New York State Testing Program

2025

Mathematics Test

Grade **4**

Scoring Leader Materials

Training Set

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.

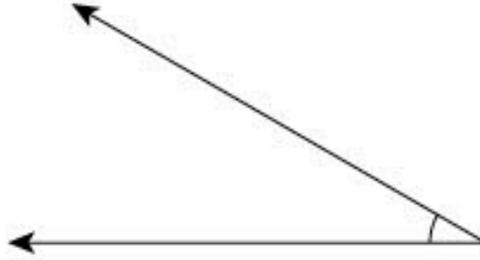The figure shown below has two rays that share a common point.
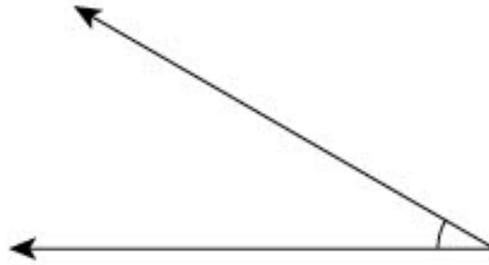
What type of figure is shown?

Answer _____

36

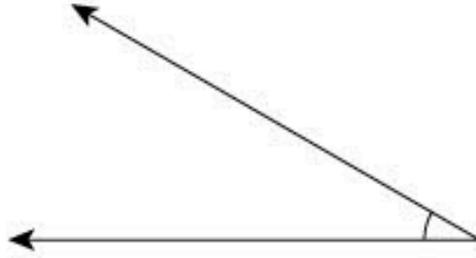The figure shown below has two rays that share a common point.

What type of figure is shown?

Answer ___Angle___

GUIDE PAPER 1

36

The figure shown below has two rays that share a common point.
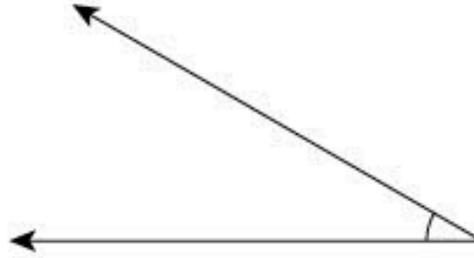

What type of figure is shown?

Answer An acute angle. (30 degrees)

Score Credit 1 (out of 1 credit)

A correct answer is provided.

36

The figure shown below has two rays that share a common point.

What type of figure is shown?

Answer | an angle |

Score Credit 1 (out of 1 credit)

A correct answer is provided.

36

The figure shown below has two rays that share a common point.

What type of figure is shown?

Answer | acute

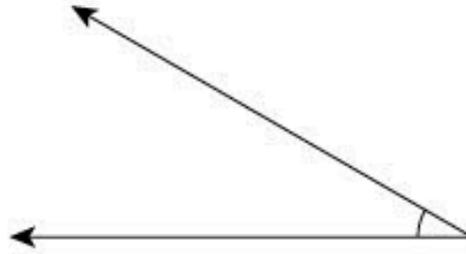---

Score Credit 0 (out of 1 credit)

An incorrect answer is provided.

37

A statement is shown below.

thirty-six is four times as many as nine

Write an equation that represents the statement.

Answer _____

37

A statement is shown below.

thirty-six is four times as many as nine

Write an equation that represents the statement.

Any of these are acceptable:

$36 = 4 \times 9$

$36 = 9 \times 4$

$4 \times 9 = 36$

$9 \times 4 = 36$

$36 \div 4 = 9$

Answer $36 \div 9 = 4$

OR Other valid response

37

A statement is shown below.

thirty-six is four times as many as nine

Write an equation that represents the statement.

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

Score Credit 1 (out of 1 credit)

A correct answer is provided.

37

A statement is shown below.

thirty-six is four times as many as nine

Write an equation that represents the statement.

Answer $36 \div 9 = 4$

Score Credit 1 (out of 1 credit)

A correct answer is provided.

37

A statement is shown below.

thirty-six is four times as many as nine

Write an equation that represents the statement.

Answer

$$\begin{array}{r} \times\ \begin{array}{r}4\\9\end{array}\\\hline 36\end{array}$$

Score Credit 0 (out of 1 credit)

An incorrect answer is provided.

38

A triangle is shown below.

Based on the size of the angles, what is the name of this type of triangle?

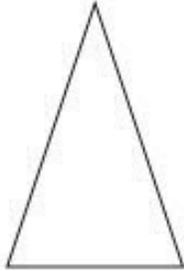*Answer* _____

38

A triangle is shown below.

Based on the size of the angles, what is the name of this type of triangle?

Answer   **acute** *or* **acute triangle**
        OR Other valid response

38

A triangle is shown below.

Based on the size of the angles, what is the name of this type of triangle?

Answer Acute triangle

Score Credit 1 (out of 1 credit)

A correct answer is provided.

38

A triangle is shown below.

Based on the size of the angles, what is the name of this type of triangle?

Answer | Isosceles |
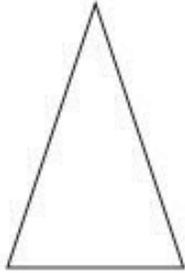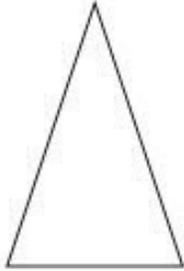
Score Credit 1 (out of 1 credit)

A correct answer is provided.

38

A triangle is shown below.

Based on the size of the angles, what is the name of this type of triangle?

Answer | Triangle |

Score Credit 0 (out of 1 credit)

An incorrect answer is provided.

39

How can the fraction $\frac{1}{2}$ be used to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$? Be sure to include a number sentence using the symbols >, <, or = to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$ in your answer.

Explain how you determined your answer.

_____

_____

_____

EXEMPLARY RESPONSE

39

How can the fraction $\frac{1}{2}$ be used to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$? Be sure to include a number sentence using the symbols $>$, $<$, or $=$ to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$ in your answer.

Explain how you determined your answer.

I know that $^1/_2$ is the same as $^3/_6$, and also the same as $^5/_{10}$.

Since sixths are smaller in size than fifths,

three-fifths would be greater than three-sixths ($^1/_2$).

I know that four-tenths would be less than five-tenths ($^1/_2$).
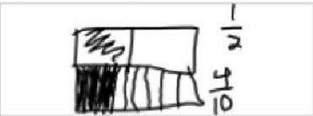
So, $^3/_5 > {}^4/_{10}$.

OR Other valid response

39

How can the fraction $\frac{1}{2}$ be used to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$? Be sure to include a number sentence using the symbols >, <, or = to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$ in your answer.

Explain how you determined your answer.

$$\frac{1}{2} > \frac{4}{10}$$

$$\frac{1}{2} < \frac{3}{5}$$

$\frac{3}{5} > \frac{4}{10}$ I determined my answer by seeing which

fraction went past $\frac{1}{2}$, if it did, it was greater than the one that

did not.

Score Credit 2 (out of 2 credits)

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

- A correct number sentence comparing the fractions is given, supported by an explanation that uses diagrams to compare the fractions to ½.

This response contains sufficient work to demonstrate a thorough understanding.

39

How can the fraction $\frac{1}{2}$ be used to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$? Be sure to include a number sentence using the symbols >, <, or = to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$ in your answer.

Explain how you determined your answer.

$$\frac{3}{5} > \frac{4}{10} \text{ because } \frac{1}{2} = \frac{5}{10} \text{ and } \frac{3}{5} = \frac{6}{10} \text{ then } \frac{5}{10} < \frac{6}{10}.$$

$$\frac{4}{10} < \frac{5}{10} \text{ so } \frac{3}{5} > \frac{4}{10}$$

Score Credit 2 (out of 2 credits)

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

• A correct number sentence comparing the fractions is given, supported by a correct explanation.

This response is complete and correct.

39

How can the fraction $\frac{1}{2}$ be used to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$? Be sure to

include a number sentence using the symbols >, <, or = to compare the fractions

$\frac{3}{5}$ and $\frac{4}{10}$ in your answer.

Explain how you determined your answer.

Score Credit 2 (out of 2 credits)

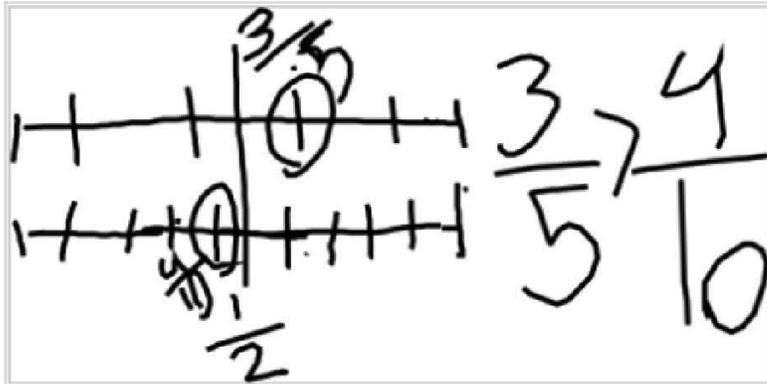This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.

- A correct number sentence comparing the fractions is given, supported by an explanation that uses a number line to compare the fractions as they relate to the location of ½.

This response contains sufficient work to demonstrate a thorough understanding.

39

How can the fraction $\frac{1}{2}$ be used to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$? Be sure to include a number sentence using the symbols >, <, or = to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$ in your answer.

Explain how you determined your answer.

$$\frac{1}{2} < \frac{3}{5} \qquad \frac{1}{2} > \frac{4}{10}$$

A half is less than $\frac{3}{5}$ because 2 and a half is half of 5 and $\frac{3}{5}$ is greater than a half. Also a half is greater than $\frac{4}{10}$ because $\frac{4}{10}$ is less than a halve.

Score Credit 1 (out of 2 credits)

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

- Although each of the fractions is correctly compared to ½, the reasoning for ½ being greater than ⁴⁄₁₀ is incomplete.
- A number sentence comparing ⅗ and ⁴⁄₁₀ to each other is not provided.

This response correctly addresses only some elements of the task.

GUIDE PAPER 5

39

How can the fraction $\frac{1}{2}$ be used to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$? Be sure to

include a number sentence using the symbols $>$, $<$, or $=$ to compare the fractions

$\frac{3}{5}$ and $\frac{4}{10}$ in your answer.

Explain how you determined your answer.

My answer is $\frac{3}{5} > \frac{4}{10}$ because $\frac{3}{5}$ is more than $\frac{1}{2}$ and $\frac{4}{10}$ is less than $\frac{1}{2}$

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts and procedures in the task.
- A correct number sentence comparing the fractions is given; however, the explanation does not adequately compare each of the fractions to ½.

This response correctly addresses only some elements of the task.

39

How can the fraction $\frac{1}{2}$ be used to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$? Be sure to

include a number sentence using the symbols >, <, or = to compare the fractions

$\frac{3}{5}$ and $\frac{4}{10}$ in your answer.

Explain how you determined your answer.

$\frac{3}{5}$ > $\frac{4}{10}$ all you do is times 5 and 4 and get 20 then times 3 and 10 and get 30.

Score Credit 1 (out of 2 credits)

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

- A correct number sentence comparing the fractions is given; however, the explanation provided does not include how the fraction ½ can be used to make the comparison, and no further detail is provided on the relevance of the 20 and the 30 as they relate to the task.

This response correctly addresses only some elements of the task.

39

How can the fraction $\frac{1}{2}$ be used to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$? Be sure to include a number sentence using the symbols $>$, $<$, or $=$ to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$ in your answer.

Explain how you determined your answer.

the fraction $\frac{1}{2}$ could be used to campare the fractions because
5 is half of 10
$\frac{3}{5}$ $<$ $\frac{4}{10}$

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 number sentence is given and the reasoning provided is insufficient to demonstrate understanding.

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

39

How can the fraction $\frac{1}{2}$ be used to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$? Be sure to include a number sentence using the symbols $>$, $<$, or $=$ to compare the fractions $\frac{3}{5}$ and $\frac{4}{10}$ in your answer.

Explain how you determined your answer.

I crosed multipled and 3and 5 was higher than 4 and 10.

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 number sentence comparing ⅗ and ⁴⁄₁₀ is not given and the reasoning provided is incoherent.

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

40

A number is described below.

It has four thousands and thirty tens.

What is the number in standard form?

Explain how you determined your answer.

_____

_____

_____

40

A number is described below.

It has four thousands and thirty tens.

What is the number in standard form?

Explain how you determined your answer.

The number is 4,300.
I know this is true because four thousands means 4,000
and thirty tens means 300,
so when I add them together
I get 4 in the thousands place,
a 3 in the hundreds place,
a 0 in the tens place,
and a 0 in the ones place.

OR Other valid response

40

A number is described below.

It has four thousands and thirty tens.

What is the number in standard form?

Explain how you determined your answer.

$4 \times 1000 = 4000$
$30 \times 10 = 300$

4000
300

+ 300

4300

the number in standard form is 4,300

Score Credit 2 (out of 2 credits)

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

• The correct standard form is given and supported by a correct explanation.

This response is complete and correct.

40

A number is described below.

It has four thousands and thirty tens.

What is the number in standard form?

Explain how you determined your answer.

> The number is 4,300. I know it because the phrase four thousands means 4,000. I also know that the word thirty tens means 300 because if it was three tens it would be 30 but they added another zero so it would be 300.

Score Credit 2 (out of 2 credits)

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

- The correct standard form is given and supported by a correct explanation.

This response is complete and correct.

GUIDE PAPER 3

40

A number is described below.

It has four thousands and thirty tens.

What is the number in standard form?

Explain how you determined your answer.

> 4300 I determined it by knowing that there are ten tens in 1
> hundred so times 30 ÷ 10 = 3 3 times 100 is 300 and then I
> already know 4 thousands, its 4000!

Score Credit 2 (out of 2 credits)

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

- The correct standard form is given and supported by a correct explanation.

This response is complete and correct.

40

A number is described below.

It has four thousands and thirty tens.

What is the number in standard form?

Explain how you determined your answer.

4,000+300

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts and procedures in the task.
- The correct expanded form of the number is shown but the standard form of the number is not provided.

This response correctly addresses only some elements of the task.

40

A number is described below.

It has four thousands and thirty tens.

What is the number in standard form?

Explain how you determined your answer.

I got 4,030 because 4,000 + 30 = 4,030

Score Credit 1 (out of 2 credits)

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

- An incorrect standard form of 4,030 is given due to the misinterpretation of the value for 30 tens; however, the correct addition of the determined individual place values supports the answer provided.

This response correctly addresses only some elements of the task.

40

A number is described below.

It has four thousands and thirty tens.

What is the number in standard form?

Explain how you determined your answer.

four thousands
and thirty tens
=
4,030

The answer is 4,030 because the 4 is in the thousands, there is nothing to put in the hundreds and you put the 3 from 30 in the tens place and the 0 from the 30 in the ones place. So, 4,030 is my answer.

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts and procedures in the task.
- An incorrect standard form of 4,030 is given due to the misinterpretation of the value for 30 tens.

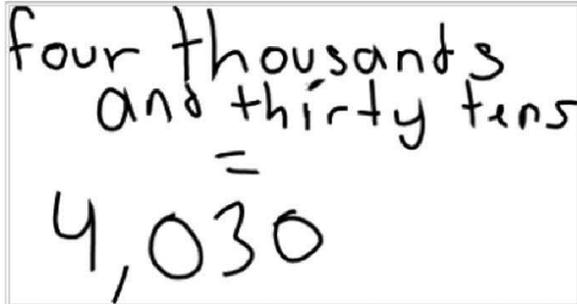This response correctly addresses only some elements of the task.

GUIDE PAPER 7

40

A number is described below.

It has four thousands and thirty tens.

What is the number in standard form?

Explain how you determined your answer.

4,300

Score Credit 0 (out of 2 credits)

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

• The correct standard form is given with no explanation.

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

40

A number is described below.

It has four thousands and thirty tens.

What is the number in standard form?

Explain how you determined your answer.

4,000 300 10

Score Credit 0 (out of 2 credits)

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

- An incorrect answer is given with no explanation.

This response is incorrect and, holistically, is insufficient to show any understanding.

41

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

Explain how you know your answer is correct.

_____

_____

_____

41

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

Explain how you know your answer is correct.

A square has 4 lines of symmetry. I know this is true
because you can fold the square into two equal halves (into 2 equal/identical parts)
from top to bottom (horizontally) and from left side to right (vertically).
You can also fold the square diagonally from corner to corner
and you will get 2 equal halves (2 identical parts).

OR Other valid response

41

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

Explain how you know your answer is correct.

> 4 because you can fold it up vertical, horizantal and diaganal from left to right and right to left with everything being lined up perfectly.

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.

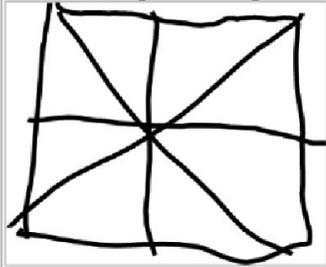This response is complete and correct.

41

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

Explain how you know your answer is correct.

4.I know this because if you flod a squre into a rectangle thats one and you can do that 2 times.Then to makw two more pices of symmetry is to make it loook like a triangle.and those are lines of symmerty.

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 along with a diagram that correctly shows all four lines of symmetry, supporting that mentioned pieces of symmetry formed (rectangle and triangle) are the same in size.

This response is sufficient to demonstrate thorough understanding.

41

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

Explain how you know your answer is correct.

> Four lines of symmetry because for symmetry you have any kind a shape and then you draw a line any way and if the both sides are equal then thats a line of symmetry.

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 4

41

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

Explain how you know your answer is correct.

> i think 4 beacause if you fold paper you would get 4 line's of symmetry

Score Credit 1 (out of 2 credits)

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

- A correct answer is given for the number of lines of symmetry; however, the provided explanation of folding the paper is unclear and insufficient in supporting the answer of 4.

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

41

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

Explain how you know your answer is correct.

> 2 lines of symmetry because if you fold the square in halves it would be equal

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, a correct reasoning for identifying lines of symmetry is provided.

This response contains an incorrect answer but describes a mathematically appropriate process.
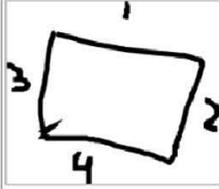
GUIDE PAPER 6

41

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

Explain how you know your answer is correct.

sqares have four lines of semitrey. i know this because in a sqware there are four lines that are the same.

Score Credit 1 (out of 2 credits)

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

- A correct total number of lines of symmetry is given; however, the provided reasoning as to why equal side length supports that answer is incomplete to demonstrate full understanding.

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

41

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

Explain how you know your answer is correct.

> I used my paper and folded it like a square and when I did I noticed there were 2 lines of symmetry. So my answer for how many lines of symmetry does a square have is? 2

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 answer is given and the explanation is incoherent.

This response is incorrect and, holistically, is insufficient to show any understanding.

41

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

Explain how you know your answer is correct.

> 2 lines of smetery i know this becasue if you look at a square you will see 2 lines are the same so that 1line of syetery and then there is another 2 lines that are the same so that another pair of semitry.

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 answer is given and the explanation is incoherent.

This response is incorrect and, holistically, is insufficient to show any understanding.

42

The first three numbers in a pattern are shown below.

    1, 4, 7, . . .

Will the tenth number in the pattern be an even number or an odd number?

Explain how you determined your answer.

_____

_____

_____

42

The first three numbers in a pattern are shown below.

1, 4, 7, . . .

Will the tenth number in the pattern be an even number or an odd number?

Explain how you determined your answer.

The tenth number will be even.
I know this because the rule for the pattern is add 3,
so if I keep adding 3 to find each new number,
the tenth number will be 28.
1, 4, 7, 10, 13, 16, 19, 22, 25, 28
The number 28 is divisible by 2, so 28 is an even number.

OR

Since the second number in the pattern is 4 and the rule is add 3,
the fourth number in the pattern would be even because 4 + 6 = 10.
Every other number in the pattern after 10 will be even
because you are always going to add an even number of 6,
and an even plus an even is always even.
This means the tenth number will be even.

OR Other valid response

42

The first three numbers in a pattern are shown below.

    1, 4, 7, . . .

Will the tenth number in the pattern be an even number or an odd number?

Explain how you determined your answer.

> The pattern is add 3 1 4 7 10 13 16 19 22 25 28 It would be even.

Score Credit 2 (out of 2 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.
- A correct answer is given and supported by a correct explanation.

This response is complete and correct.

42

The first three numbers in a pattern are shown below.

1, 4, 7, . . .

Will the tenth number in the pattern be an even number or an odd number?

Explain how you determined your answer.

> even, i can use an repetition of numbers to find out the answer.7+6 which is 2 places whick make it number 13 and place 5 now plus 15 for 3 per place and 5 places give me 28. which ids even

Score Credit 2 (out of 2 credits)

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

• A correct answer is given and supported by a correct explanation.
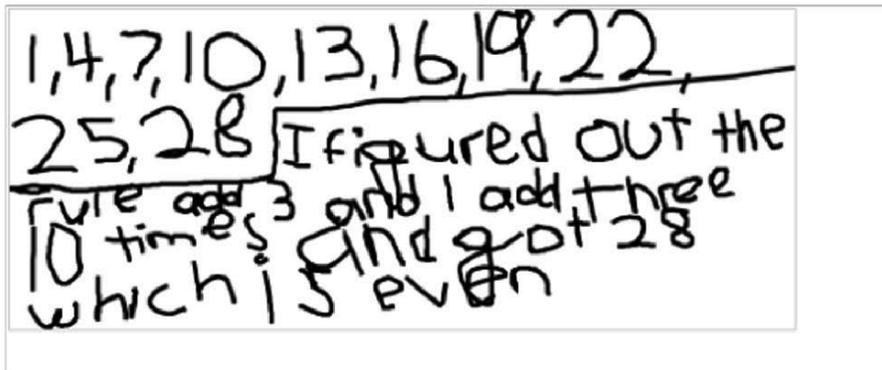
This response is complete and correct.

GUIDE PAPER 3

42

The first three numbers in a pattern are shown below.

1, 4, 7, . . .

Will the tenth number in the pattern be an even number or an odd number?

Explain how you determined your answer.

1,4,7,10,13,16,19,22,
25,28 I figured out the
rule add 3 and I add three
10 times and got 28
which is even

Score Credit 2 (out of 2 credits)

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

- A correct answer is given and supported by the utilization of the rule to generate the first ten numbers in the pattern.
- Although the explanation incorrectly refers to adding 3 ten times, the first ten numbers of the pattern are correctly shown.

This response contains an inconsequential error that does not detract from the demonstration of a thorough understanding.

42

The first three numbers in a pattern are shown below.

1, 4, 7, . . .

Will the tenth number in the pattern be an even number or an odd number?

Explain how you determined your answer.

> The tenth number will be 27 and 27 is an odd number. I got my answer by counting by three. the pattern will continue by 1,4,7, 10, 13, 15, 18,21,24,27... and so on.

Score Credit 1 (out of 2 credits)

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

- The rule for the pattern is utilized to generate the numbers in the pattern; however, a calculation error results in an incorrect conclusion about the tenth number.

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

42

The first three numbers in a pattern are shown below.

1, 4, 7, . . .

Will the tenth number in the pattern be an even number or an odd number?

Explain how you determined your answer.

even im pretty sure because its 1, 4 , 7, so I think its 10
because its adding 3 every time because 1 plus 3 eqauls 4 and
4 plus 3 eqauls 7 and 7 plus 3 is 10 which is a even number

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts and procedures in the task.
- The rule for the pattern is utilized to correctly identify the fourth number in the pattern as being even; however, no conclusion regarding the tenth number is given.

This response correctly addresses only some elements of the task.

42

The first three numbers in a pattern are shown below.

    1, 4, 7, . . .

Will the tenth number in the pattern be an even number or an odd number?

Explain how you determined your answer.

> it will be a even number because it goes by three nubers every time.

Score Credit 1 (out of 2 credits)

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

- The tenth number is correctly identified as even and the rule for the pattern is correctly identified; however, the reasoning provided is insufficient in supporting why the tenth number is even.

This response contains a correct solution, but the reasoning provided is incomplete.

42

The first three numbers in a pattern are shown below.

      1, 4, 7, . . .

Will the tenth number in the pattern be an even number or an odd number?

Explain how you determined your answer.

it is a even number

Score Credit 0 (out of 2 credits)

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

• The correct answer is given with no explanation.

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

42

The first three numbers in a pattern are shown below.

1, 4, 7, . . .

Will the tenth number in the pattern be an even number or an odd number?

Explain how you determined your answer.

the pattern is you add three to each number because one pluse three is four and four pluse three is seven thats how I know.

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 rule for the pattern is correctly identified, no conclusion regarding the tenth term is given.

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

43

The diagram below shows angle ABD divided into two angles, ABC and CBD.
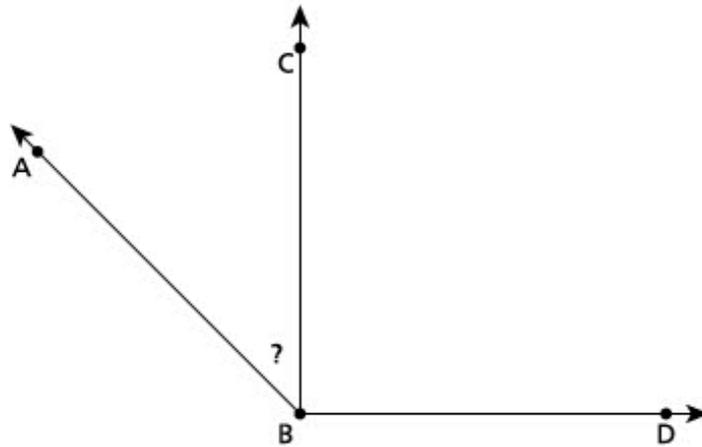
The measure of angle ABD is 135° and the measure of angle CBD is 90°. Write and solve an equation that can be used to determine the measure, in degrees, of angle ABC.

Show your work.

Answer _____ °

43

The diagram below shows angle ABD divided into two angles, ABC and CBD.

The measure of angle ABD is 135° and the measure of angle CBD is 90°. Write and solve an equation that can be used to determine the measure, in degrees, of angle ABC.
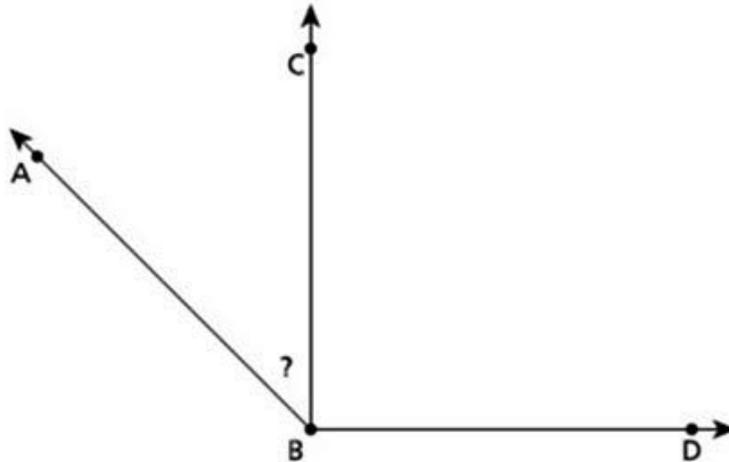
Show your work.

135 - 90 = 45
45°

OR

90 + ? = 135
90 + 45 = 135
? = 45

OR Other valid process

Answer _____45_____ °

43

The diagram below shows angle ABD divided into two angles, ABC and CBD.

The measure of angle ABD is 135° and the measure of angle CBD is 90°. Write and solve an equation that can be used to determine the measure, in degrees, of angle ABC.
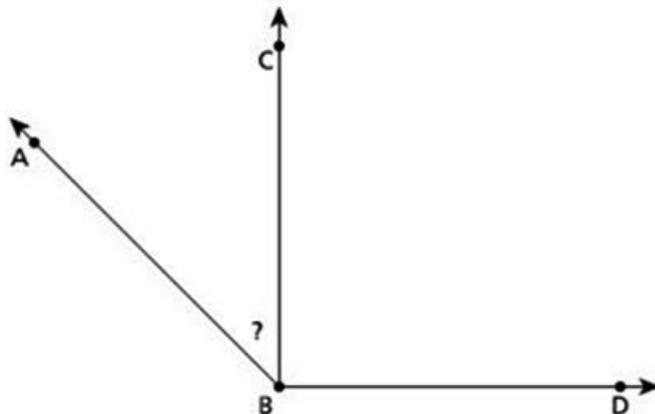
Show your work.

$$90+x=135$$
$$90+45=135 \qquad\qquad 90+25=115 \qquad\qquad 90+45=135$$
$$135=135$$

Answer [45] °

Score Credit 2 (out of 2 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.
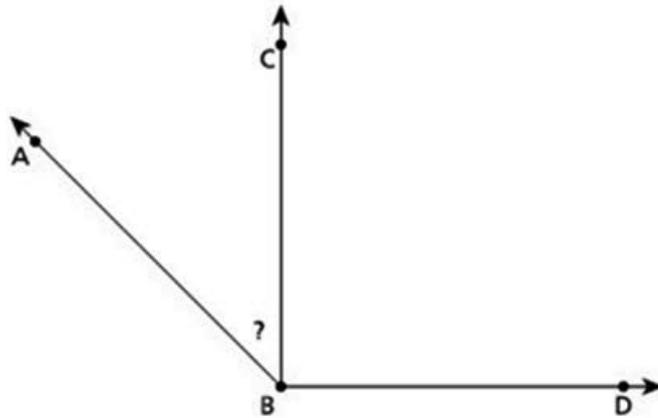
- An equation is written that shows a correct relationship between the three angles and the correct measurement of angle ABC is provided.

This response is complete and correct.

43

The diagram below shows angle ABD divided into two angles, ABC and CBD.

The measure of angle ABD is 135° and the measure of angle CBD is 90°. Write and solve an equation that can be used to determine the measure, in degrees, of angle ABC.

Show your work.

> If ABD is 135 and 1 part of it is 90 $135 - 90 = 45$. So ABC
> is 45

Answer 45 °

Score Credit 2 (out of 2 credits)

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

- An equation is written that shows a correct relationship between the three angles and the correct measurement of angle ABC is provided.

This response is complete and correct.

GUIDE PAPER 3

43

The diagram below shows angle ABD divided into two angles, ABC and CBD.

The measure of angle ABD is 135° and the measure of angle CBD is 90°. Write and solve an equation that can be used to determine the measure, in degrees, of angle ABC.

Show your work.

45°

90 + 45 = 135

Answer 45 °

Score Credit 2 (out of 2 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.
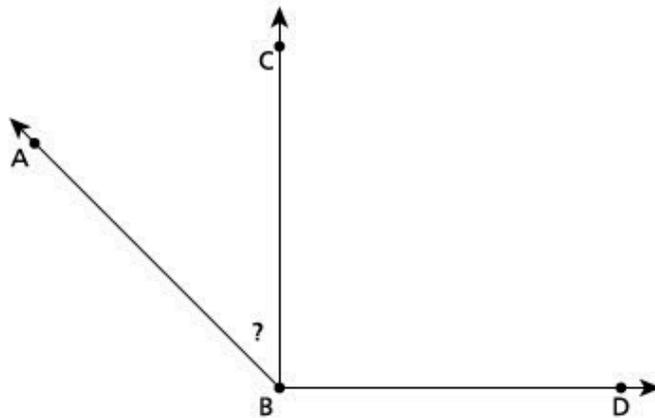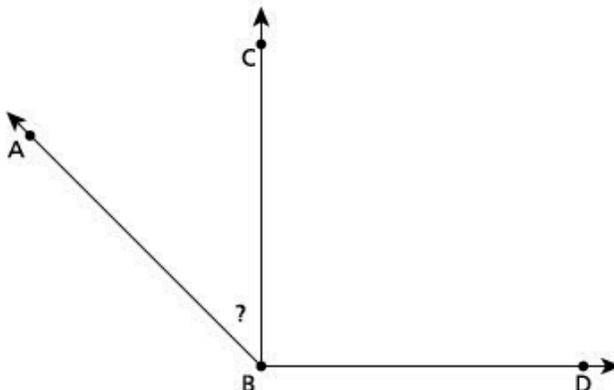
- An equation is written that shows a correct relationship between the three angles and the correct measurement of angle ABC is provided.

This response is complete and correct.

43

The diagram below shows angle ABD divided into two angles, ABC and CBD.

The measure of angle ABD is 135° and the measure of angle CBD is 90°. Write and solve an equation that can be used to determine the measure, in degrees, of angle ABC.

Show your work.

$$\begin{array}{r} 135 \\ -90 \\ \hline 45 \end{array}$$

Answer [45] °

Score Credit 1 (out of 2 credits)

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

- A correct answer is given for the measurement of angle ABC and correct supportive work is shown; however, the relationship between the three angles shown in the work is not written horizontally as a number sentence (equation), so per Scoring Policy #10 for 2-and 3-credit responses, this response cannot receive full credit.

This response correctly addresses only some elements of the task.

GUIDE PAPER 5

43

The diagram below shows angle ABD divided into two angles, ABC and CBD.
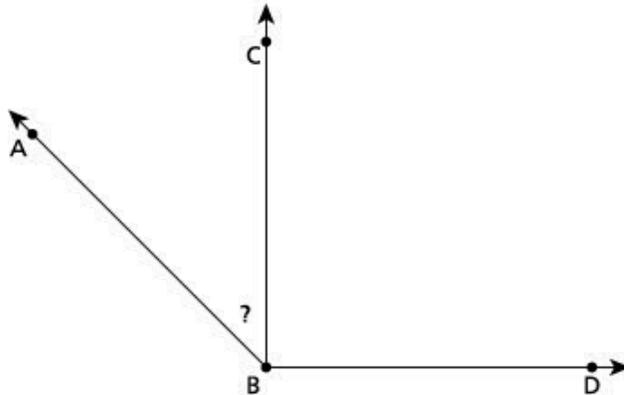
The measure of angle ABD is 135° and the measure of angle CBD is 90°. Write and solve an equation that can be used to determine the measure, in degrees, of angle ABC.

Show your work.

$$\begin{array}{r} 135 \\ -\ \ 90 \\ \hline 35 \end{array}$$

Answer 35 °

Score Credit 1 (out of 2 credits)

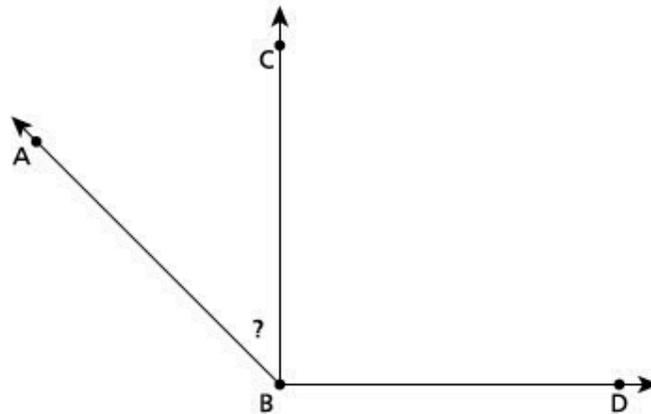This response demonstrates only a partial understanding of the mathematical concepts and procedures in the task.
- The provided work shows how subtraction can be used to determine the measure of angle ABC; however, a calculation error is made.
- The provided work is not written horizontally as a number sentence (equation).

This response correctly addresses only some elements of the task.

43

The diagram below shows angle ABD divided into two angles, ABC and CBD.

The measure of angle ABD is 135° and the measure of angle CBD is 90°. Write and solve an equation that can be used to determine the measure, in degrees, of angle ABC.

Show your work.

you could do 135 – 90 and you would get 45. I know this because I used subtraction and I took away 90 from 135. That is how I got my answer.

Answer 45 °

Score Credit 1 (out of 2 credits)

This response demonstrates only a partial understanding of the mathematical concepts and procedures in the task.
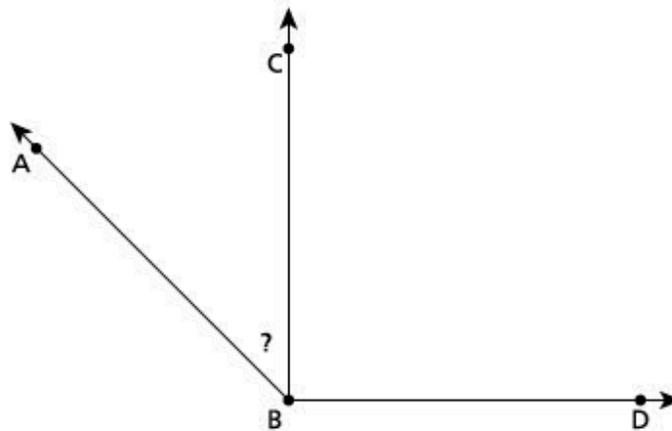
- A correct answer is given for the measurement of angle ABC and its value is correctly represented as a subtraction expression in the provided explanation; however, no equation is written.

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

43

The diagram below shows angle ABD divided into two angles, ABC and CBD.

The measure of angle ABD is 135° and the measure of angle CBD is 90°. Write and solve an equation that can be used to determine the measure, in degrees, of angle ABC.

Show your work.

45+45 =90
90-45-45

                                                45 is hav of 90 so angle abc is

45

Answer | 45 | °

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 obtained using an incorrect procedure.
Holistically, this response shows no overall understanding of the task.

43

The diagram below shows angle ABD divided into two angles, ABC and CBD.

The measure of angle ABD is 135° and the measure of angle CBD is 90°. Write and solve an equation that can be used to determine the measure, in degrees, of angle ABC.

Show your work.

$$135 + 90 = 225$$
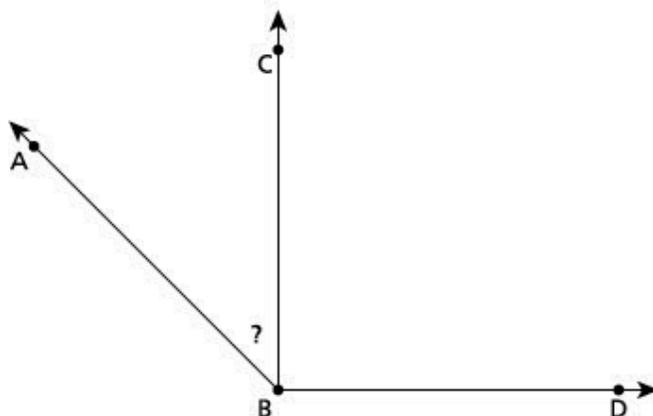$$360 - 225 = 135$$

Answer [135] °

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 answer is given and the equations provided do not show any understanding of the relationship between the three angles.

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

44

A group of students walk to school and to the park together 5 days a week. Each day, they start at Tia's home and end at Tia's home. The number of miles they walk each day is described below.

- from Tia's home to their school is $\frac{7}{8}$ mile

- from their school to the park is $\frac{5}{8}$ mile

- from the park to Tia's home is $\frac{3}{8}$ mile

What is the total distance, in miles, that the group of students walk together in those 5 days?

Show your work.

Answer _____ miles

44

A group of students walk to school and to the park together 5 days a week. Each day, they start at Tia's home and end at Tia's home. The number of miles they walk each day is described below.

- from Tia's home to their school is $\frac{7}{8}$ mile

- from their school to the park is $\frac{5}{8}$ mile

- from the park to Tia's home is $\frac{3}{8}$ mile

What is the total distance, in miles, that the group of students walk together in those 5 days?

Show your work.

$5 \times {}^7/_8 = {}^{35}/_8$
$5 \times {}^5/_8 = {}^{25}/_8$
$5 \times {}^3/_8 = {}^{15}/_8$

${}^{35}/_8 + {}^{25}/_8 + {}^{15}/_8 = {}^{75}/_8$
${}^{75}/_8$ miles OR $9^3/_8$ miles

OR

${}^7/_8 + {}^5/_8 + {}^3/_8 = {}^{15}/_8$
$5 \times {}^{15}/_8 = {}^{75}/_8$
${}^{75}/_8$ miles OR $9^3/_8$ miles

OR Other valid process

Answer $\underline{\quad {}^{75}/_8 \text{ miles OR } 9^3/_8 \quad}$ miles

44

A group of students walk to school and to the park together 5 days a week. Each day, they start at Tia's home and end at Tia's home. The number of miles they walk each day is described below.

- from Tia's home to their school is $\frac{7}{8}$ mile

- from their school to the park is $\frac{5}{8}$ mile

- from the park to Tia's home is $\frac{3}{8}$ mile

What is the total distance, in miles, that the group of students walk together in those 5 days?

Show your work.

$$\frac{3}{8} + \frac{7}{8} + \frac{5}{8} = \frac{15}{8}$$

$$\frac{15}{8} \times 5 = \frac{75}{8} \rightarrow \text{mixed number}$$

$$\text{Answer} \rightarrow 9\frac{3}{8}$$

Answer | The group of friends walk $9\frac{3}{8}$ of a mile together in a week. | miles

---

Score Credit 3 (out of 3 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.
- The correct total distance walked in the week is given and supported by correct work.

This response is complete and correct.

GUIDE PAPER 2

44

A group of students walk to school and to the park together 5 days a week. Each day, they start at Tia's home and end at Tia's home. The number of miles they walk each day is described below.

- from Tia's home to their school is $\dfrac{7}{8}$ mile

- from their school to the park is $\dfrac{5}{8}$ mile

- from the park to Tia's home is $\dfrac{3}{8}$ mile

What is the total distance, in miles, that the group of students walk together in those 5 days?

Show your work.

$$\dfrac{7}{8} + \dfrac{5}{8} + \dfrac{3}{8} = \dfrac{15}{8} = 1\dfrac{7}{8} \qquad 1\dfrac{7}{8} \times 5 = 5\dfrac{35}{8}$$

$$= 9\dfrac{3}{8}$$

Answer $\boxed{9\dfrac{3}{8} \text{ miles}}$ miles

Score Credit 3 (out of 3 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.
- The correct total distance walked in the week is given and supported by correct work.

This response is complete and correct.

44

A group of students walk to school and to the park together 5 days a week. Each day, they start at Tia's home and end at Tia's home. The number of miles they walk each day is described below.

- from Tia's home to their school is $\frac{7}{8}$ mile

- from their school to the park is $\frac{5}{8}$ mile

- from the park to Tia's home is $\frac{3}{8}$ mile

What is the total distance, in miles, that the group of students walk together in those 5 days?

Show your work.

$$\frac{35}{8} + \frac{25}{8} + \frac{15}{8} = \frac{75}{8}$$

Answer $\boxed{\dfrac{75}{8}}$ miles

Score Credit 3 (out of 3 credits)

This response demonstrates a thorough understanding of the mathematical concepts and procedures in the task.
- The correct total distance walked in the week is given and supported by correct work.

This response is complete and correct.

44

A group of students walk to school and to the park together 5 days a week. Each day, they start at Tia's home and end at Tia's home. The number of miles they walk each day is described below.

- from Tia's home to their school is $\frac{7}{8}$ mile

- from their school to the park is $\frac{5}{8}$ mile

- from the park to Tia's home is $\frac{3}{8}$ mile

What is the total distance, in miles, that the group of students walk together in those 5 days?

Show your work.

7/8 + 5/8 + 3/8 = 15/8   15/8 × 5 = 60/8

Answer 60/8 miles

Score Credit 2 (out of 3 credits)

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

- The total number of miles walked in one day is correctly calculated and the need to multiply this total by five is shown; however, a calculation error results in an incorrect answer for the total distance walked in the week.

This response appropriately addresses most, but not all, aspects of the task.

44

A group of students walk to school and to the park together 5 days a week. Each day, they start at Tia's home and end at Tia's home. The number of miles they walk each day is described below.

- from Tia's home to their school is $\frac{7}{8}$ mile

- from their school to the park is $\frac{5}{8}$ mile

- from the park to Tia's home is $\frac{3}{8}$ mile

What is the total distance, in miles, that the group of students walk together in those 5 days?

Show your work.

$$(7+5+3) = (15)$$
$$(15 \times 5) = (75) = 9\frac{3}{8}$$

Answer $\boxed{9\frac{3}{8}}$ miles

Score Credit 2 (out of 3 credits)

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

- A correct total distance walked in the week is given; however, the work shown is insufficient in supporting the total and contains the incorrect equation of $75 = 9\frac{3}{8}$.

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

GUIDE PAPER 6

44

A group of students walk to school and to the park together 5 days a week. Each day, they start at Tia's home and end at Tia's home. The number of miles they walk each day is described below.

- from Tia's home to their school is $\frac{7}{8}$ mile

- from their school to the park is $\frac{5}{8}$ mile

- from the park to Tia's home is $\frac{3}{8}$ mile

What is the total distance, in miles, that the group of students walk together in those 5 days?

Show your work.

$$\frac{7}{8}\ \frac{7}{8}\ \frac{7}{8}\ \frac{7}{8}\ \frac{7}{8} = \frac{35}{8} \qquad\qquad 35 + 25 + 15 =$$

75

$$\frac{5}{8}\ \frac{5}{8}\ \frac{5}{8}\ \frac{5}{8}\ \frac{5}{8} = \frac{25}{8} \qquad\qquad =$$

$$\frac{3}{8}\ \frac{3}{8}\ \frac{3}{8}\ \frac{3}{8}\ \frac{3}{8} = \frac{15}{8}$$

Answer | 75 miles | miles

Score Credit 2 (out of 3 credits)

This response demonstrates a partial understanding of the mathematical concepts and procedures in the task.
- Each daily fractional distance is increased fivefold using repeated addition and the numerators are correctly added; however, the denominator 8 is not included in the final answer.

This response reflects some minor misunderstanding of the underlying mathematical concepts and procedures.

44

A group of students walk to school and to the park together 5 days a week. Each day, they start at Tia's home and end at Tia's home. The number of miles they walk each day is described below.

- from Tia's home to their school is $\dfrac{7}{8}$ mile

- from their school to the park is $\dfrac{5}{8}$ mile

- from the park to Tia's home is $\dfrac{3}{8}$ mile

What is the total distance, in miles, that the group of students walk together in those 5 days?

Show your work.

$$\frac{7}{8} + \frac{5}{8} + \frac{3}{8} = 1\frac{7}{8}$$

Answer $\boxed{1\dfrac{7}{8}}$ miles

Score Credit 1 (out of 3 credits)

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

- The total distance walked for one day is correctly determined; however, this total is not multiplied by 5 and incorrectly provided as the final answer.

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

44

A group of students walk to school and to the park together 5 days a week. Each day, they start at Tia's home and end at Tia's home. The number of miles they walk each day is described below.

- from Tia's home to their school is $\frac{7}{8}$ mile

- from their school to the park is $\frac{5}{8}$ mile

- from the park to Tia's home is $\frac{3}{8}$ mile

What is the total distance, in miles, that the group of students walk together in those 5 days?

Show your work.

$$7 + 5 + 3 \, \frac{75}{8}$$

Answer $\boxed{\dfrac{75}{8}}$ miles

Score Credit 1 (out of 3 credits)

This response demonstrates only a limited understanding of the mathematical concepts and procedures in this task.
- A correct total distance walked in the week is given; however, the work shown is incomplete.

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

GUIDE PAPER 9

44

A group of students walk to school and to the park together 5 days a week. Each day, they start at Tia's home and end at Tia's home. The number of miles they walk each day is described below.

- from Tia's home to their school is $\frac{7}{8}$ mile
- from their school to the park is $\frac{5}{8}$ mile
- from the park to Tia's home is $\frac{3}{8}$ mile

What is the total distance, in miles, that the group of students walk together in those 5 days?

Show your work.

$$\frac{7}{8} + \frac{5}{8} + \frac{3}{8} = 1\frac{7}{8}$$
$$1\frac{7}{8} \times 7 = 12\frac{5}{8}$$

Answer $\boxed{1\frac{7}{8} \times 7 = 12\frac{5}{8}}$ miles

Score Credit 1 (out of 3 credits)

This response demonstrates only a limited understanding of the mathematical concepts and procedures in this task.
- The total distance walked for one day is correctly determined; however, this total is not multiplied by 5, but rather by 7.
- A calculation error occurs with the multiplication by 7.

This response exhibits flaws related to misunderstanding important aspects of the task.

GUIDE PAPER 10

44

A group of students walk to school and to the park together 5 days a week. Each day, they start at Tia's home and end at Tia's home. The number of miles they walk each day is described below.

- from Tia's home to their school is $\frac{7}{8}$ mile

- from their school to the park is $\frac{5}{8}$ mile

- from the park to Tia's home is $\frac{3}{8}$ mile

What is the total distance, in miles, that the group of students walk together in those 5 days?

Show your work.

7/8 + 5/8 + 3/8 = 15/24

Answer 7/8 + 5/8 + 3/8 = 15/24 miles

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.
- The total distance walked for one day is incorrectly calculated and incorrectly provided as the final answer.

This response is incorrect, and, holistically, is insufficient to show any understanding.

44

A group of students walk to school and to the park together 5 days a week. Each day, they start at Tia's home and end at Tia's home. The number of miles they walk each day is described below.

- from Tia's home to their school is $\frac{7}{8}$ mile
- from their school to the park is $\frac{5}{8}$ mile
- from the park to Tia's home is $\frac{3}{8}$ mile

What is the total distance, in miles, that the group of students walk together in those 5 days?

Show your work.

$$\frac{7}{8} + \frac{5}{8} + \frac{3}{8} = \frac{15}{8} = \frac{6}{8}$$

Answer $\boxed{\frac{6}{8} \text{ of the miles she walked.}}$ miles

---

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.
- The total distance walked for one day is initially calculated; however, incorrectly set equal to ⅝.

This response is incoherent, and, holistically, is insufficient to show any understanding.

Grade 4

Mathematics

Scoring Leader Materials
2025 Training Set