 times bigger then the one in the tens place.

Score Credit 2 (out of 2 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.

- A division equation showing the place value relationship between 500 and 50 is given and supported by sound reasoning.

This response is complete and correct.

GUIDE PAPER 2

43

Write a multiplication or division equation that shows the relationship between the value represented by the digit 5 in the number 3,451 and the value represented by the digit 5 in the number 3,526. Be sure to include how place value can be used to determine your answer.

Explain your answer.

50 × 10=500 so 50 like in 3,451 if you times that by ten that is 500 like in 3,526 thats the relations between 50 in 3451 and 500 in 3526

Score Credit 2 (out of 2 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.

- A multiplication equation showing the place value relationship between 50 and 500 is given and supported by acceptable reasoning.

This response contains sufficient work to demonstrate a thorough understanding.

GUIDE PAPER 3

43

Write a multiplication or division equation that shows the relationship between the value represented by the digit 5 in the number 3,451 and the value represented by the digit 5 in the number 3,526. Be sure to include how place value can be used to determine your answer.

Explain your answer.

$50 \times 10 = 500$
because every time you move up a place value the number gets ten times greater.

Score Credit 2 (out of 2 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.

- A multiplication equation showing the place value relationship between 50 and 500 is given and supported by acceptable reasoning.

This response contains sufficient work to demonstrate a thorough understanding.

GUIDE PAPER 4

43

Write a multiplication or division equation that shows the relationship between the value represented by the digit 5 in the number 3,451 and the value represented by the digit 5 in the number 3,526. Be sure to include how place value can be used to determine your answer.

Explain your answer.

the 5 in the number 3451 is in the tens place witch means the value of the number is 50 if it were tlo be in a different place like the hundreds place it would be 500. The 5 in the number 3526 is in the hundreds place so the value of it is 500 if it were to be in the thousands place then the number would be 5000 but it is in the hundreds place so it is not 5000.

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts and procedures in the task.

- The progression of the values represented by the digit 5 as it moves left across place values is shown; however, no multiplication or division equation is given to show the place value relationship of those values.

This response correctly addresses only some elements of the task.

GUIDE PAPER 5

43

Write a multiplication or division equation that shows the relationship between the value represented by the digit 5 in the number 3,451 and the value represented by the digit 5 in the number 3,526. Be sure to include how place value can be used to determine your answer.

Explain your answer.

the number 5 in 3,526 is ten times greater then the 5 in 3,451

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts and procedures in the task.

- A place value relationship is stated for the locations of the digit five in both numbers; however, no multiplication or division equation is given to show how the values represented by the digit five multiplicatively compare to one another.

This response correctly addresses only some elements of the task.

GUIDE PAPER 6

43

Write a multiplication or division equation that shows the relationship between the value represented by the digit 5 in the number 3,451 and the value represented by the digit 5 in the number 3,526. Be sure to include how place value can be used to determine your answer.

Explain your answer.

10x50=500 10x500=5,000

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts and procedures in the task.

- Two equations that show the multiplicative relationship between the consecutive place values of tens, hundreds and thousands are provided; however, no further explanation is given and the equation that shows the place value relationship between the values represented by the digit 5 in both of the numbers is not clearly identified.

This response correctly addresses only some elements of the task.

GUIDE PAPER 7

43

Write a multiplication or division equation that shows the relationship between the value represented by the digit 5 in the number 3,451 and the value represented by the digit 5 in the number 3,526. Be sure to include how place value can be used to determine your answer.

Explain your answer.

the 5 in 3,451 is in the tens place and the 5 in 3,526 is in the hundreds place.

Score Credit 0 (out of 2 credits)

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

- Although the place value locations for the digit five in the two numbers are given, no further explanation or equation is provided as to how the values represented by the digit five multiplicatively compare to one another.

Holistically, this response shows no overall understanding of the task.

43

Write a multiplication or division equation that shows the relationship between the value represented by the digit 5 in the number 3,451 and the value represented by the digit 5 in the number 3,526. Be sure to include how place value can be used to determine your answer.

Explain your answer.

The number 3,526 of the 5 is greater then 3,451.

Score Credit 0 (out of 2 credits)

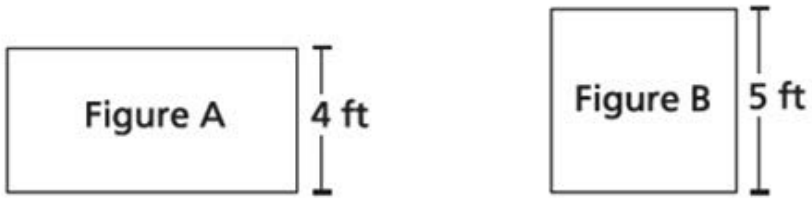
This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts in the task.

- An incoherent comparison statement is given, and no equation showing a place value relationship is provided to support the meaning of the statement made.

Holistically, this response shows no overall understanding of the task.

44

Two rectangular figures are shown below. Figure A has an area of 32 square feet. Figure B has an area of 25 square feet.



Which figure has the larger perimeter? Be sure to include the perimeters of both figures in your answer.

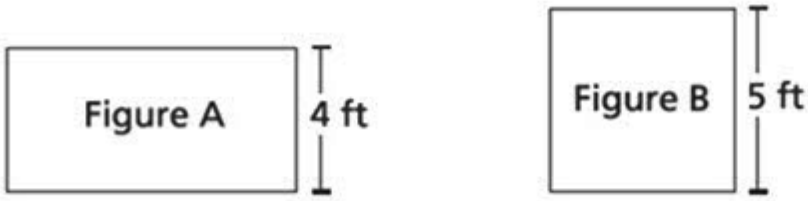
Show your work.

Answer _____

EXEMPLARY RESPONSE

44

Two rectangular figures are shown below. Figure A has an area of 32 square feet. Figure B has an area of 25 square feet.



Which figure has the larger perimeter? Be sure to include the perimeters of both figures in your answer.

Show your work.

Figure A:
$4 \times 8 = 32$
$2(4+8) = 2(12) = 24$

Figure B:
$5 \times 5 = 25$
$2(5+5) = 2(10) = 20$

$24 > 20$

OR
Other valid process

Figure A
$32 \div 4 = 8$
Length = 8 ft
Perimeter = 4 + 8 + 4 + 8 = 24 feet

Figure B
$25 \div 5 = 5$
Length = 5
Perimeter = 5 + 5 + 5 + 5 = 20 feet

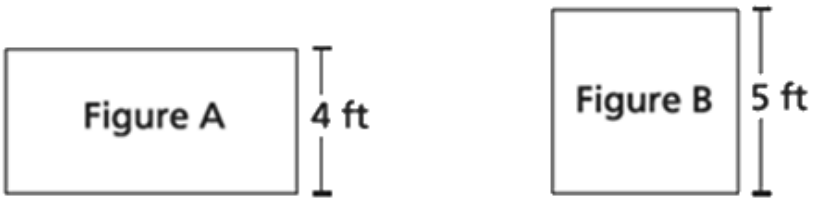
$24 > 20$

OR
Other valid process

Answer **Figure A**

44

Two rectangular figures are shown below. Figure A has an area of 32 square feet. Figure B has an area of 25 square feet.



Which figure has the larger perimeter? Be sure to include the perimeters of both figures in your answer.

Show your work.

Figure A has the biggest perimeter ,because 8x4=32sq ft so the perimeter will be 24. 8+8+4+4=24 ft . figure B has the least ,because 5x5=25sq ft so 5+5+5+5= 20 ft . 24 > 20

Answer Figure A= 24 ft

Score Credit 3 (out of 3 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.

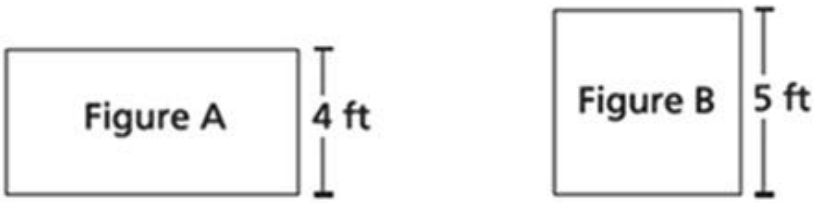
- The missing side lengths and perimeters of both figures are given and supported by sound mathematical procedures.
- Figure A is chosen as having the larger perimeter.

This response is complete and correct.

GUIDE PAPER 2

44

Two rectangular figures are shown below. Figure A has an area of 32 square feet. Figure B has an area of 25 square feet.



Which figure has the larger perimeter? Be sure to include the perimeters of both figures in your answer.

Show your work.

$P=(L+W) \times 2$

$A = L \times W$

$32 \div 4 = 8$

$(8+4) \times 2 = 24$

$(5+5) \times 2 = 20$

Answer Figure A has the larger perimeter because 24 feet > 20 feet which is the perimeter of Figure B.

Score Credit 3 (out of 3 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.

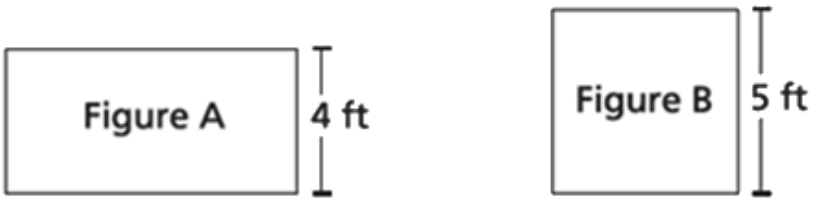
- The missing side lengths and perimeters of both figures are given and supported by sound mathematical procedures.
- Figure A is chosen as having the larger perimeter.

This response is sufficient to demonstrate understanding.

GUIDE PAPER 3

44

Two rectangular figures are shown below. Figure A has an area of 32 square feet. Figure B has an area of 25 square feet.



Which figure has the larger perimeter? Be sure to include the perimeters of both figures in your answer.

Show your work.

figure A has a perimiter of 24 figure b has a perimiter of 20 i found this out by 5x5=25 4x8=32
add all the sides and figure A has the biggest perimiter

Answer Figure A with a perimiter of 24

Score Credit 3 (out of 3 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.

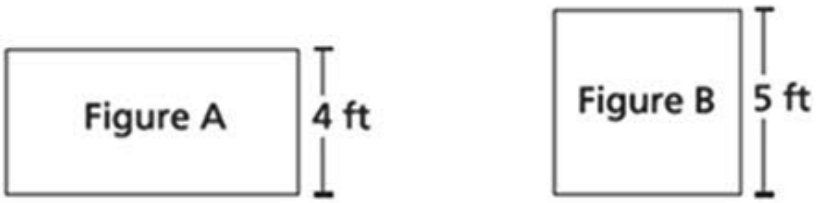
- The missing side lengths and perimeters of both figures are given and supported by sound mathematical procedures.
- Figure A is chosen as having the larger perimeter.

This response contains sufficient work to demonstrate a thorough understanding.

GUIDE PAPER 4

44

Two rectangular figures are shown below. Figure A has an area of 32 square feet. Figure B has an area of 25 square feet.



Which figure has the larger perimeter? Be sure to include the perimeters of both figures in your answer.

Show your work.

32 ÷ 4=8
25 ÷ 5=5
A= 24
B=20 A has a larger perimeter

Answer A has a larger perimeter

Score Credit 2 (out of 3 credits)

This response demonstrates a partial understanding of the mathematical concepts and procedures in the task.

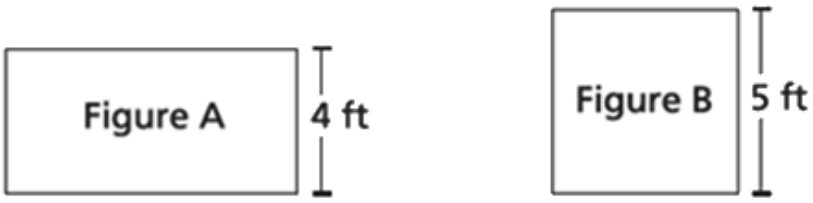
- The perimeters of both figures are given along with equations that support the missing side lengths; however, no work or supporting explanation for how the perimeter values were determined is included.
- Figure A is correctly chosen as having the larger perimeter.

This response appropriately addresses most but not all aspects of the task using mathematically sound procedures.

GUIDE PAPER 5

44

Two rectangular figures are shown below. Figure A has an area of 32 square feet. Figure B has an area of 25 square feet.



Which figure has the larger perimeter? Be sure to include the perimeters of both figures in your answer.

Show your work.

5 + 5 + 5 + 5 = 20 and 4 × 8 = 32 so 4 + 4 + 8 + 8 = 24

Answer Figure B

Score Credit 2 (out of 3 credits)

This response demonstrates a partial understanding of the mathematical concepts and procedures in the task.

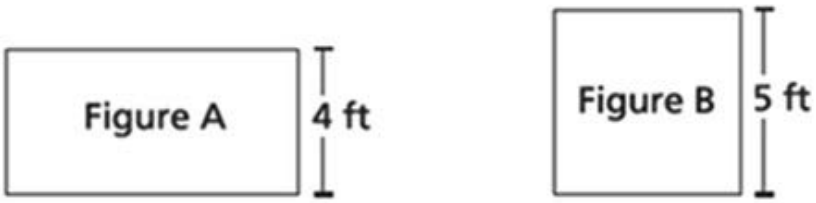
- Although work to support the missing side length of Figure B is not provided, use of the area formula is referenced in the work shown to support the missing side length of Figure A and the perimeters of both figures are correctly calculated; however, Figure B is incorrectly chosen.

This response appropriately addresses most but not all aspects of the task using mathematically sound procedures.

GUIDE PAPER 6

44

Two rectangular figures are shown below. Figure A has an area of 32 square feet. Figure B has an area of 25 square feet.



Which figure has the larger perimeter? Be sure to include the perimeters of both figures in your answer.

Show your work.

8+ 8+ 4+ 4 = 24a

5+ 5+ 5+ 5=20b

Answer a has a larger perimiter than b by 4 feet

Score Credit 2 (out of 3 credits)

This response demonstrates a partial understanding of the mathematical concepts and procedures in the task.

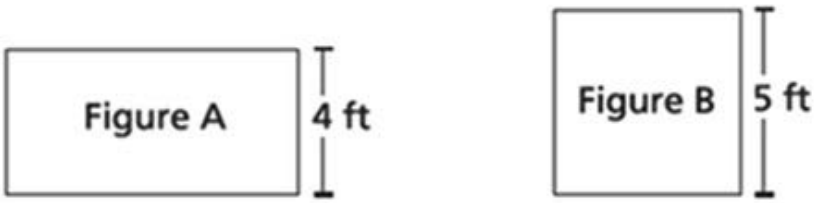
- The perimeters of both figures are correctly calculated; however, work to support the missing side lengths is not provided.
- Figure A is correctly chosen as having the larger perimeter.

This response appropriately addresses most but not all aspects of the task using mathematically sound procedures.

GUIDE PAPER 7

44

Two rectangular figures are shown below. Figure A has an area of 32 square feet. Figure B has an area of 25 square feet.



Which figure has the larger perimeter? Be sure to include the perimeters of both figures in your answer.

Show your work.

figure b = 20
figure a =24

Answer figure a because it has 4 more perimeter.

Score Credit 1 (out of 3 credits)

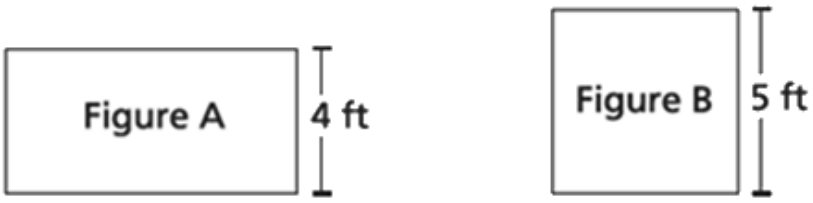
This response demonstrates only a limited understanding of the mathematical concepts and procedures in this task.

- The perimeters of both figures are given; however, no supporting work is shown.
- Figure A is correctly chosen as having the larger perimeter.

This response contains the correct solution, but the required work is limited.

44

Two rectangular figures are shown below. Figure A has an area of 32 square feet. Figure B has an area of 25 square feet.



Which figure has the larger perimeter? Be sure to include the perimeters of both figures in your answer.

Show your work.

A = 8+8+4+4= 32
B= 5 + 5 + 5 + 5= 25
figur a has the bigger perimeter

Answer figure A

Score Credit 1 (out of 3 credits)

This response demonstrates only a limited understanding of the mathematical concepts and procedures in this task.

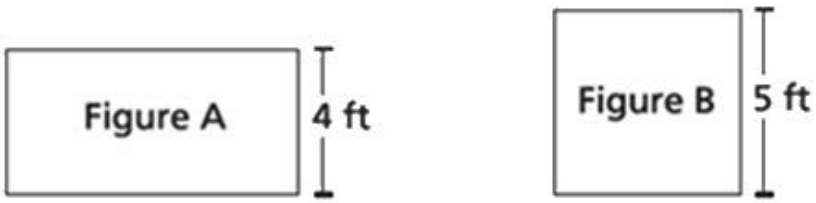
- Expressions representing the perimeters of both figures that utilize the missing side lengths are shown in the work; however, no supporting work for those missing lengths is given.
- Incorrect values for the perimeter expressions are given and it is unclear whether those values were used to support final solution.

This response addresses some elements of the task correctly but reaches an inadequate solution and provides reasoning that is faulty and incomplete.

GUIDE PAPER 9

44

Two rectangular figures are shown below. Figure A has an area of 32 square feet. Figure B has an area of 25 square feet.



Which figure has the larger perimeter? Be sure to include the perimeters of both figures in your answer.

Show your work.

Figure B
5 + 5 + 5 + 5 = 20ft

Figure A
4 + 4 = 8
32 − 8 = 24
24 ÷ 2 = 12ft

Answer 20 ft > 12ft Figure B's perimeter

Score Credit 1 (out of 3 credits)

This response demonstrates only a limited understanding of the mathematical concepts and procedures in this task.

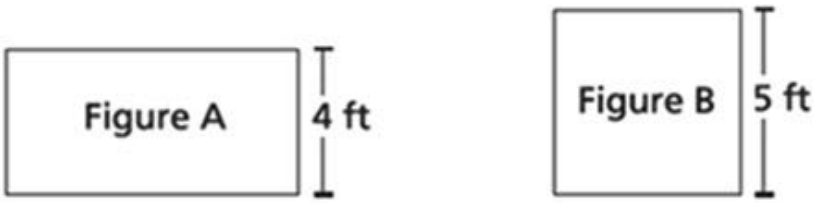
- The perimeter for Figure B is correctly calculated; however, work supporting the missing side length is not provided and the work shown for determining the perimeter of Figure A is incorrect.

This response reflects a lack of essential understanding of the underlying mathematical concepts.

GUIDE PAPER 10

44

Two rectangular figures are shown below. Figure A has an area of 32 square feet. Figure B has an area of 25 square feet.



Which figure has the larger perimeter? Be sure to include the perimeters of both figures in your answer.

Show your work.

Figure B: 5+5+5+5=20 20 + 25 = 45 Square feet
Figure A: 4+4+4+4= 16 32 + 16= 48 Square feet

Answer

Figure A has the larger perimeter beacuse
48 sq ft. > 45 sq ft.

Score Credit 0 (out of 3 credits)

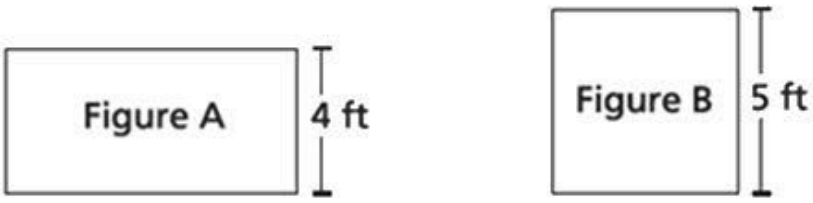
This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts and procedures in the task.

- Although Figure A is chosen as having the larger perimeter, the solution is based on incorrect perimeter values that are calculated using an incorrect procedure.

Holistically, this response is insufficient to show any understanding.

44

Two rectangular figures are shown below. Figure A has an area of 32 square feet. Figure B has an area of 25 square feet.



Which figure has the larger perimeter? Be sure to include the perimeters of both figures in your answer.

Show your work.

Figure A = 16
Figure B = 20

Answer Figure A is less than Figure B

Score Credit 0 (out of 3 credits)

This response is not sufficient to demonstrate even a limited understanding of the mathematical concepts and procedures in the task.

- Although a solution is given based on the perimeter values determined, no supporting work for either perimeter value is shown and the perimeter for Figure A is incorrect.

Holistically, this response is insufficient to show any understanding.

Grade 4
Mathematics

Scoring Leader Materials
2026 Training Set